THE

MEDICAL TIMES:

A JOURNAL



OF

ENGLISH AND FOREIGN MEDICINE,

AND

MISCELLANY OF MEDICAL AFFAIRS.

VOLUME THE SIXTEENTH.

FEBRUARY 20 TO OCTOBER 9, 1847.

LONDON

J. ANGERSTEIN CARFRAE, ESSEX STREET, STRAND.

MDCCCXLVII.

No. 387. SUMMARY. Feb. 27.

COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the THEATRE of QUEEN'S COLLEGE, Birmingham

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Treatment of the dysentery of 1846; *complications of it with dyspepsia; observations on the frequency of these; primary treatment of the dysentery; opium; cases in which large doses are needed; Dover's powder, effects of; stomach flatulence and intestinal flatulence, respective remedies for; hot bath; hip-bath; suggestions concerning them; opiate enemata, value of; secondary treatment of the dysentery; scybalous fæces, observations on the cause of; treatment of the cholera of* 1846; *value of opium; camphor in irritation of mucous membranes in old subjects; hydrargyrum cum creta, value of; salines; stimulating baths; counter-irritation; mustard poultices; turpentine; cases in which the bowel-complaint superseded pre-existing diseases; diabetes; hooping-cough; skin disease; scarlet fever; pyrosis; bronchorrœa; phthisis.*

GENTLEMEN,—At the close of my last lecture I told you that the present one would consider the treatment of the dysentery and cholera of 1846, and of their *sequelæ*.

The dysentery, as a rule, was not severe, but a few of the cases were very troublesome. As I mentioned, a few lectures ago, this ailment was generally complicated with dyspepsia. I am inclined to think that this usually happens with dysentery, not arising from ulceration of the intestines, or from other definite pathological causes. In the cases under notice, though the dejections were scanty, and chiefly composed of mucus and blood, and the straining severe, long continued, and frequent, yet there was no direct proof of ulceration of the bowels. Pressure made over the abdomen, at different points, was borne without complaining—it neither caused acute pain, nor sickness, nor increased tenesmus, as we generally find when ulceration exists. There are exceptions even to this rule, but they are so few as to weigh little against the practical value of its evidence. Moreover, there was not the excessive prostration which commonly accompanies ulceration; and, more than all, the ailment, in so far as I had an opportunity of seeing it, admitted of remedy, which is perhaps the best proof that its cause was neither serious nor deep-seated. Yet in some instances, as I have said, the morbid action was very severe, and productive of much suffering. In almost every case, however, the dysentery was preceded or accompanied by dyspeptic symptoms. Now, whether the former were a *consequence* or a *coincidence* of the latter, at least two forms of treatment were indicated. These were, first, to relieve the immediate anxiety, pain, tormina, and tenesmus; and secondly, to improve the digestive function.

The most successful treatment consisted in giving, at once, an opiate proportioned to the urgency of the case. That you may understand what I mean by this, I must tell you that the physiological action of some medicines is considerably modified by the circumstances under which they are given. Opium is, perhaps, the most remarkable of this class. One grain of it, which is represented by twenty drops of laudanum, is a fair average dose for an adult; but there are occasions when an immense quantity of it can be borne, not only with impunity but without any obvious effect. In tetanus, for instance, this drug seems to be disarmed of its potency. Doses of it, that in ordinary cases would prove fatal, in this disease are of little or no effect. In severe pain, again, especially of the abdominal or pelvic viscera, a large opiate is generally required to produce good results. In the dysentery I allude to the symptoms, when not very urgent, were mostly mitigated by a dose of forty drops of tincture of opium; but, when very distressing, sixty drops barely served to alleviate them. I always preferred to give, for the first administration, the simple opiate diffused through a little warm water. My reason for not conjoining with it any other medicament was, that there was generally more or less gastric irritation, which prohibited other than narcotic or sedative remedies. This gastric irritation was seldom troublesome after the first full opiate; we were, consequently, left with the privilege of exhibiting other remedies, accordingly as they might be afterwards called for. Thus, the compound ipecacuanha powder, which the stomach would not have retained in the first instance, because of the nausea, was afterwards easily tolerated when that nausea had been subdued: in this manner, by a *timely* exhibition of the Dover's powder, we secured its valuable narcotico-sudorific effects (the best possible in dysentery), without the annoyance of sickness or vomiting.

A distressing stomach flatulence was occasionally a prominent symptom. If attended with nausea, it was best not interfered with until after the first opiate had allayed this; and then, one or two drachms of compound spirit of ammonia, with laudanum, in hot water, relieved it like a charm. In other cases, intestinal flatulence was a conspicuous trouble. I found nothing to remedy this like equal parts (four or five grains each) of compound soap pill and assafœtida. You will generally find that stomach flatulence is much benefited by ammonia, and little so by assafœtida; and that the converse applies to flatulence of the intestines.

An excellent adjunct to this opiate treatment was the hot bath. A complete bath was the most serviceable, because it determined more uniformly to the surface, and the better relieved internal congestion. The temperature I advised was from 100° to 106° Fah., in which the patient remained for five minutes, or longer, if he could conveniently bear it. Subsequently, he was well rubbed, from head to foot, with coarse towels. This is an important item in bathing, where you desire either to cleanse the skin or to promote free cuticular transpiration. Make it a rule never to advise a patient to take a bath without also advising him on this point.

When it was inconvenient or impracticable to obtain a full bath, I ordered the hip-bath, and found much good from it. Though it seldom relieved the abdominal pains effectually, it materially lessened the tenesmus, and in some cases dissipated it altogether. I employed it of the same temperature as above, and kept the patients in it from ten to fifteen minutes. You must be mindful, in using the hip-bath in dysentery, tenesmus, hemorrhoids, and such like affections, not to place your patient in a constrained position, or you will be likely to do more harm than good. Let him recline in such manner as to throw gravitation as little as possible towards the termination of the rectum.

In some cases in which an opiate given by the mouth did ineffectual service, it was excellently substituted in the form of enema. From forty to eighty drops of laudanum, according to the severity of the symptoms, I advised to be administered in a pint of gruel or starch. The latter is preferable, as being entirely free from irritating properties, and furnishing a convenient lubrication for the excited mucous membrane. This form of injection is sometimes invaluable in cases like those I am speaking of, as also in *calculus vesicæ*, enlarged prostate, uterine disease, &c.: the opiate coming into immediate contact with the suffering part, or into close proximity with it, often affords much more immediate and even lasting relief, than is capable of being afforded in any other mode of administration.

To keep the patient in a recumbent position, and especially to keep his feet warm, was one of the most effective means of relieving the pains of

the dysentery that prevailed last year. These are excellent adjuncts to more direct treatment, and I advise you never to lose sight of them in intestinal disorders, whether acute or chronic.

After the relief of the more urgent symptoms of the dysentery, it became necessary to attend to the state of the stomach. Calumba, for reasons I have already given, was the most available tonic, in union with carbonate of soda and tincture of henbane, or hop: when much stomach flatulence prevailed, the soda was well substituted by compound spirit of ammonia, or its carbonate. So soon as ever the intestinal irritation permitted, a purgative of castor oil, or rhubarb and magnesia, was given, which generally brought away a considerable quantity of fæces, chiefly scybalous. Some of these were almost completely round, others oval: their discharge was constantly accompanied with flatus, often in profuse quantity. I mention this fact thus specifically, because you may hereafter meet with its repetition in practice, and be led to suspect serious mischief where really there is none. It is not uncommon for dyspeptics, who lead sedentary lives, to complain of constipation of the bowels, and of the hardened, rounded character of their fæces. To their own minds, the belief suggests itself that there must be a narrowing of some portion of the bowels, which first causes a retention of, and subsequently gives a configuration to, the matter of dejection. In all these cases, if no organic disease exist, you will find that the patients suffer considerably from intestinal flatulence. It is to this accumulated and retained air, exerting its pressure equally at all points, that the rotundity of the fæcal matter is owing.

The treatment of the cholera of last year, of course, varied with the individuals who had the management of it. Practitioners, however, pretty generally agreed in the main of their remedies. Opium was of more value than any other single medicament. In full doses, repeated as often as necessary, it proved of excellent service. In many instances I found great use from camphor; this is often an admirable remedy in irritation of mucous membranes, especially of old people, as I have several times pointed out to you in treating cases of bronchial and vesical irritability, in such subjects, of late. I do not believe it to be so efficient in relieving irritation of mucous membranes in young people. Hyoscyamus, again, often did much good. Three grains of this, with three of camphor, and five of soap and opium pill, I was in the frequent habit of prescribing, and rarely without some good effect. When a mercurial was indicated, as on the occasion of the dejections being deficient in bile, *hydrargyrum cum creta* was the only one to be trusted. It seldom increased the purging, often relieved the sickness, and not often failed to promote the biliary secretion. In several cases, a scruple dose of the grey powder checked the vomiting at once, without at all increasing the action of the intestines. Calomel, in scruple doses, has been known to produce a like effect, but its sedative action under these circumstances is not always to be trusted; and, speaking from my own experience, I have so often seen it prove deceitful that I am little inclined to rely upon it when the bowels are in disorder.

In those cases of cholera in which the tongue was red, mouth hot, and epigastrium tender, ten-grain doses of carbonate of soda, as many drops of tincture of opium, and one or two drops of Scheele's acid, in an ounce and a half of camphor mixture, was a very serviceable draught. In severe cases, its repetition every three or four hours generally did great good. When the tongue was pale and trembling, two drachms of compound spirit of ammonia well supplied the place of the soda.

The hot bath was an excellent adjunct to other treatment. In many instances I had reason to rejoice in its services. I always preferred the salt bath, made by adding three or four pounds of common salt to the water; or a more stimulating one, in which, in place of the salt, two or three ounces of mustard were used. The object of this was more completely to excite the skin, and divert the deep-seated irritation. When a full bath could not be procured, the foot-bath was substituted: there being little tenesmus, generally, in the cholera cases, the hip-bath was not specially indicated.

Another form of treatment, which rarely failed to be of benefit, I must mention to you. This consisted of local applications to the epigastrium or abdomen. When simple warmth, with moisture, seemed only to be indicated, they were well furnished by large bran poultices. These are made by scalding a sufficiency of bran with boiling water, and, when properly cool, putting it in a calico or canvas bag, large enough to cover the entire of the abdomen. Heat and moisture are thus supplied easily, and are maintained without trouble or inconvenience for a long time. This poultice is much cheaper, cleaner, and more readily made, than one of linseed meal, and retains its temperature for a considerably longer period.

In urgent cases counter-irritation of an active kind was called for. When the gastric symptoms chiefly required to be counteracted, this was best done by the application of a mustard cataplasm, from six to eight inches square, over the epigastrium. These are most serviceable articles when you desire to produce an immediate action upon the skin. They act more quickly than a blister, and, though perhaps not so thoroughly, they have the greater advantage of seldom breaking the skin, and, therefore, of being capable of renewal almost as often as you may think fit. Some people advise, to add pungency to the mustard, that it should be mixed with vinegar. There is no need for this. A mustard poultice is never better made than when its fluid ingredient is warm water. It is of importance that the mustard should be recent: that which has been long kept, and especially if it have been exposed to air and sunlight, will prove of little value. When you desire to mitigate the acrimony of the mustard, as when about to apply a poultice of it to a very sensitive skin, or to a child's, this is done by adding to it one half, or the equivalent quantity, of flour or starch.

The mustard poultice applied over the epigastrium in the cholera cases I speak of was ordered to be retained there as long as the patient could conveniently bear it, which averaged between ten minutes and twenty. I never urged its protracted application, for fear of preventing a convenient repetition of it. This was made whenever circumstances required, and generally with good results.

When the irritation was more completely gastro-intestinal, a less potent counter-irritant than mustard was necessary. A mustard poultice of a few inches square is not a very formidable remedy; but one to cover the entire abdominal and gastric region is a very different affair. If you counter-irritate very actively an extensive surface, you may produce more mischief than at first you would suspect. It is possible, in thus injudiciously treating a patient, to occasion excessive irritability and exhaustion. I have known fatal sinking from a large abdominal blister. Instead of a mustard poultice, then, where we wanted to combat gastro-intestinal disturbance, turpentine was used. Like most volatile bodies, this cools any part to which it may be applied with freedom of evaporation; and, on the contrary, warms it when evaporation is prevented. A ready way of using it in this wise is to saturate with it a piece of thick calico, large enough to cover the part affected, to apply this calico uniformly to the surface; and then to cover the calico with oil-silk and a few folds of flannel. The turpentine, thus prevented from evaporating, is kept in close contact with the skin, which it stimulates sufficiently to produce heat, redness, and a tolerable degree of pain. An easy and elegant way of applying turpentine in these and other such cases is provided in the piline materials lately introduced to the profession by Mr. Markwick. These are of two kinds, called, from their relative thickness and amount of coating, impermeable piline, and spongio-piline. To saturate either with turpentine, according as you want to produce more or less effect, and apply it to the part in question, is to save the longer and somewhat troublesome process I have just given.

This turpentine application to the bowels was of much use in the generality of cholera cases in which I tried it. It appeared to rouse the dormant energies of the system (a very natural effect of its absorption), and certainly mitigated the intestinal pain and discharge. In a few cases its absorption was attested by a violet odour of the urine; but in none did it produce the least stranguary, or other renal disorder. As the cholera symptoms declined, the remaining debility, gastric or other, was met most effectually in the mode I described when speaking of diarrhœa and dysentery.

I told you, gentlemen, in beginning this subject, that the bowel complaints of last year occasionally superseded others that had pre-existed. I had the opportunity of seeing many instances of this, and a few of them are curious enough to deserve mention.

I have already spoken to you of a dispensary patient of mine, whom some day I will introduce to you as a good example of diabetes permanently or temporarily arrested, time must tell us which. This man, William France, a workman in the manufactory of Mr. Bacchus of this town, was passing fourteen quarts of water every twenty-four hours, when he came under my care as a dispensary patient. Its specific gravity was 1040; it was very sweet, and gave other proofs, which on a future day I will detail, of containing a notable quantity of sugar. He continued stationary for nearly a fortnight, when he was suddenly seized with excessive purging. From the moment this commenced, there was a suspension of his diabetic symptoms: he passed not more than from two to four quarts of urine in twenty-four hours, and instead, as was his wont, of rising five or six times in the night to void it, never rose except to relieve his bowels: his urine acquired a deep colour, had a strong urinous smell, a salt taste, and contained not a trace of sugar: moreover, the excessive thirst and hunger decreased, and the skin perspired freely. This improved state lasted for five or six days, when the diarrhœa subsided, and the diabetic symptoms again made their appearance as urgently as ever.

Six months ago, I attended, with Mr. Bracey of this town, a little girl, two years and a half old, who was the subject of severe diarrhœa, or it might almost be called dysentery. This had suddenly supervened upon an attack of hooping-cough, and had completely supplanted it. The diarrhœa was treated with mild astringents, chalk, and small doses of opiate. These produced little effect, and we were about increasing their quantity, when the purging as suddenly ceased as it had begun, and the child's head became hot, and it screamed, and started in its sleep. On visiting it the next morning, we found it feverish and restless, with a very slight tendency of the eyes inwards. It was clear there was metastasis of the morbid action to the brain, or its membranes. He gave calomel to reproduce the purging, employed counter-irritation and other active remedies, but to no purpose: the child died of meningitis in sixteen hours after the unaccountable cessation of the diarrhœa.

In another case that occurred to my observation, a troublesome pustular eruption, chiefly affecting the face, back, and chest, that had lasted some months, and resisted every form of remedy, disappeared immediately on the occurrence of the bowel complaint (not *antecedently* to it), but returned, though in a mitigated form, as this subsided.

The little girl with the eruption round its mouth, which has lately been my out-patient at the hospital, was the subject of scarlet fever, the course of which was suddenly stopped by the occurrence of profuse diarrhœa. This was relieved by medicines, but the fever did not recur.

A rather striking case of pyrosis, of several

weeks' duration, was arrested directly on the supervention of dysentery, and did not return after this had subsided. A case of profuse bronchorrœa was similarly checked; but, though the discharge did not recur after the cessation of the bowel complaint, the cough continued, and the breathing, before easy, became difficult. The case eventually improved. In more than one phthisical subject, I had occasion to notice a complete suspension of the night sweats, and of the expectoration, when the diarrhœa made its appearance. The exchange, however, was the reverse of salutary to the poor sufferers.

I find that our time will not permit me to enter further into these subjects; and for the same reason I must defer speaking of the *sequelæ* of the bowel complaint, and their treatment, until our next meeting.

LECTURES ON INFLAMMATION.

By Dr. CORRIGAN.
Delivered at the Richmond Hospital School of Medicine, Dublin.

Lecture I.—INFLAMMATION.

GENTLEMEN,—I am sure it is not necessary on the present occasion to occupy your time with any introductory observations. You have already had the advantage of obtaining from my colleagues whatever information you might require in regard to your studies, and in relation to your efforts for success in your profession hereafter.

With regard to the importance of this particular branch of your studies it is hardly necessary to say a word; there is no one branch which is not of consequence to the student; but, without wishing for a moment to exalt any one above another —for all are essential to a subsequently successful career—still you are to recollect that the branch before us constitutes, if not the most, one at least of the most important, having for its object the cure of diseases; and, where that cannot be accomplished, the lessening of human suffering: to the attainment of which great ends all the other branches, however important in themselves, are subservient. Without further trespassing on your time, I shall proceed at the outset to draw your attention to a subject which appears to form a stumbling block to the student,—I allude to inflammation.

This subject I shall take up only as far as it relates to the particular department before us— practice of medicine. I remember my own feelings, as a student, respecting this perplexing subject, and I am aware that it is not less puzzling to those commencing at this day; if, therefore, even at the risk of appearing tedious, I shall be able to remove some of the obscurity in which it is involved, I will consider myself sufficiently fortunate. If we take up some of the most accurate writers on the subject, for a definition of inflammation, we come to the end of the definition without any one distinct idea presented to our minds.

In making any definition the object ought to be the statement of some one fact, or sign, essential to the particular subject described, in order to prevent perplexity. Let us take up the article inflammation in almost any book, and see what are some of the difficulties attendant on this subject. We are told that in inflammation there are present, "heat of the part, tension, swelling, hardness, and for the most part a sensation of acute pain of a burning, heavy, pungent, or fixed character; that the colour is redder or darker than natural; the pulse most frequently full and hard, though often contracted; finally, that suppuration or gangrene ensues." But let us take any single one of these signs, and we don't find it an essential accompaniment of the lesion under consideration: for example, we find heat to exist only in particular instances; in others we have no means of determining whether it be present or not. Take common inflammation of the iris, we have no means by which to determine its absence or presence there Tension is very often absent, swelling may be totally absent. In many acute inflammations, instead of hardening, the part is often softer than natural; then we come to the nervous lesions—pain which is described as being so acute; but in how many instances is this symptom also absent? In some inflammations of the brain, pain is absent; there may be only the mere arrest of functions. These observations apply to each and every symptom ascribed to the presence of inflammation. In inflammations of serous membranes there is neither increased redness nor darkness of these structures; on the contrary, they may be lighter than natural. Again, you are told there is most often fever accompanying inflammation—a statement exceedingly dangerous to the beginner. For example, during the first twenty-four hours of acute pericarditis there is no fever, and so with other diseases; fever comes as the consequence of certain lesions, not as an early accompanying symptom. You see it as the consequence of a wound; not immediately after its infliction, but when inflammatory action has been set up. Thus you observe, as regards internal diseases, this would be a very bad characteristic to establish. Next, as to the pulse: in some of the most important diseases—pericarditis for example—the pulse, instead of being hard, full, bounding, &c., is exceedingly soft and small, requiring the exhibition of wine. Sometimes you will find the pulse natural, thus overturning all the rules laid down as diagnostic of inflammation.

We now pass to the nature and treatment of disease; and, go round the hospital, the same difficulty encompasses us. The pupil passes through the wards, he sees a case which is pointed out to him as pneumonia, and for which tartar emetic in large doses is given; yet, in the very next bed, a patient, also labouring under pneumonia, is taking mercury and opium. To what principles is the student to look for an explanation of these facts? He next sees a patient with inflammation of the mucous membrane of the large intestines, and to him opium is given in large doses; thus, again, he observes a departure from fixed principles. He next passes to the surgical wards, and there sees a case of inflammation of the conjunctiva treated by leeching, mercury, &c.; and the next moment a case of irritable ophthalmia, in which neither leeching nor mercury is used, but sedative applications and the internal exhibition of tonics; while to a third is applied nit. argenti, or some other caustic remedy. Again, amongst the host of skin diseases in the medical wards, the same confusion exists: so that an impression is absolutely forced upon the student's mind, that the whole treatment is the result of guesswork; he can conceive the existence of no guiding principle of treatment, for he sees remedies of an entirely opposite character administered in diseases of the same name, and included in the same class. Some late scientific writers, impressed with the erroneousness of the term—inflammation, have proposed to discard it altogether; and among these is so high an authority as Sudul; but we cannot, after all, proceed without it. Allison advocates the preservation of the term; and with him, Bennet, and others—these latter, however, stating that it should only be applied to those cases in which there occurs an exudation of the granules of the fibrine, as seen with the microscope in the liquor sanguinis. But let us come to test this proposition in practice, and we will find that a man may die of what can be called inflammation before this exudation has taken place; for instance a man may die of congestive pneumonia: the vessels throughout the whole lung are in a state of congestion, and in that state the patient dies; yet such a case must be excluded from the class of inflammations, if we are to view the term in the manner proposed.

With these difficulties surrounding us, what are we to do? In order to have any clear ideas of the term inflammation, we must strictly analyse it; to ascertain in what it consists, we must avoid connecting with it this effect or that, and endeavour to ascertain what particular morbid state we have to deal with, that we may be able to understand the rules which are to guide us in the treatment. In the achievement of this great practical object, the discoveries of modern days furnish us with important aid. I allude to the results of microscopical observation, and these I shall take up as far only as relates to the particular subject under consideration.

In the elementary function of nutrition there exists in all living bodies a perfect similarity; the same system of nutrition that exists in the lowest vegetable exists equally in man; and to this the name of cytogenesis, or cellular nutrition, is given, from its being supposed that growth takes place by the development of cell after cell. But, without going into this question further, you are to remember that by nutrition is meant the process by which in all living bodies is effected growth,—the formation of the new tissue that is required, and the removal of that which has done its office. This function exists before any trace of capillary circulation—before the formation of a single vessel can be discovered Keeping this function by itself before our mind's eye, let us carry our analysis a little further. Before you is a diagram of the web of a frog's foot, as seen through the microscope; it will serve to illustrate our views; the capillary vessels are seen communicating in every possible way with one another, and may be considered as so many supply tubes carrying the materials to the cellular matrix, in which the process of cytogenesis, or cellular nutrition, is going on. There are here, then, two closely connected yet independent actions—circulation and nutrition.

It has been supposed—the opinion, however, being still a matter of theory, I merely mention it as serving to carry out an explanation—that the globules of fibrine found in the liquor sanguinis are the nucleated cells required for the purposes of nutrition, the vessels being the mere supply tubes. And this carries us to the second function, circulation, which, although intimately connected with that of nutrition, is yet independent, insomuch that a lesion of the one may exist without necessarily involving the other. For instance, you can readily understand that the function of nutrition carried on in the interstices or meshes may not be in full vigour, that it may not draw from the blood globules in the usual amount, that its vigour may not be equal to that of the circulation; or, on the other hand, we can as easily suppose that the circulating vessels may become distended to double their usual size, carrying too great a quantity of blood globules; the function of mere nutrition may be comparatively unaffected.

Let us turn again, for a moment, to pathology, and we shall see two completely opposite pathological conditions classed under the same name —inflammation. Take peritonitis, what do we find here? We find an effusion of the fibrinous granules—in other words, the nucleated cells, and perhaps a proportion of serum constituting strictly a lesion of the nutritive function, but no disturbance, or little or none, of the capillary circulation of the part; there may be some vascular enlargement, but the lesion of the circulating function bears no proportion whatever to that of nutrition; the lesion of the nutritive function, in fact, here constitutes the leading character of the disease.

If, on the other hand, we pass to the extremities, or to the lungs themselves, we frequently find the part on examination darker or redder, or heavier than natural. Upon what does this depend? Not upon derangement of the nutritive function, not upon derangement of the granules of the fibrine, but the capillary vessels acquire two or three times their natural size, and at length become so distended that they have lost their tone; the circulation has ceased, the vessels have come at last to that point that all motion has ceased in them, the part dies the lesion has ended in gangrene or death from a cessation of the circulation, and yet the function of nutrition has hardly been engaged; the patient has died before that function has become deranged. The same capillary distention is observed in bad cases of typhus fever, where the patient lies prostrate in the bed. Thus, you see, we are led

at once to the distinction of the cases to which I have been alluding as included under the one class—inflammation.

We will now advance a step further. In some of the lowest classes of animals we find hardly anything more than these two functions; but the higher classes possess something more than this elementary constitution. We find in them two classes of nerves—the one, the sympathetic system, or that of organic life; the other, that of animal life, or that which connects the living being with external objects, and endows him with sensation.

Mixed up with the two functional lesions already described as constituting severally pericarditis on the one hand, and congestive pneumonia on the other, he may have superadded a lesion either of that portion of the nervous system which connects the diseased part with the other portions of the body, or of the nerves of sensation giving rise to pain or disturbance of function. Thus, in proportion to the combined derangement of these three functions, we have what is called inflammation. If there be derangement of nutrition, we find exudation; if of circulation, redness or darkness of colour of the part, &c.; lastly, pain, if the function of innervation be involved..

Following out this system of analysis, you will see how it is that the definition of inflammation, as applied to any one organ of the body, cannot be applied to another. No definition can combine the symptoms or characters of this compound lesion as it occurs in the various organs of the body. You will also be able to understand on what depends the difference of treatment alluded to, or what seem to be conflicting principles in the mode of treating these diseases. Let us, by way of illustration, go back to the case of congestive pneumonia, which we spoke of, and ask ourselves what have we to contend with in that stage? We have to treat a derangement of the circulating function; the vessels are more distended than natural, the blood globules move slowly: there, as I told you, we use tartar emetic, with bloodletting, and if the patient be sinking we give stimulants. But turn to the patient lying in the next bed with the same disease, and you see him under mercurial treatment; and why? Because, as pathology shows us, after the vascular distention, the lesion of the circulating system has lasted some time, the nutritive function become implicated, and effusion of fibrine or of the nucleated cells takes place from the vessels into the cellular tissue of the lung, and thus there is superadded a lesion of the nutritive function, and sometimes not merely superadded, but taking the place of the deranged function of circulation, and becoming now the prominent lesion to be dealt with. Of all remedies we know that mercury has the most powerful influence over the derangement of the nutritive function, and in causing the absorption of those lymph granules; and for this reason we put the patient under mercury. Again we find that in some cases, or in somewhat similar cases, such as bronchitis, opium is added to the mercury; and why? For the purpose of allaying the irritation of the nerves of the part which sometimes exists.

In acute dysentery, see what occurs; mark the effect of leeching or bloodletting, as a means of relieving the lesion of circulation; of mercury, in correcting the derangement of the nutritive function; and the powerful effect of opium in checking the progress or preventing a recurrence the lesion of innervation.

These three functions, though separately affected, are most often in intimate connection, so that, though the nervous lesion may be a consequence of the derangement of the two first functions, we use the opium to remove it, for when it ceases to exist we break up the circle, while, if left alone, it might be the means of bringing back the lesions of the circulating and nutritive functions. This explains why it is that we use this remedy or the other in various proportions. Every case of inflammation, you are to remember, commences with one or other of these three lesions, more or less marked, viz., the elementary functions of nutrition, of circulation, or that of the nervous system. Where the lesion of the nervous system is the greatest, as in neuralgia of the face, it shows itself as the primary lesion, commencing with acute pain, and followed by flushing of the cheek, swelling, and redness, with weeping of the eye. You there see, first, the lesion of innervation; second, that of circulation; lastly, deranged nutrition: the order of common inflammation being inverted in such a case. Here you would use not such remedies as would lower the tone of the system, but first sedatives, to dull the increased sensibility; and, next, exhibit such internal remedies as would give a general tone to the constitution.

In acute rheumatism we observe opium given in very large doses, while we see an injury of a joint subjected to another and different mode of treatment. If we analyse a case of acute rheumatism, we find the observation of Sydenham perfectly borne out; he expressly states that it commences with pain, in other words, that the lesion of innervation precedes, by one, two, or three days, the lesion of the functions of circulation and nutrition; it is the first link in the chain of morbid actions, and hence we can employ opium in very large doses, and effectually, in its treatment, while we trust more to antiphlogistic remedies in common inflammation.

Still following up the same views, we can understand why occasionally we use a combination of opposite remedies, as opium, leeching, internal tonics, tartar emetic, bleeding, mercury, &c.

The adoption of this analysis throughout the long list of diseases that fall under the class inflammation will probably afford the student a clearer conception of the subject than he can obtain from the works that ordinarily come before him.

At our next meeting I shall take up more in detail the alterations of each particular function in itself

SUBSTANCE OF A LECTURE

By Sir B. BRODIE, Bart.

DISEASES OF THE SHOULDER-JOINT.

GENTLEMEN,—In my last lecture I entered upon the subject of counter-irritants, and I intended to pursue the subject to-day, but for particular reasons I postpone it for a time, and shall, on this occasion, speak of the diseases of the shoulder-joint. The shoulder-joint is not nearly so liable to disease as many other parts of the body, and this is probably owing to its proximity to the vital organs—the heart, brain, and spinal chord—also from its being protected by the great mass of muscle surrounding it: another cause may be named—it has not to support the weight of the body. But, though it is less liable to be affected than some other joints, yet the diseases which occur elsewhere may, and frequently do, also occur here; and should I enter into a history of diseases of this joint, and their treatment, I might well occupy several lectures; that, however, is not my intention. If you look into the remarks on diseases of the knee and hip joints, which I published some years ago, and which appeared in the journals of the day, you will find many of the most important observations on points which belong to those joints and the shoulder-joint in common; but I do not refer you to my own observations alone, but to information published by many others; and I propose to day to speak chiefly of those morbid conditions which are peculiar to the shoulder-joint.

One of the most common diseases to which the shoulder joint is liable is inflammation of the synovial membrane. The circumstance of the large deltoid muscle covering it makes it less liable to this disease than the knee—resembling in this respect the hip-joint, which is protected by the glutæus muscle. Inflammation may occur in this joint as a local disease, as when a man has inflammation from a blow on the shoulder; but where it occurs once as a local disease, it takes place as gout or rheumatism twenty times. Inflammation of the synovial membrane of the shoulder gives a sharp lancinating pain, more or less intense, according to the degree of inflammation, and this pain is referred to the joint itself. If the pain be in the immediate neighbourhood, the shoulder becomes swollen, and the swelling is sometimes much more considerable than you would imagine the capsular ligament would allow. But the shoulder-joint is never inflamed without the numerous bursæ being inflamed also, and the inflammation of these makes the swelling larger than if confined to the joint. The inflammation extending to these bursæ produces also another symptom: when you handle the joint a sort of cracking sensation is produced as you touch it with the fingers; this sensation differs entirely from that produced by the grating of rough bones together, and will be readily recognised when once you have noticed it. It arises, I think, from the fluid in these inflamed bursæ passing from one set of cells to another.

Inflammation of the synovial membrane of the shoulder-joint terminates in the effusion of serum, and also of coagulated lymph, but seldom of pus. Persons seldom die of inflammation of the synovial membrane of this joint, and opportunities of judging by examination after death are rare, more rare in cases of this joint than of any other. That lymph is effused into the interior of the joint, and also into the cellular texture external to it, is shown by the stiffness which always, more or less, according to the inflammation, follows this form of disease. Now, I said that this was very frequently an effect of gout, and therefore met with very much amongst the rich and idle. How will you be able to judge of this? There will be acidity of stomach, and weak digestion; you will find that the patient has been indulging in excess of eating, and drinking wine, has lived very much on animal food, and the urine will contain a large quantity of lithate of ammonia. This gouty attack of the shoulder may be distinguished from rheumatism by this, that the latter attacks several parts simultaneously; but gout, though it may move about from one part of the body to another, seldom attacks two places at once. After all, the distinction between gout and rheumatism is not very well marked, as shown by this circumstance, that we hear of rheumatic gout when the surgeon is doubtful to which it belongs. Inflammation of the synovial membrane of this joint, I suppose, may terminate in pus, in the joint, though I never saw that effect; it may also, perhaps, produce ulceration of the cartilage, though I am not certain whether I have seen it do so; but, at all events, it is more rare here than in the knee. If it did terminate in ulceration, then there would be more pain, and paralysis of the muscles of the extremity.

This disease is treated on the same general principles as inflammation of the synovial membrane of other joints. When it runs high, and there is much fever, you will take blood from the arm, or apply leeches, or cup the patient—not just on the joint, but in the neighbourhood, as the pressure of cupping will do it more harm than good. As in other cases, you administer purgatives, saline medicines, and diaphoretics, where the inflammation is acute. Having well purged the patient and given diaphoretics, you may give the vinum colchici in small doses of twenty drops three times a day; but never, on this or any other occasion, give colchicum till you have well purged the bowels; and I never give it without at the same time administering small doses of mercury: for its effect, we know, is to hinder the secretion of bile, as shown in the colour of the stools; and this is injurious, if carried to any extent. In cases of rheumatism, as is usual, give the patient calomel; he is often relieved by being mercurialized. In almost any case of inflammation of the synovial membrane of the shoulder-joint, as of the other joints, you may give mercury with advantage, so as to affect the gums just for a few days—it is not required long; and, besides these remedies, as the case is acute or chronic,

you may give guiacum, pulvis ipecacuanhæ comp., and sarsaparilla, as for the treatment of rheumatism elsewhere.

The next disease of the shoulder which I speak of has its origin in cancellous structure of the bone. You can cut it with a knife; it becomes very vascular, and filled with matter of a cheesy nature. Then you will recollect that this increased vascularity is followed by diminished vascularity, and this by ulceration of cartilage beginning on that surface which lies towards the bone; and where the articular cavity is perforated an abscess is formed which makes its way externally. This scrofulous disease of the shoulder-joint terminates differently from that of the synovial membrane; there is a small degree of pain in the first instance, and it never is very great till the abscess is making its way to the surface, and is aggravated by motion of the joint. When the abscess is formed it makes its way in one of two directions—either forwards or backwards; it cannot make its way through the deltoid muscle, for muscles seldom ulcerate, so it creeps along, either to the inferior or posterior edge. An abscess connected with scrofulous disease of the shoulder-joint presents a remarkable appearance—a globular tumour appearing to be enveloped in a serous cyst, just like an encysted tumour. I remember a case where a surgeon mistook an abscess of this kind for an encysted tumour, which it very much resembled, and proposed to have it removed, but the lady objected, and after a time it proved to be a scrofulous abscess. I remember a case in this hospital which shows how the disease takes this peculiar form:—A woman was admitted for a globular tumour near the shoulder joint; but she died of diseased lungs. I examined the body: there was scrofulous disease of the joint; the bone was soft, vascular, and cheese-like; an abscess was found in the interior of the joint, which made its way out by the course of the tendon of the biceps, and under the anterior edge of the deltoid muscle. You cannot fail to understand how it put on the peculiar form I have mentioned.

The treatment of scrofulous disease of the shoulder-joint is conducted in the same way as that of the knee-joint. I have sometimes put on a leather splint, formed to the shoulder, and, by straps, buckled to the opposite side of the chest; but this is not so necessary here as in scrofulous disease of the knee-joint, as it protects the knee from being rubbed against anything, and entirely prevents motion. This splint is of more advantage in protecting the shoulder from disturbance, than from limiting its motions. You may control its motion by fastening a bandage round the arm, and then passing it to the opposite side of the chest and tying it. With respect to the other part of the treatment, you attend first to the patient's general health; send him to the seaside, or let him live in the country air; let him have a generous diet, and have steel medicines, if they agree with him they are the best tonics; they must not be given unremittingly, but after a period of three weeks let the use of them be suspended for ten days, and then resume them for another similar period, stopping again for another ten days, and so on in like manner as before. The steel medicines must be taken for a long time, for they are intended to strengthen the constitution, and that cannot be attained at once; it will be necessary to extend their use over a period of three or four years, for it is not given so much with the intention of curing the disease, as of strengthening the constitution. Sometimes steel heats the patient, if given in the ordinary manner. You may then frequently make it agree with your patient by giving it thus:—let him have citrate of iron in an effervescing saline draught, or without effervescence; the iron gives tone to the system, and the saline tends to the skin and relieves the patient from any uncomfortable heat.

When iron cannot be made to agree, you may employ sarsaparilla or quinine, and other bitter tonics. But the best tonic, after all, is the sea-air; it is more useful than bathing; many go to the seaside and imagine that it is the bathing which does them good—it is the air more than the bathing.

The cartilage of the shoulder-joint may ulcerate in consequence of this scrofulous disease of the synovial membrane; but one point I must remark—scrofulous disease of the shoulder-joint will generally get well, especially in young subjects, for the joint is of a simple construction, and for the same reason that fractures and various diseases of the upper extremity get well sooner than those of the lower, because of the greater proximity to the centre of the circulation. When it gets well, the patient may recover with more or less of a stiff joint; but anchylosis of the shoulder is less inconvenient than in many other joints, because the scapula is moveable on the trunk, and the increased motion of the scapula makes up in some degree for the diminished motion of the shoulder-joint.

If you have scrofulous disease of the knee which does not get well, you resort to amputation; can you do so as regards the shoulder? The disease is not confined to the joint alone, but extends to the scapula also. I never attempted it but once; a man came into the hospital with scrofulous disease of the shoulder, and after some time the disease appeared to be gaining on him, and the remedies employed did him no good; he seemed dying of disease of the shoulder, and I amputated the arm at the shoulder-joint. The head of the humerus was greatly diseased, and the disease extended down to the shaft of the bone, and the cartilage completely ulcerated; the articular surface of the scapula was deprived of cartilage, and was very soft; the abscess was found in the substance of the bone, just below the articular surface. Of course it was out of the question to heal the wound by the first intention, and the patient stayed a long time in the hospital, the wound healing by granulation, sometimes better and sometimes worse. All this time our endeavours were exerted for the improvement of his constitution. In ten months after the amputation I saw him again, and his health seemed much better, since he had got rid of the incubus of the disease; the wound had nearly healed; there were two sinuses, one before and another behind, but the appearance was favourable. Since that time I have not had an opportunity of seeing him. Though ulceration of the cartilage of the shoulder-joint is often the effect of inflammation of the synovial membrane, and is also connected with scrofulous disease, it occurs sometimes as a primary disorder. I have not seen it in the shoulder, but I have in the knee; yet I have no doubt it has occurred. When it occurs in the shoulder, it is generally connected with some form of rheumatic inflammation in the articular textures.

The patient has pain in the shoulder, small at first, but increasing for months, and is worse at night, and affects the muscles of the limb, rendering the patient weak. When you press the articulating surfaces against one another there is an aggravation of the pain, indeed by every kind of motion; the pain is referred chiefly to the joint, but it extends down as far as the hand. There is no swelling of the joint, but a decided diminution. The deltoid muscle wastes, and you know this lessens the size of the joint. This smallness of the shoulder corresponds with the flattening of the nates in diseased hip. I suppose this disease would go on to the formation of matter in the joint; but the cartilage does not ulcerate, and the joint may become anchylosed, without abscess, and the patient get well. When this kind of caries affects the spine it may destroy many of the vertebræ, and yet no abscess exist.

The treatment of this form of disease in the shoulder does not differ from the same form in the knee; I therefore refer you to what I have written on that subject. I may just say, keep the joint immoveable, you will do well to protect it by the leather splint; it is one of those cases where counter-irritation is useful, and therefore I have sometimes applied a blister; but I think caustic issues are preferable, one in front and one behind, to be kept open, not with peas, but by rubbing with caustic potash; but do not harass the patient. There are constitutional remedies more important than local applications. Treat this as you would orchitis or iritis. Mercury is an important medicine. Give two grains of mercury and one of opium, once or twice in the day. If the patient be scrofulous (and it is not always the case), give sarsaparilla, ℥ij. of the extract in the decoction, or mercury and sarsaparilla. You may give mercury with iodide of potassium. If you are afraid to give so much mercury as I have named, give five grains of blue pill, night and morning; or two grains of iodide of potassium, night and morning. You will not be required to maintain the use of the mercury long, not longer than ten days, or three weeks at the most. Under this treatment I have never known what I believe was permanent ulceration of the cartilage of the shoulder fail to give way in a certain time, although on recovery the shoulder will, of course, be more or less stiff.

The primary ulceration of the cartilage of the shoulder assumes two forms, as in other joints, and is sometimes acute and sometimes chronic. It is especially in its acute form that mercury is indicated, and, when chronic, sarsaparilla helps very much to put an end to it.

The shoulder may be the seat of malignant disease. A patient was admitted to this hospital, complaining of pain in the shoulder; the pain was slight and the shoulder very large; the pain was not much aggravated by motion, except when the arm was elevated to a right angle with the trunk, then much pain was experienced. She was here for some time, and went out. The nature of the disease was not then understood; she was readmitted. There was now not much pain, but the joint was much enlarged; soon after she had erysipelas and died. I examined the shoulder carefully; the head of the humerus was much attenuated, and much like a thin membrane. When the cartilage was pulled off, the cancellous structure of the bone was quite abnormal; hardly any earthy matter left in it, quite vascular, and looking to the eye like a part affected with medullary disease—fungus hematodes. This substance, over the greater tuberosity, had made its way to the projection on the inside of the scapula, and perhaps this was the cause of that pain which was felt when the elbow was raised. Behind the parts I have mentioned, the bone presented another appearance of disease—it was hard like scirrhus; the scapula was free from disease. Perhaps, if the limb had been amputated, there would have been little chance of cure with so much tendency to erysipelas; but what should have been done had there been no erysipelas? I think amputation would have been right. We judge of what will take place by what has taken place. A young lady had pain in the shoulder, for which she had consulted several persons and tried many different remedies. She did not apply to me till twelve months after the disease was first remarked. She had considerable disease of the head of the humerus. I handled the head of the humerus and moved it in every direction, showing no disease of scapula. Sir A. Cooper and Mr. Key saw her, and we all recommended amputation. We removed the shoulder-joint, and the capsular ligament was in its natural state, but the head of the bone was much enlarged. On making a division of the enlarged head of the humerus, it was found that there was a large tumour, the earthy matter of bone had disappeared, and there was fungus hematodes.

There was, in this case, one feature rendering it favourable for an operation—the whole of the seat of disease was removed, it terminated very well, and no return of disease has taken place ten years after. Now, there is a class of cases of disease of the shoulder-joint, concerning which you will often be consulted in private practice, with the pathology of which I cannot profess myself positively acquainted. It happens that we cannot examine the body, as patients do not die of it. You may know it by an assemblage of symptoms,

which I will describe as I see it. A patient comes to you complaining of pain in the arm, and chiefly about the insertion of the deltoid muscle; it is not distressing—patients do not suffer much pain, and sleep well. When you come to examine the arm you find its motions limited, sometimes it can be raised to form an angle of forty-five degrees, and sometimes not more than ten, from the body. You can move it backwards and forwards better than laterally. The rotatory motion gives most pain; if you tell him to bend his forearm, and put it behind his back, he cannot do it; and that not on account of the pain, but the joint will not admit of the motion. There is no enlargement of joint, indeed it is rather smaller. It comes on very insidiously, and is of a chronic nature; the patient often suffers from it for months before he consults a surgeon for it; it may last for one or two years. Sometimes he attributes it to pulling down a window, or pushing one up, or some equally simple cause. In general, the patient recovers, and has the use of the joint; but it is still stiff, though not anchylosed; but the motion chiefly depends on the scapula. It occurs, under some circumstances, like those in which persons are affected with sciatica or lumbago; but what is the primary seat of disease—whether it is a disease of the synovial membrane, or primary ulceration of the cartilage—I cannot say. From the absence of swelling, I should think it is not a disease of the synovial membrane, and I do not think it is a primary disease of the cartilage; for there is no pain at night, no starting or disturbance of rest: certainly not of the character of scrofula.

Sometimes the opportunity will occur, accidentally, of making out the nature of the disease; and, in the meantime, in giving you this sketch of it, I am imparting to you all the knowledge of it which I possess. It is very common, so that where you meet with one other disease of the shoulder-joint this occurs ten times.

The treatment which I have found best is to keep the joint quiet in a sling, and attend to the constitution of the patient; give small doses of blue pill, and of iodide of potassium two or three grains in water; this treatment has succeeded when blisters, setons, issues, and all other remedies, have failed; the vapour-bath is also found useful. It occurs chiefly, I have found, in the affluent classes of society, and amongst those who indulge in excess of animal food; and you will in such cases see the propriety of reducing the diet. It is astonishing how little food is really necessary for the requirements of nature. Many of the idle and affluent eat double the amount they need; such persons, when they come into your hands, must be placed on a more natural diet—meat once a day, no fermented liquors; a little food well masticated nourishes the body, when meat swallowed as it is put into the mouth does quite the contrary; and this is the practice frequently of those I have named—eating double what is necessary, and letting that into the stomach whole. Experience will direct you in the choice of a proper diet.

DUMAS ON ORGANIC CHEMISTRY. No. XII.

ON THE BLOOD.

(Continued from p. 400.)

Blood of Animals.—M. Prévost and myself, in an earlier memoir, published our views as to the composition of the blood in various animals. The analyses which we then performed led us to the conclusion, that there are essential differences in this fluid, in so far as regards the proportion of the globules. According to our determinations, birds contain the largest amount; next come the carnivorous mammiferæ; and then the herbivorous, animals with cold blood contain the least.

As the temperature of birds is much more elevated than that of the carnivorous mammiferæ, which in their turn possess a degree of animal heat sensibly higher than that of the herbivorous animals, we may conclude from this comparison that there exists a manifest relation between the temperature of the animal and the richness of its blood in globules. The following table contains the result of our experiments. The fibrine and globules were not separated in these analyses, but were valued together. We must remark with some surprise the amount of globules in the blood of the tortoise, which approximates to that of the bird, although furnished by a cold-blooded animal.

Further researches are required as to the composition of the blood in animals; but, to derive much utility from them, we must carry out our investigations so as to define with greater precision the nature of the materials entering into its constitution.

Name of Animal.	Temperature of rectum.	Normal pulse per minute.	Normal respiration per minute.	Blood Globules.	Albumen and soluble salts.	Water.	Composition of serum.	
							Water	Albumen
Pigeon	40°C°	136	34	1557	469	7974	945	55
Chicken	41·5	140	30	1571	630	7799	925	75
Duck	42·5	110	21	1501	847	7652	9·1	99
Raven	..	..	..	1466	564	7970	934	66
Heron	41·0	200	22	1326	592	8082	932	68
Ape	35·5	90	30	1461	779	7760	908	92
Man	39·0	72	18	1292	869	7839	90·	100
Guineapig	38·	110	36	1280	872	7818	900	100
Dog	37·4	90	28	1238	655	8107	926	74
Cat	38·5	100	24	1204	843	7953	904	96
She goat	39 2	81	24	1020	834	8146	907	93
Calf, mixture of venous and arterial blood	..	..	..	912	828	8·60	901	99
Rabbit	38·	120	36	938	681	8379	891	109
Horse	36 8	56	16	920	897	8183	901	99
Sheep { arterial blood	38·	..	..	935	772	8293	915	85
Sheep { venous ditto	..	..	..	861	775	8361	915	85
Trout	..	..	..	638	725	8637	923	77
Codfish	..	..	36	481	657	8862	931	69
Frog	..	.	20	690	464	8846	950	50
Tortoise	..	..	3	1506	806	7688	901	96
Eel	..	..	..	940	600	84·0	900	100

It is clear, from the foregoing table, that the composition of the blood is intimately allied with the development of the animal heat, and that the degree of caloric is, in an especial manner, related to the mass of the globules in the circulation. But we cannot expect in analyses of this nature always to arrive at perfectly similar results. In fact, the mass of blood, of which no account is taken, must interfere largely in the results. The rapidity of the circulation and the energy of the respiration, which are not easy of appreciation, will also modify them in an essential manner. But even admitting that, in a given animal, the weight of its globules, compared to that of the body, can enable us to judge of its temperature,—the globules being considered as the essential agent in the production of heat,—yet it is manifestly evident that the proportion of oxygen consumed by these globules, or through their medium, must constitute a material element in the question.

The only point on which we need dwell at present, however, is that which relates to the mass of the globules as compared to the total weight of the body. This amount has not hitherto been determined by suitable experiments. It can only, in fact, be positively decided by first killing the animal. We should, for example, bleed to syncope an animal of known weight, and then circulate through its vessels a solution of sulphate of soda, which would extract from them all the remaining blood, and, consequently, the globules which had not passed out in the first bleeding.

The plan usually adopted for its valuation, but which must of necessity lead to very vague results, consists in abstracting a portion of the blood by venesection, replacing this loss by the injection of water, and subsequently withdrawing an equal quantity of blood by a second venesection. It is clear that, if we suppose the blood to have received nothing but the water furnished by the injection, the quantity of this water being known, as well as the composition of the blood before this addition, we can by comparison arrive at some knowledge of the total mass of the blood, and consequently of that of the globules. The experiments of Valentin, conducted according to the foregoing plan, would seem to indicate that the blood constitutes about a fourth or a fifth part of the weight of a mammiferous adult. The female contains somewhat less than the male. The weight of the blood is, to the weight of the body, according to the above author :: 1 : 4, 3 in the dog, and :: 1 : 5 in the rabbit.

M. H. Nasse has likewise analysed the blood of some domestic animals. We will here give the mean calculations which he assigns to normal blood; and we may observe, *en passant*, that his data are founded, for each animal, on a series of ten analyses performed on individuals of the same species. He has calculated all the fatty matters, excepting that in the fibrine; consequently, the figure of this latter element must of necessity be too high, whilst, on the contrary, that of the fatty principles will be understated in an equal ratio.

The experiments of M. Nasse lead to the conclusion that fibrine exists in rather larger quantity in animals than in man; it is generally even more elevated in the herbivora than in the carnivora. It varies from 2 to 5 in 1,000 parts, by weight, of the blood. The globules are most abundant in birds and in the carnivora, although the amount is here less than in our own experiments. They vary from nine to fifteen per cent. The albumen is very variable, but it is less in birds than in other animals; it fluctuates from five to seven per cent. As to the fatty matter, it is always low, and oscillates between 1·5 and 2·5 in 1,000 parts.

Composition of normal blood, according to M. Nasse.

	Man.	Dog.	Cat.	Horse.	Ox.	Calf.	Goat.	Sheep.	Rabbit.	Pig.	Goose.	Hen.
Water	798·40	790·50	810·09	804·75	799·59	826·71	839·44	827·77	817·30	768·95	814·88	793·42
Globules	116·53	123·85	113·39	117·13	121·87	102·50	86·00	92·42	} 170 72	115·53	121·45	144·57
Albumen	74·20	65·19	61 46	67·58	66·90	56·41	62·70	68·77		72·87	50·78	48·52
Fibrine	2·23	1·93	2·42	2 41	3·62	5·76	3·90	2·97	3·80	3 95	3·46	4·67
Fatty matters	1·97	2·25	2·70	1·31	2·04	1·62	0·91	1·61	1·90	1·95	2·57	2·03
Soluble salts	6·67	6·28	7·01	6·82	6·98	7·00	7·05	6·91	6·98	6·75	6·87	6·79
	1000·00	990·00	1000·00	1000·00	1000·0	1000·00	1000·00	1000·45	1000·00	1000·00	1000·00	10.0·00

Composition of the soluble salts.

	Man.	Dog.	Cat.	Horse.	Ox.	Calf.	Goat.	Sheep.	Rabbit.	Pig.	Geese.	Hen.
Alkaline phosphates ..	0 8234	0·7209	0·607	0 844	0·468	0 957	0·402	0·395	0·637	1·3[illegible]	1 135	0·915
Sulphate of soda	0·2020	0·1270	0 210	0 213	0·181	0·269	0·265	0 348	0 202	0·189	0·090	0·100
Alkaline carbonates ..	0·2566	0·7890	0·[illegible]	1·104	1·071	1·263	1·202	1·498	0·970	1·198	0·824	0·350
Chloride of sodium ..	4·[illegible]0	4·4900	5·274	4 6 9	4·321	4 864	5·176	4 895	4·092	4·281	4·216	5·398
	6·6720	6·2060	7 010	6·820	6·041	7 353	7 045	7 136	5 901	7 030	6·295	6·787

MM. Andral, Gavarret, and Delafond have likewise given us the results of some analyses of the blood in various domestic animals:—

Name of Animal.	Fibrine.	Globules.	Solid matters of serum	Water
4 stallions, used for heavy draught	4·5	104·5	84 3	806 7
13 stallions, used in light draught	3·9	102 3	84·1	811 7
6 oxen, used in draught	3·6	97·4	85·8	813·2
6 milking cows	3·8	1 1 9	86 8	807·5
6 pigs, from two to six months old	4 6	105·7	80 1	809·5
2 goats	3·2	101 4	91·4	801 0
6 rams and 25 sheep of various cross-breeds	3·0	101·1	82·1	813·5
4 male lambs and 1 female of the merino breed, from three to ninety-six hours old	2·2	107·3	72·8	817·7
3 rams, of English breed ..	3·0	92 6	94·0	810·4
10 sheep do. do.	2 6	95 7	91 9	809 8
16 dogs, of various species ..	2·1	148 3	75 5	774 1

MM. Andral and Gavarret have deduced from numerous experiments, that the blood of each animal offers a mean constitution which is peculiar to itself. These authors also state, that the fibrine is more abundant in the carnivora than in the herbivora; that it exists in but feeble proportion in the newly-born animal; and that it is lowered in amount during gestation, but rises again after parturition. The globules present their maximum in carnivorous animals, and their minimum in herbivorous. The albumen of the serum appears to follow the same law as the globules. The following table further shows that diseases alter the blood of animals in a similar manner, and according to the same laws, as in man.

Pathological Blood in the Sheep, according to MM. Andral, Gavarret, and Delafond.*

Sex.	Age.	Disease.	No. of animals ill.	No. of bleedings.	Fibrine.	Globules.	Solid matters of serum.	Water.
Wether sheep	5 to 7 years	Simple distoma hepaticum	11	27	3·1	49·6	61 6	885·7
Wether sheep	4 to 7 years	Do. complicated with inflammation	6	14	7·1	44·4	79 7	868·8
Wether sheep	6 years.	Acute tubercular bronchitis	..	..	5·2	61·0	109 4	824 1
Ram	2 do.	Softened tubercles	..	..	4·1	88 8	101·8	805·0
Wether sheep	5 do.	Lobular pneumonia	..	..	4 6	6 66	59·5	878·3
Wether sheep	6 do.	Tubercular pulmonary abscess	..	..	6·2	6 45	106·7	822·6
Wether sheep	7 do.	Suppurating pulmonary cyst	..	..	4·3	83 0	83·7	829·0
Ram	1 do.	Acute enteritis	..	..	6 0	100 7	96 6	796·7
Ewe	4 do.	Acute metritis	..	..	6 3	100·4	85·4	807·9
Ewe	1 do.	Pulmonary congestion	..	..	3 0	101·4	82 1	813·2
Ewe	2 do.	Pulmonary tubercles	..	..	4·0	87·6	85 6	822·8
Wether sheep	4 do.	Chronic peritonitis	..	.	3·2	58·8	52 2	885·8

Urine.—While examining the phenomena of respiration, we considered the lung as an organ of excretion, and stated that it was charged with eliminating from the economy certain gaseous products, with which the blood becomes loaded during the vital processes. The kidneys, viewed in the same light, free the blood of certain liquid matters, or such as are soluble in water, and which pass in excess into the economy by the digestion of the aliments, or else which result from the daily accomplishment of the phenomena of life itself. This circumstance explains why the urine, from the remotest antiquity, should have attracted the attention of physicians, who have sought, by its aid, to characterize certain affections, attempting to base them upon the physical properties of this fluid. It was not, however, until the middle of the seventeenth century, that the urine was studied in a chemical point of view. The first examination of this fluid, which was at all deserving of attention, is due to the younger Rouelle, who discovered urea in the human urine, and benzoic or hippuric acid in the urine of the herbivora. Scheele soon afterwards recognised in this fluid the presence of uric acid, to which he attributed the formation of calculi and of gravel. More recently, Wollaston analysed the different kinds of calculous deposit, and laid down a complete history of them. Cruikshank, about the same time, made a comparative analysis of normal and of diabetic urine, in the latter of which he pointed out, for the first time, the presence of saccharine matter; he, moreover, demonstrated in urea the property it possesses of combining with nitric acid. Fourcroy and Vauquelin published, a short time afterwards, an elaborate and important work on the urine, dwelling particularly on urea and the urinary calculi, and entering minutely into the fermentative process of urine. M. Thénard called attention to the fact, that the acid, by means of which the earthy phosphates are maintained in solution, is a body of an organic nature. M. Berzélius has discovered that this principle is not acetic acid, as was generally thought, but that it is lactic acid: he was the first to give a complete analysis of normal human urine. Proust has also published some elaborate researches on the urine. His observations have been, in great measure, confirmed by Liebig, who has added considerably to our knowledge on this subject.

In entering on the consideration of this fluid, we will first describe it in its normal state; and it will be easy for us, subsequently, to add to this knowledge a description of the changes which the urine experiences in certain diseases, as well as that of the variations which it presents in different animals.

In the normal state, human urine is a limpid liquid, of a colour varying from a clear yellow to a yellowish-brown, and having a salt, disagreeable, and bitter taste. It possesses a characteristic stale or urinous odour, which disappears on its becoming cold, but is again engendered by moderately heating it. Its density varies greatly; most frequently it ranges from 1·015 to 1·030. It has an acid reaction on litmus-paper. If left to itself for several days, it becomes changed in colour, throws down some salts, becomes alkaline, and gives out an ammoniacal and repulsive odour.

Heat does not coagulate urine; if it be subjected to evaporation, and the residue be distilled in a retort, we obtain carbonate, acetate, and hydrochlorate of ammonia, as well as an inflammable oil. At a very elevated temperature, it yields a small quantity of phosphorus.

The acids, in general, have no action upon urine, excepting oxalic acid, which precipitates its lime. The alkalis and some salts form with it precipitates of a variable nature, the production of which will be better understood upon examining the analysis of normal urine, as given by M. Berzélius. It is as follows:—

Water	933·00
Urea	30·10
Free lactic acid } Lactate of ammonia } Animal matter, soluble in alcohol... } Extractive matters soluble in water }	17·14
Uric acid	1·00
Mucus of the bladder	0·32
Sulphate of potass	3·71
Sulphate of soda	3·16
Phosphate of soda	2·94
Biphosphate of ammonia	1·65
Chloride of sodium	4·45
Chloride of ammonium	1·50
Phosphate of lime and magnesia	1·00
Silica	0·03
	1000·00

The nature of the salts, which M. Berzélius has discovered in the urine, will show at once the character of the reagents which will precipitate it; these are—ammonia, nitrate of silver, baryta, lime, oxalic acid, the salts of lead, &c.

We should not forget, moreover, that there exist in the urine extractive matters, which may also furnish precipitates with the salts of mercury, and with the sub-salts of lead, &c. These matters are but little known.

If a large quantity of alcohol be added to fresh urine, a precipitate of a very complex nature is formed: for, besides the earthy salts, the phosphates and sulphates, which the alcohol is unable to retain in solution, this precipitate contains uric acid, mucus, and probably a small portion of extractive matter.

Tannin renders urine cloudy, by combining with the mucus and with a portion of the extractive matter; the muddiness is at all times very slight. If it be much marked, we must attribute it to the accidental presence of albumen.

ORIGINAL CONTRIBUTIONS.

THE CAUSES OF SUDDEN DEATH.

By MALCOLM HILLES, Esq.

It is somewhat extraordinary that, amidst the various treatises that have appeared of late years on the several divisions of medical science, not one has been devoted to the consideration of the *causes of sudden death*, or, so to speak, of the physiological and pathological conditions which induce a sudden cessation of the vital powers.

And yet few subjects can be more interesting, certainly none more important, or more likely to command professional attention.

As living, moving, and thinking beings, the phenomena which *life* presents are peculiarly interesting. Who can behold it, even in the vegetable world, where traces of it are feeble and imperfect, with indifference? Who can examine it in man, the most perfect of animals, without admiration? From the delicate lichen that can scarcely be said to live, to man himself, every step, as it were, to vital perfection, excites the wonder as well as the attention of the zealous inquirer. The most indifferent cannot view the subject unmoved, and almost involuntarily admires why or by what means such extraordinary results are obtained.

If the phenomenon of *life*, and the laws which govern its production and support, be interesting, the study of the causes which lead to its decay and dissolution cannot fail of awakening attention. It is true that it is a more pleasing task to contemplate the perfection of structure that maintains the vital principle, than the imperfections which cause its ultimate extinction, as the mind naturally inclines to what is perfect and beautiful; yet these imperfections must be interesting to the philosophic mind, as portions of that great chain of events which Nature has

* For an insight into the microscopical characters of the blood, the reader should consult the writings of Hewson, Donné, Mandl, and Henle.

fabricated, and which lead to the ends which she designs to consummate.

Indeed, to the medical profession, whose duties are rather directed to the prevention of death than to the maintenance of life, abstractedly considered, such an inquiry is the more important, perhaps, of the two; to all individuals, as deeply interested in the successive changes which the body undergoes from "the cradle to the grave," it affords much room for observation and reflection.

I must do the profession to which I have the honour to belong the justice to state that the question of the causes of sudden death has met with considerable attention from them, and that various observations have been published, from time to time, by its members on the subject; but these are much scattered and require collection: this is indeed what I propose to do, adding such remarks as may appear to me necessary to connect them together, and elucidate such as I may consider not to furnish sufficient for a general treatise.

How many die suddenly! and yet how few take the trouble of inquiring into the causes of such deaths. Some, more curious than others, may hazard a question on the subject; the reply is most probably "apoplexy"; and yet I have no hesitation in asserting that not half of the deaths attributed to apoplexy are really produced thereby.

In support of this assertion it may be mentioned that M. Devergie, the medical director of the Morgue, in Paris, has found the causes of death, in forty cases carefully examined by him, to be—Apoplexy, with a clot in the annular protuberance, 1; meningeal apoplexy, 3; serous apoplexy and pulmonary congestion, 2; congestion of the brain and spinal marrow, 3; pulmonary congestion, 12; pulmonary and cerebral congestion, 12; hematomesis, 2; syncope, 3; rupture of the heart, 1; rupture of the pulmonary artery, 1.

Thus, out of the above forty cases, but nine could be referred to apoplexy, twelve to pulmonary and cerebral congestion combined, the remainder had no connection whatever with the apoplectic disease.

Again, in "Guy's Hospital Reports," April, 1845, Dr. Francis found, in nineteen cases of sudden death recorded by him, but six cases connected with cerebral disease: of these, two were from rupture of arteries at the base of the brain, one from venous congestion of the brain with thoracic obstruction, one from chronic disease of the arteries and substance of the brain, two from epilepsy.

How culpable is this indifference, this neglect, especially when we reflect that the treatment to be pursued, in many of these cases, is widely different; nay, that the treatment which is necessary in one may be fatal in the other.

Death may be defined to be a deprivation of life, or rather a cessation of the functions on which life depends, and thus indicates a negative rather than a positive state of being. We die, that is, we cease to live; the principle which imparted life to our frame has ceased to inhabit this; and it consequently returns to its original condition in the inanimate world. The moment death takes place, or life ceases, those changes commence in the inanimate body which are ultimately to resolve it into the gaseous fluid or solid materials from whence it derived its existence; the change is but one of elements: the body ceases to live, but not to exist; it still exists in the material world around, and again takes its part in those elements whence it was formed.

No action or influence to which human ingenuity may expose it can cause its anihilation; air, earth, fire, water, all can only change, none can destroy, save Him who created. Life depends for its integrity on the perfect performance of certain functions, which are therefore denominated *the vital functions*; these, in their turn, depend for their continuance on the perfect condition of the organs from whence they derive support; life, therefore, depends on the perfection of organization, and can no more exist without it than day without light, or any material object without the matter of which it is composed.

But organization does not necessarily produce or create life; the body often presents, after death, to all external examination, the most perfect organization, and yet life has fled; the tree struck by lightning frequently presents no traces of disorganization, yet it has ceased to live, and soon perishes. There is a vivifying principle independent of organization, and which is as necessary to the animating of this, as its perfection is to the maintenance of life. There is no instance of life being produced without life.

I shall not wander into a metaphysical discussion, however interesting this might be, but proceed to the physiological consideration of the subject.

The *vital functions*, or the functions on which life depends, are the nervous, the circulatory, and the respiratory: the organs on which these respectively depend are, the brain and nervous system, the heart and vascular system, the lungs or pulmonic system.

These functions are usually classed, after the example of Bichat, into—1, the functions of *animal life*, or those performed by the brain and nervous system; 2, the functions of organic life, or those of the organs of circulation and respiration.

An arrest of the functions of any one of these three great *centres of life* will soon cause the cessation of the others, and thus produce the death of the individual. If the organs of respiration cease to act, the blood is no longer arterialized: impure blood is sent to the brain and nervous system; this fails to produce the nervous excitement necessary to cause or sustain the muscles or mechanical agents which maintain the mechanical and chemical action on which life depends; these, therefore, become paralysed, and complete death is soon the result.

If the circulation be arrested by the bursting of either the heart or blood-vessels, or other cause, the same result is produced, but more rapidly, and in a somewhat different manner. Here, the cause of death is negative, not positive, and consists in the absence of all blood from the brain and vital organs; the functions of these, therefore, cease, and death rapidly ensues.

As the nervous system consists of two somewhat distinct yet intimately connected portions, namely, the cerebro-spinal and sympathetic—and as these preside, the first over the animal, the second over the organic, life of the individual—the functions of either of these may be destroyed, independently of the other. In apoplexy, for example, the animal life is frequently extinct for some time before the organic life ceases; and in some sudden nervous affections it is reasonably inferred that the organic life ceases before the animal is affected: so intimately connected, however, are these two, both in function and structure, and in that general control of all the actions of both animal and organic life so necessary to their perfection, that it is impossible for one to be wholly extinguished, without the other immediately feeling the result, and soon participating in the consequences.

Let us take, for example, the case of apoplexy already mentioned. In this the more evident symptoms of animal life, such as sensibility and voluntary motion, may be absent, and these altogether destroyed for a length of time, without serious result(a); yet animal life is evidently not wholly extinguished so long as respiration and circulation continue: both of these functions, although principally supplied by the sympathetic system of nerves, being indebted for their continuance to the agency of the pneumo-gastric and other nerves derived from the cerebro-spinal system, and which appear to exercise an influence on those of a distant and, it may be called, superior character to that which is connected with the mechanical performance of these functions; for the performance other respiratory nerves are destined.

In the remarkable case of the Hon. Colonel Townshend, related by Dr. Cheyne, it would appear that organic life had become extinguished without animal life participating in its destruction, as this individual maintained his power of voluntary action, and exercised this by rallying the functions of organic life into operation.

In syncope, or fainting, both the animal and organic life seem to cease whilst the fit continues. It is stated by some that the circulation and even respiration proceed in these cases, although not so evidently as to be apparent either to sight or touch.

Many cases, however, are on record in which these functions were suspended for a considerable time, and yet life was not extinct, the individuals having been restored, and continued to live, some for many years after. This state of existence is somewhat analogous to that of the vegetable kingdom, in which life is present, although both sensibility and visible motion are absent. The following cases of suspension of the usual symptoms of life are most important and interesting.

Pliny, in a chapter entitled, "De his qui elati revisceraut," relates the case of the Roman consul Avicular, who, being supposed dead, was conveyed to his funeral pile, where he was reanimated by the flames, and loudly called for succour, but, before he could be saved, he was suffocated. Boutrier(a) relates an instance of a young woman upon whose supposed corpse an anatomical examination was about to be made, when the first stroke of the scalpel revealed the truth.

Numerous other cases are recorded, in which all life was suspended for several days, save that analogous to vegetable existence, and which evidenced itself in preserving the body from decomposition, and in sustaining a moderate temperature.

Some will perhaps assert that organic life, in the actions of respiration and circulation, must have existed in these cases, but so feebly as not to be ascertained by external examination. To this there is but one reply, namely, that, as we cannot resort to internal examination, the matter must rest unsettled. We do not see why life may not be feebly supported in man, as in the lower tribes of animals and vegetables, without manifesting any evidence thereof beyond, as already stated, that of resisting decomposition and sustaining a moderate temperature; but, as this requires some action, we must acknowledge the existence of this in the cases cited, although so feeble as to elude observation. The remaining organs and functions, although necessary to life, contribute to it only indirectly, or in a secondary form, thus, for example:—

The *bony system*, or *skeleton*, is by no means essential to life, even in the highest classes of animals, in man himself. In the disease of rickets the bones become softened, without danger to the life of the individual; although this softening seldom affects the whole osseous system, its influence is sufficiently extensive, in many instances, to support this conclusion. The bones are frequently fractured, without life being in the least impaired thereby; indeed, if it were possible for every bone in the body to be fractured, without producing a shock on the nervous system, the patient would suffer but little thereby beyond the inconvenience arising from such extensive injuries; the great vital functions would continue to support life uninterruptedly, the only one likely to be in the least impaired being that of respiration, which would suffer from the injury done to the parts engaged in producing the mechanical act of respiration.

The osseous system, being essentially necessary to locomotion, contributes but little to the integrity of the vital functions, its connection with these affording them rather protection than ministering to the completion of their functions.

Nor is the *muscular system* much more sub-

(a) Sir A. Cooper relates the case of a sailor, who remained for twelve months in a state of stupor from a depressed portion of bone.

(a) "Dissertation sur l'Incertitude des Signes de la Mort," &c. Cyclop. of Medicine, vol. iii., p. 316.

servient to the integrity of the functions of life; its sole influence on these arises from its being the powerful mechanical agent employed by nature in the circulation of the blood, and in the performance of the act of respiration; thus muscular fibres are found in the heart, the smaller arteries, and some of the larger veins: but their use in these is simply to propel the blood onwards to its destination; in like manner muscular fibres constitute the great bulk of the muscles of the respiration, but they do not constitute in any way to the perfection of the function, except as mechanical agents.

Their influence, however, on the perfection of these functions is not to be altogether disregarded, as we shall have occasion to observe hereafter, that a cessation of life is often suddenly caused by a morbid condition of the muscular system, existing in it, or imparted to it, through the agency of the nerves.

The various functions of *digestion*, *secretion*, and *excretion* are not of such immediately-essential nature to life as to call for particular observations at present; no case, I believe, of sudden death has ever occurred from a stoppage of any one of these functions; indeed, the most healthy individual presents daily examples of a temporary cessation of one or all of these functions, without the notice of, much less any injurious effect on, the person.

But how different is it with regard to the three great functions, which are justly styled *the vital functions!* a momentary cessation of any one of these instantly places the life of the individual in danger; a more continued arrest annihilates life beyond the power of all human efforts. How admirable that structure, then, which, composed of the slenderest threads, keeps on its way through tens of thousands of hours, through some thirty millions of moments, without one instant's interruption! How wonderful the contrivance that pulsates upwards of one hundred and ninety millions of times in a life of ordinary duration, without, perhaps, one interruption even for a second! How perfect the design that contributes so effectually to such an end!

Although sudden deaths are of such frequent occurrence, and excite so much attention, speaking physiologically, they rarely happen, except from accident, as they are almost uniformly the result of disease, that has commenced some ten or twenty years previously, and has been, during this length of time, engaged in producing the fatal result. How, therefore, can we call such a death sudden? It is true that life appears to us to be suddenly extinguished, but nothing is more certain than that this extinction of life had commenced many years previously, and that, so far from the person perishing suddenly, he had "begun to die," as it were, some twenty or thirty years before.

Although a startling and a somewhat unpleasant fact, it cannot be contradicted that most persons beyond the age of sixty, many past fifty, or even forty, bear with them the foundations of the disease, which is one day or other to terminate their existence: the heart, the arteries, perhaps the lungs or other viscera, are the seats of this morbid affection. I have now examined many hundred bodies, and, speaking from recollection, I do not think I ever met with one past sixty years of age in which the arteries were free from disease; in most of them extensive ossification existed. This condition is exemplified, even in the living subject, by a peculiar whiteness of the skin and hair.

As it will appear more regular, and doubtless prove more satisfactory, as well as convenient, to commence the consideration of the causes of sudden death by first examining into those connected with the function of respiration, I shall adopt that course, then proceed to

2. Those attached to the circulatory system.
3. Those connected with the functions of the nervous system; and conclude with
4. Remarks on cases of sudden death, the causes of which are as yet involved in doubt.

The cases of sudden death which are caused by arrest of the respiratory function may be classed into

1. Those which occur where lesions or morbid alterations of the organs of respiration have existed and contributed to the fatal result.
2. Those which take place in cases where either no lesions or morbid alterations have existed in the organs of respiration, or, if present, have not contributed to the result.
3. Those which are caused by direct violence, injury, or accident.

We shall proceed to consider—

1. *The physiological causes of sudden death in such cases as occur where lesion or morbid alterations of the lungs have existed and contributed to the result.*

The diseases to which the lungs and respiratory organs are subject are supposed to be less frequently productive of sudden death than those of either the organs of circulation or of the nervous system. Most pulmonic affections run through a course of longer or shorter duration under the observation of the physician and the patient's friends; bronchitis, pleuritis, pneumonia, pulmonary consumption, are all, even in their most acute forms, of sufficient duration to forbid the application of the term sudden death to their fatal terminations.

It is remarkable, however, that death takes place much more frequently than is supposed from lung affections; even in pulmonary consumption, which is usually a protracted disease, sudden death is by no means uncommon.

Sir James Clark, in his very excellent work "On Pulmonary Consumption" (a), observes as follows:—

"It occasionally happens that death occurs very suddenly in the advanced state of the disease. The patient does not appear worse than he has been for some days, when, while sitting up, he suddenly falls back and expires. Examination after death does not always enable us to explain this sudden cessation of life. Louis gives two cases, in one of which œdema of the glottis appeared to be the cause, and in the other a rapid hepatization of a large proportion of the lungs; but neither of these pathological lesions could account for the sudden termination to which I allude.

"Among the causes of sudden death pulmonary hemorrhage may be mentioned, as it is occasionally so profuse as to prove fatal in a few minutes. In such cases a considerable artery is opened, by ulceration, in the progress of the tuberculous disease."

The sudden fatality which thus attends some cases of consumption, or phthisis pulmonalis, demands our attention for a few moments. To what are we to attribute it? In which of the three great centres of life does death commence to extend its baneful influence over the individual?

The *post-mortem* examinations, as well as the symptoms previous to death, clearly show that the respiratory organs were not so much affected as to interfere seriously with their function; death, therefore, can only be referred to the nervous or circulatory system; but there is nothing to lead us to the opinion that this latter is at fault: the former must be, then, the system in which death commences. And to this supposition we are strongly led by the recollection of the feeble state of the nervous energy (not *mental* force) which exists in most cases of consumption. How easily wearied are the limbs! How soon is the physical strength exhausted! How prone the patient to fits of weakness, if not of fainting! These indicate a deficient nervous energy.

On the occurrence of some unusual exertion, the nervous energy is overpowered, the patient faints, the heart ceases to beat, the respiration stops; as yet the patient is not "dead, but sleepeth." At this critical moment the application of some stimulant may, and frequently does, set the vital machinery again in motion; the want of it decides the struggle, and death assumes his sway.

(a) "On Pulmonary Consumption." By Sir James Clark, M.D., F.R.S., &c. Sherwood and Co., London, 1835. P. 163.

I feel persuaded that many cases of this nature have been lost from want of this mode of treatment, or from the adoption of that *refugium peccatorum*—the *dernier ressort* of all bad practitioners, in extreme cases—the lancet.

Here I must observe that the profession should set its face against the vulgar prejudice of trying what bleeding may do in such cases, on the plea that it can do no harm. It may do harm, and should not be practised: the man who thus practises is unworthy of following the profession he has adopted.(a)

The disease, if it can be called so, of the lungs which appears to be most frequently productive of sudden death is *pulmonary congestion*, or pulmonary apoplexy. Thus, of the forty cases of sudden death, as before related, examined at the Morgue by M. Devergie, twelve arose from this affection, twelve from pulmonary congestion and cerebral congestion, two from serous apoplexy and pulmonary congestion. It may be presumed that one-half of these deaths were produced by pulmonary congestion. Of the nineteen cases recorded by Dr. Francis, five were referrible to pulmonic affections generally.

At the same time it must be observed, that pulmonary congestion is an affection which may be produced after death, or so close a resemblance thereto may be induced as to be incapable of distinction. Thus, for example, there is in most bodies a tendency to accumulation of blood in the lungs in the last moment of, or immediately after, death; this is particularly the case where the left ventricle continues to contract after respiration has ceased, the blood being thus forced on the venous and pulmonic system.

The position of the body too, may tend to this appearance, the blood obeying the laws of gravity. When the lungs are free from disease, the circumstance of the blood being confined to the posterior part of these organs will assist in forming our opinion; but there is no reason why the blood should not gravitate equally after pulmonary congestion, where the lungs are otherwise healthy. There can be no doubt, where the whole tissue of the lungs are found gorged with blood.

The structure of these organs, the reticular cellular tissue of the infinite ramifications of capillary vessels, of which they are composed, dispose to this affection on any sudden exertion, as, independently of a large vessel being ruptured, the whole capillary system, both venous and arterial, may pour out their blood into the parenchyma of these organs, as frequently occurs in the cerebral organs.

It may be doubted, therefore, if all the cases of sudden death referred by M. Devergie to pulmonary congestion shall be consigned to this cause, especially as in many, it is to be presumed, he was unable to obtain any previous history. The pulmonary congestion was doubtless the consequence, not the cause, of death in some. A sufficient number, however, were beyond all question referrible to this affection, to entitle it to be regarded as frequently productive of sudden death.

Here the lancet may be used without being abused, as no means are so likely to afford relief. The use of stimulants would not be injudicious, with a view to excite the renewed action of the muscles of respiration, the heart, &c.

(To be continued.)

(a) Some years since I was called to a gentl man who dropped dead in the street. I found that he was past all hopes, and that he had to all appearances died from the bursting of some bloodvessel internally, his face being perfectly blanched; I therefore pronounced such to be the case, and refused to bleed him further. Some ten or fifteen minutes after, a medical practitioner, but I believe an unqualified one, saw the body, made a cut in the arm, and thus left the mark of his attendance. He was summoned to the coroner's inquest, was paid for his trouble, whilst I was left to console myself with the philosophical reflection, "that virtue is its own reward."

FACTS AND OBSERVATIONS.

As to the relative Value of Mesmeric and Hypnotic Coma, and Ethereal Narcotism, for the Mitigation or entire Prevention of Pain during Surgical Operations.

By JAMES BRAID, M R C.S.E., &c.

"The following table shows the curious fact, that, in the three cases in which there was no evidence of pain, the pulse rose remarkably during the operation. But in the cases in which there were the symptoms of pain, described in paragraph 20, the pulse continued exactly the same before and during the operations."

State of Pulse.

Patient.	Disease.	Before.	During.	Immediately after.	Operation.
Nilmoney.	Tumour.	84	124	Natural.	Apparently painless.
Ditto.	Dressing changed on September 12.	80	108		" "
Dohman.	Tumour.	72	72		Doubtful.
Jahirodeen	Excision of thickened prepuce.	60	60		"
Ramchund.	Tumour.	68	68		"
Hyder Khan.	Amputation of thigh.	108	112	100	Apparently painless.
Murali Doss.	Tumour.	68	108	72	

This acceleration of the pulse, in cases which showed no evidence of suffering pain during the operation, whilst it remained unaltered in those cases which were accompanied with writhing and distortion of features, seems to have puzzled and perplexed both Dr. Esdaile and the committee, as it may many others, who would naturally have expected the very opposite results. The fact is very easily explained, however, and the solution of this apparent anomaly will at once suggest itself to all who have read my little treatise on Hypnotism with attention. In the former cases the stimulus of the knife has excited a greater or lesser degree of rigid catalepsy, which is always attended with acceleration of pulse, generally in the ratio of the intensity of the rigidity (and it also suspends motion); whilst in the latter cases, accompanied by distortion of features and jactitation of the limbs, there being no rigidity of muscles to obstruct the transmission of blood through the limbs, there would not necessarily be any acceleration of the pulse, unless from mental emotion. The tranquillity of the pulse in these cases, therefore, was the surest possible indication that the patients spoke the truth in declaring that they had felt no pain. The jactitation of the limbs, and convulsive movements of the muscles of the face, in the latter, as well as the rigidity in the former cases, might all arise as reflex or automatic actions, of which the brain might take no cognizance, as is well known to every physiologist, and is daily witnessed during the sound conscious state of nervous sleep.

Dr. Esdaile considered much less blood was lost by patients who were operated on during the mesmeric sleep; but three of the four *medical members* of the committee expressed as their opinion, that there was no material difference observable. Neither did the medical members consider that the after-treatment of the patients was in any degree ameliorated, or the cure accelerated, by the operation having been performed in the mesmeric sleep.

The following is the only case to which the committee attached any importance to renewing the dressings of sores during the sleep:—

"In Ramchund, an examination of the wound, of a peculiarly painful nature, was required (dressing) involving two separate incisions; just as the first was completed (it lasted about a quarter of a minute, and caused writhing of the body and distortion of the face) he awoke, and, on proceeding to the second step, he shouted aloud in pain and terror, and struggled so violently that the operator could not proceed." This seems pretty conclusive evidence, that whilst he was a person of keen feelings, the induced sleep had saved him much suffering during the *first* incision. It also tends to support the truth of his statement, as to having suffered no pain when first operated on, on the 13th of September. It strikingly proves, moreover, the superiority of sleep thus induced for such purposes from that induced by an opiate, as the following case will show:—

"The committee, having adjourned to the Native Hospital, inspected No. 4, Neechul, upon whom Dr. Jackson operated, removing the hypertrophied prepuce at one stroke.

"*Ninety* drops of laudanum had been administered half an hour previously, and the patient was sound asleep when operated on: pulse 90.

"At the moment of operating, *he shouted aloud, struggled violently, drew up his legs, and kicked hard pulse rose to* 120; *he continued to struggle for several minutes.*"

In paragraph twenty-seven, the committee express a similar opinion to that which I have already stated as my own conviction, respecting the great length of time required destroying its general applicability in surgical practice. They say—

"The uncertainty of the time required in producing the intense condition of the mesmeric sleep, in the majority of the cases now under notice, appeared very unfavourable to the general introduction of mesmeric manipulations in the practice of surgery, especially in hospitals. But Dr. Esdaile states positively, that by frequently changing the mesmerizers, and performing the manipulations without interruption, the same results may possibly be produced in one day, which would, in the manner pursued before the committee, have been necessarily extended over several days. In the cases of Hyder Khan and Murali Doss, several mesmerizers were successively employed, and the result seemed to the committee corroborative of Dr. Esdaile's statement.

"The committee further apprehend (the report goes on to state) that a serious practical obstacle to the universally useful application of mesmeric processes exists in the resistance to the sleep, which, Dr. Esdaile acknowledges, is given by cough, by *pain, by mental excitement*, by fever, and by the sinking state of the vital system induced by protracted and dangerous diseases."

I can state, as the result of my own experience, that patients with restless and excitable minds are generally, if not always, difficult to be reduced into a deep state of nervous sleep. In cases of fever, so long as it is possible to arouse and arrest the attention of the patient, he may be affected; I have failed, however, with one of the most susceptible subjects I ever met with, when in a state of such profound delirium from fever that the attention could not be arrested and fixed: a clear proof that hypnotism is as much a mental as a physical influence.

The fears expressed in paragraph 30, that the repetition of the processes may bring the nervous systems of patients into a morbidly impressible condition, which might render them liable to numerous nervous maladies, I feel assured, from very extensive experience, is a groundless fear, *provided the patients are treated with care and judgment.* In the whole course of my experience I have met with no such untoward result, although I have hypnotized some patients daily for several months successively.

I most heartily concur in the just tribute of praise awarded to Dr. Esdaile in the concluding paragraph of the committee's report:—

"The committee are unanimously of opinion that great credit is due to Dr. Esdaile for the zeal, ability, and boldness with which he has taken up and pursued this inquiry." They further add:—"His sphere, however, has been hitherto limited, but the committee hope that his further investigation may be extended to medical as well as surgical cases, to European as well as native patients, and to the elucidation of the several questions which have been adverted to in the course of this report."

In the Deputy Governor's reply to the above report, he says:—"So far has the possibility of rendering the most serious surgical operations painless to the subject of them been, in his honour's opinion (it was written by the secretary), established by the late experiments performed under the eye of a committee appointed for the purpose, as to render it incumbent on the Government to afford to the meritorious and zealous officer by whom the subject was first brought to its notice, such assistance as may facilitate his investigations, and enable him to prosecute his interesting experiments under the most favourable and promising circumstances.

"With this view his honour has determined, with the sanction of the Supreme Government, to place Dr. Esdaile for one year in charge of a small experimental hospital, in some favourable situation in Calcutta, in order that he may, as recommended by the committee, extend his investigations to the applicability of this alleged agency to all descriptions of cases, medical as well as surgical, and all classes of patients, European as well as native. Dr. Esdaile will be directed to encourage the resort to his hospital of all respectable persons desirous of satisfying themselves of the nature and effects of his experiments, especially medical and scientific individuals in or out of the service." Medical officers of the presidency are also to be appointed as visitors," to inspect the proceedings of Dr. Esdaile, and report thereon to the Government, but without interfering with the doctor's proceedings."

Here, then, we have an example of the most judicious, praiseworthy, and enlightened conduct, both on the part of the Government and the committee, which has ever been recorded, in connection with this highly interesting inquiry. It is conduct not only deserving of all praise, but also worthy of universal imitation. Extending the inquiry and treatment to medical cases, I feel confident, is a movement in the right direction, as it may be rendered of far more avail for the relief and cure of disease, than for suspending the anguish of painful surgical operations; and the latter application is the less important now that we can achieve the like purpose so much more generally and rapidly by ethereal narcotism. That the latter process may also be used with advantage in the treatment of various forms of disease I have no doubt. Indeed I have been in the habit of using the fumes of ether for such purposes, in my own practice, for the last thirty years. Still I feel well assured, from what I know of both methods, that whilst the ethereal narcotism is likely to prove most available for preventing pain during surgical operations, it will never be rendered so available for the relief and cure of disease as mesmerism and hypnotism, when the latter are judiciously and skilfully managed. I presume it is scarcely necessary for me to add, what must be apparent to every reflecting person, that practical experience is as requisite for the successful treatment of disease by hypnotism or mesmerism, as by any other mode of cure.

In *theory* I entirely differ from Dr. Esdaile. He is a mesmerist—that is, he believes in the transmission of some peculiar occult influence from the operator to the patient, as the cause of the subsequent phenomena. He has entirely failed, however, in adducing any new or additional evidence in support of this position, which had not been adduced before by European mesmerists; with which opinions I am entirely at issue for reasons which are well known to your readers, from my previous contributions to the *Medical Times*. In these papers I have illustrated and explained, as the ground of my dissent from the occult-influence theory, that all the well-ascertained phenomena of mesmerism can be equally, readily, and more satisfactorily explained, without the aid of any occult or exoteric influence. It is gratifying to me to be able to add, in support of my opinion on this point, that since the publication of my observations "On the Power of the Mind over the Body," I have had the honour to receive numerous letters from some of the most eminent members of the profession and of general science, expressive of their entire concurrence with my

views of the nature and cause and extent of mesmeric phenomena generally; and also of my mode of explaining the extraordinary phenomena adduced by Baron Reichenbach, as proof of a "*new imponderable.*" On this last point I have only met with one or two dissentients, and these were parties who were previously strongly committed to the mystical notions of the mesmerists.

Dr. Carpenter, in the third edition of his "Principles of Human Physiology"—one of the most perfect and valuable works on physiology extant—has fully admitted the reality and peculiarity of all the mesmeric phenomena which I contend for. He says to that extent he considers they have as just a title to the attention of the scientific physiologist as that which is possessed by any other class of well-established facts." Dr. Carpenter was present at a private *conversazione* at my house, when he had an opportunity of investigating the phenomena most minutely; and the lucid manner in which he has described the nature and modes of educing the genuine manifestations does him infinite credit. In respect to my mode of operating, he has done me the honour to say, at page 757, that—"He considers that this curious class of phenomena cannot be better prosecuted than by that method."

I have thus endeavoured, to the best of my ability, to submit to your readers a candid estimate of the relative value of hypnotism, mesmerism, and ethereal narcotism, for the relief and cure of disease, as well as for suspending consciousness, and thus relieving or entirely preventing pain during surgical operations. I shall be glad if my public endeavours may in any degree tend to the advancement of what seems to me so well calculated to promise amelioration to suffering humanity.

3, St. Peter's-square, Manchester, Jan. 30.

P.S. Experience has proved that the fumes of sulphuric ether may be rendered available for suspending consciousness, and thus preventing pain during surgical operations, in the brute creation as well as in man. It has been used with complete success for such purposes with the dog, the sheep, and the horse, as publicly recorded. Nevertheless I do not consider it applicable to all cases indiscriminately. The use of such a potent agent evidently requires caution in many cases, whilst in others it is altogether contraindicated. I consider nothing could be more indiscreet than bringing the system fully under its influence in certain forms of cerebral disease, as well as in various disorders or diseases of the heart and lungs. In some patients, moreover, it produces much excitement in the first instance, and is long in producing unconsciousness and total loss of feeling. In certain cases this may arise from idiosyncrasy, but it appears to me that much also depends on the rapidity with which the ether is absorbed through the bronchial membrane. Where this takes place slowly, excitement is likely to result in the first instance; but where it takes place rapidly, the blood becomes quickly surcharged with the hydro-carbonaceous compound, and the narcotic effects speedily manifest themselves, and that without any marked state of primary excitement. This is what, *à priori*, we might expect, and has its analogue in the progressive symptoms of intoxication induced from slowly sipping wine or spirits and water, which produces excitement in the first place, and depression subsequently; whereas the sudden ingestion into the stomach of a large quantity of strong liquor is speedily followed by stupor of the most intense and sometimes fatal nature, without having produced any corresponding or marked primary symptoms of excitement.

I would also infer, both from what I have read and seen, that patients who are most rapidly affected experience the narcotic influence of the ether for a much briefer period than those who are more tardily affected. I think it will be found that the narcotizing influence will require about an equal length of time for its subsidence as was required for its indication: in other words, soon drunk, soon sober, and *vice versâ*.

My own rule is this—and I think myself warranted in recommending its adoption by others—always to test the susceptibility of each patient to the influence of the ether, at least once or twice, before the time when the operation is to be performed. By this means much useful knowledge is acquired regarding the idiosyncrasy of the individual case, alike valuable to the operator and patient during the important crisis of the operation. This could not be more satisfactorily illustrated than by recording the results of an operation which I performed on the 9th of the present month (February). The patient was a lady of fifty years of age, for whom I had occasion to amputate the whole of the right mamma. But for my previous knowledge of the idiosyncrasy of this patient, by experimental trials, there can be no doubt but the results would have been very different. With this precaution, however, I was enabled to perform the operation without the patient manifesting the slightest symptom of consciousness or of feeling pain, either during the operation or whilst stitching and dressing the wound. Indeed, some time had elapsed after she had been comfortably placed in bed before the patient could be made to believe that the operation had really been performed. It is quite impossible that any case could have been more complete and decisive than this was, as to the power of ethereal narcotism for suspending consciousness and feeling during surgical operations; but, from peculiarities in her case, there is good reason to believe that we should not have realized the same satisfactory results had not the patient been tested previously, by which means I was enabled to determine the proper extent to which the etherealization should be carried in her individual case. Not only during the operation, but also subsequently, the symptoms were in the highest degree satisfactory, the patient having suffered in no respect whatever from the ether, either locally or generally, mentally or physically; she slept well the first two nights without requiring any opiate.

Moreover, the patient was not only spared the shock of the mental and physical anguish usually attendant on such an operation, but it was quite obvious to all present that there was much less hemorrhage than is usual in such cases. I may also further remark that the subsequent progress of the cure has been unusually satisfactory for such a subject, the wound having healed by the first intention, being entirely adherent when first examined, which was seventy-two hours after the operation. The wound was closed by six stitches of the interrupted suture, none of which had given way. Water-dressing was used, the wound being first covered by a piece of soft linen moistened with tepid water, and on this again was superimposed that excellent invention of Mr. Markwick, the "spongio piline," the whole being secured, *in situ*, by a calico roller.

My much esteemed and talented friend, Daniel Noble, Esq., surgeon, and my son, Dr. Braid, not only assisted me during the operation, but also narrowly watched the subsequent progress of the case, and entirely concur with me in all the facts and opinions above stated regarding it.

Those who allege that tetanus and hydrophobia are not likely to be benefited by ether, *because they are diseases of motion and not of sensation, and because the excito-motory system becomes more mobile or irritable in proportion as the functions of the cerebrum become depressed*, prove by such remarks that they only *partially* comprehend its power. The first symptoms undoubtedly seem to favour that interpretation; but let it be carried *sufficiently far*, and the functions of the medulla oblongata and true spinal marrow will also become implicated, so that the action of the heart and lungs may be so impaired as to endanger the patient's safety from asphyxia; and general muscular irritability may be so suspended as to afford no indication of reflex action on the application of the galvanic current. Mr. Tracy has given some interesting remarks on this point in page 258 of the *Medical Gazette*. No doubt some diseases of morbidly exalted feeling, *e. g.*, the whole of the painful neuralgiæ, may be more readily affected and benefited by it, for it is an undoubted fact that both by hypnotism, mesmerism, and ethereal narcotism, the first indications are in the sensorium, and that the sense of pain may be gone whilst consciousness remains: so that the patient may be sensible to temperature, sound, smell, and sight, in some cases when there remains no distinct sense of pain from severe inflictions, such as pricking, pinching, and cutting. Still we have only to increase the means, and the *whole* functions of the nervous system will be depressed or temporarily suspended.

It is of great importance that washed ether should always be used; and that the inhaler should be heated to the temperature of from 80° to 90°, as by this means, as pointed out by Dr. Snow, the air becomes much more highly charged with ether than at lower temperatures, and thus the patient is more speedily narcotized, and that with much less risk of primary excitement.

The proper time for commencing the operation must be determined on by the state of the pupils of the eyes, by the state of the pulse and respiration, and by the prostration of voluntary power and muscular irritability. In prolonged operations the patient should be allowed to take about one respiration of pure air for two of the etherealized air, from the period when the operation is commenced till the whole painful proceedings terminate. Of course, giving more fresh air if the patient seems to be going too deep, and more etherealized air if getting too near the conscious state.

3, St. Peter's-square, Manchester, Feb. 13.

ON NEUROMA.

(*Detailed at a meeting of the Pathological Society.*)

By R. ADAMS, Esq., M.D., one of the Surgeons to the Richmond Hospital.

It must be in the recollection of many of the members present, that, during the winter session 1843-4, Dr. Robert Smith brought before the Pathological Society the result of two *post-mortem* examinations he had made of patients who had die with neuromatous tumours. In these two case which were very similar to each other, the neuromatous tumours had been visible in almost every superficial nerve in the body; they amounted to an almost countless number in each case, had existed for many years, and had been always *painless* to the patients. One of these cases had been, up to the time of the patient's death, under the care of Dr. Hutton, at the Richmond Hospital, and one of the numerous neuroma with which he was affected sprung from the centre of the right vagus nerve in the middle of the cervical region, having attained, after ten years' growth, the size of an infant's head. In the left sciatic nerve of the same patient had arisen a neuromatous tumour which extended from the lower margin of the gluteus to the popliteal region, and in magnitude fully equalled the head of the patient, an adult about forty-five years of age. The man died emaciated, with hectical symptoms, and without pain; but the exact source of the exhausting hectic was a matter of conjecture.—The second case, the *post-mortem* examination of which was reported by Dr. Smith, had been under the care of Dr. Corrigan, in the Whitworth Hospital, where he died of dysentery. It was very similar to the former case, the tumours in both being remarkable for their size and number, and *not* accompanied by any pains or the source of any apparent injury to the patient, further than that arising from their weight or bulk.

Somewhat different from these two remarkable cases of neuroma already brought forward will be found those which I am now about to adduce. While in the former the tumours were to be seen springing along the course of almost every nerve in the body, in the cases presently to be related it will be seen that in each individual only one small tumour appeared in the course of the one single nerve affected by the disease.

In the two former examples, again, the patients did not complain of any pain whatever in the tumours, and sought advice only on account of the

size and growing deformity which they produced. In the latter, on the contrary, the tumours will be observed to be comparatively small, but to have been accompanied with pain of the most distressing kind, and requiring for the cure of the disease the most active surgical interference.

Although the treatment demanded by neuromatous tumours has been laid down by Sir A. Cooper, Mayo, Velpeau, &c., still it appeared to me that the relation of the three following cases, which have been under my own care at the Richmond Hospital, may not be considered uninteresting to the society. In the first, the ulnar nerve, in the second the posterior tibial, and in the third case the median, was the seat of the neuroma.

1st Case.—Owen Nolan, aged forty, was admitted to the Richmond Hospital in October, 1836, to be treated for an old stricture and a sarcocele; he had been a dragoon in the British army, but was now out of the service. While in the hospital he directed my attention to a tumour on the internal side of his right arm, a little above the internal condyle of the humerus. It was of an oblong form, about one inch and a half long, and evidently connected with the ulnar nerve, which, in in the situation of the swelling, seemed to have acquired four times its natural size. This tumour appeared, on feeling it, as if solid, and was movable in the transverse direction; all this information being obtained at the expense of some suffering to the patient. He dreaded any one handling the swelling, or anything even touching it, because, at the moment of each examination, and even for a quarter of an hour after, a stinging pain was felt all along the course of the branches of the ulnar nerve. The pain was most severely felt in the fleshy portion of the palm, at the inner side where the ulnar nerve divides and its branches sink deep into the palm, as also along the sides of the little finger and ulnar edge of the ring finger.

It is, however, to be remarked, that the patient never suffered any pain in the tumour except when suddenly touched or pressed upon, and, from the situation of the disease, these were accidents which seldom occurred.

Independently of the disease, Nolan was then under treatment: for it is to be observed that his general health had suffered much while in the service of the British army in India.

He stated that while on duty he had been thrown from his horse, of which fall he still bore on his person the sad memorial, in a dislocation of his left elbow-joint, which had never been reduced; so that "Jam fractus membra latore;" he neither sought for any active treatment to be applied to the removal of the neuroma, nor did I or my colleagues think it right, under the circumstances, to propose any to him.

When he was somewhat relieved of the sarcocele and stricture, he left the Richmond Hospital; and, in the latter part of the year 1839, was admitted into the Hardwicke Hospital for fever, of which he died.

The neuroma was found to consist of a swelling, about one inch and a half long, of the ulnar nerve, in that part of its course situated nearly above the internal condyle of the humerus. The swelling when cut into proves to be a cyst containing transparent albuminous fluid, and formed within the neurilema. The filaments of the nerve, separated from each other, were spread out over the surface of the cyst, and were reunited into a trunk below the tumour.

It is interesting to observe how closely this case resembled that related by Cheselden, which, we learn from Wood, was the first ever recorded of neuroma.

Cheselden says:—"A tumour forms in the centre of the cubital nerve, a little above the bend of the elbow; it was of the cystic kind, but contained a transparent jelly. The filaments of the nerve were divided, and ran over the surface; the tumour occasioned a great numbness in all the parts that the nerve led to, and excessive pain on the least touch or motion. The removal of the tumour was effected; and the account of the case, a few weeks after the operation, was:—'The pain has entirely ceased, the numbness a little increased, and the limb is not as yet wasted.'"—*Cheselden's Anatomy.*

2nd Case.—In most cases where the neuroma is solitary, and situated in the course of a nerve where it is exposed to injury or pressure, such as that even of the ordinary dress, the pain excited in it by the most trivial causes is intolerable to the patient, who becomes anxious to undergo any operation to be relieved of the disease. Such was the case of a patient, under the care of the late Mr. Macdowel, in the Richmond Hospital.

He had a neuroma about the size of a Spanish nut, in the course of the posterior tibial nerve, where it passed behind the inner ankle. Such were the pains endured by the patient in his daily work, as a labourer, that he could not earn his bread. At a consultation, at which I also attended, it was advised that the neuroma should be cut out, dividing the nerve across, both above and below the tumour, which was accordingly done. The tumour removed in this case was of a fibro-cellular structure, surrounded by a dense covering. The operation was completely successful in relieving the man of his suffering, and the motions of the foot were not materially impaired by the effects of the complete division across of the posterior tibial nerve. Although this case occurred many years ago, and was quoted from memory, it is well remembered by Dr. Hutton, Dr. Smith, and by the narrator himself.

The last case is that of a woman, C. Mulvany, aged twenty-seven, a widow, mother of four children. About two years ago she had the misfortune to fall against a window, from the broken glass of which she received a transverse wound of the forearm, about an inch above the wrist-joint. The wound divided some of the tendons across, as well as the median nerve, and it was five or six months before the wound was perfectly cicatrized. Subsequently to this a tumour formed in the course of the median nerve, just underneath the central part of the transverse cicatrix. This tumour, when she presented herself at the Richmond Hospital in September last, was about the size of a large almond; it was hard to the touch, and was the source to her, to use her own language, of "awful suffering," and completely prevented her supporting herself or family. When at her work, if anything, even her dress, accidentally touched the tumour, severe pains shot down to the hollow of the palm of the hand, and upwards to her shoulder; she also complained much of *numbness* and *coldness* of all the parts of the hand supplied by the *median nerve*. As in the case of Nolan, who had neuroma in the ulnar nerve, the little finger and *ulnar* side of the ring-finger were the seat of the peculiar sensations extending down from the neuromatous swellings, so in this case the peculiar sensations were felt principally in the parts supplied by the *median* nerve. Hence she complained that there were always coldness and numbness of the radial side of the ring-finger, and of the thumb and sides of the other fingers, always excepting the ulnar side of of the ring-finger and both sides of the little finger. The parts supplied by the ulnar nerve were in this case in their natural state as to temperature and feeling, and no pains radiated along the course of the branches of any nerve but those of the median. In this case a neuroma about the size of an almond, originating in a cicatrix formed across the partially or completely divided median nerve (well represented in the cast presented to the society), was the source of all her suffering. The obvious treatment for her case was to cut out the neuroma, and to effect this, involved the necessity of completely cutting across and removing a portion of the median nerve with the neuroma. Experience, however, led me and my colleagues to advise her to have the operation at once performed, to which she very gladly assented, as she found her sufferings daily become aggravated, and all she had tried utterly useless. On Wednesday, the 9th of September, I removed the neuroma, in presence of the Richmond Hospital class.

Operation.—An incision one inch long was made over the tumour, in the direction of the longitudinal axis of the forearm. The fascia was thus exposed, and a director passed underneath it, and the membrane divided on it. The upper extremity of the tumour was soon arrived at, and the point of entrance into it of the median nerve discovered; a probe passed under the trunk of the median nerve, and this last cut across. A hook was next passed firmly into the tumour, and the surrounding part dissected from it, until the lowest extremity of the tumour was reached; and the median nerve, where it made its exit from the lowest part of the neuroma, was cut across, one inch of it, including the tumour, having been completely removed. The operation, as may well be conceived, caused very great pain to the patient; the result, however, has been most satisfactory, the wound having healed in the course of a week. Her statement at the hospital, a few mornings ago, was, that there still remains some sensation of coldness and numbness in all those parts supplied by the extreme branches of the median nerve. But it was learned that there is now no morbid sensibility in the seat of the cicatrix where the neuroma existed; no shooting or stinging pain darting down to the palm or upwards. In short, with great joy, she states she is enabled to earn her bread, and (though with great difficulty in these times) to support her children by her labour.

Dissection.—On examining the portion of median nerve removed, which, including the neuroma, was about one inch and a quarter in length, it was noticed that the nerve, as to colour, consistency, and structure, seemed, above and below the tumour, to be quite normal. The oblong tumour itself had spread over it here and there some slender fibrillæ of the radial nerve; a longitudinal section of it presented a hard, white, homogeneous mass of the same consistence throughout, having no distinct cyst, but with an appearance as if the nerilema of the nerve had been continued over it.

In this case the surgeon had no choice between the operations that might have been proposed, viz., either that of cutting out the portion of the median nerve, including the neuroma; or that of dissecting out the tumour from the surrounding branches of this nerve as they passed outside or through the neuroma. The circumstance of the disease in this case having originated from a wound, which had penetrated deep into the centre of the median nerve, showed that there was no other alternative than that of cutting completely across the nerve. We learn, however, that on the Continent there have been cases of large neuromatous tumours connected with great nerves, such as the sciatic, which tumours have been safely disengaged from the lash of branches or fibrillæ of which this great nerve is made up. Velpeau mentioned in his clinical lectures, that he had successfully treated a remarkable case of neuroma of the sciatic nerve in this way; and he states that Chelius, of Heidelberg, had similar success. In these cases the tumours were purely neuromatous.

QUININE IN INTERMITTENTS.

A paper by Dr. Holmes has been published, in the American *Journal of Medical Sciences*, of considerable interest, on the use of quinine in the malarious diseases of hot climates, drawn from his experience as an army surgeon, stationed at an unhealthy post in Florida, of which we now present our readers with an abstract. The diseases of this country are said by the author invariably to assume an intermittent or remittent form. The experience of physicians in the warmer climates of Europe shows that larger doses of quinine are necessary to check fevers, than in regions where malarious influence is less predominant.

Starting with the principle deduced from his experience in Florida, that "in proportion to the amount of miasmata in the system, as shown by its effects, so must the dose of quinine, for the cure, be increased or diminished," he proceeds to state the mode in which he was in the habit of administering it with the greatest effect.

Dr. Holmes never gives quinine in a torpid or gorged state of the bowels, believing, very rationally, that under such circumstances the effect will be comparatively lost. For this reason he precedes the administration of quinine by an active cathartic, if necessary. He has given it when the

bowels were actively purged and irritated, without increase of the irritation.

Much discussion has recently occurred as to the most advantageous mode of administering quinine: some practitioners adhering to the common practice of giving it in small and divided doses, while others advocate very large doses at longer intervals. Dr. Holmes belongs to the latter class, and speaks most enthusiastically of this mode of administration.

It must be borne in mind that the malarious diseases of England and other countries of the temperate zone bear about the same proportion in severity to those of hot climates that ordinary diarrhœa does to Asiatic cholera. An English ague seldom causes the death of the patient until after repeated paroxysms, and is comparatively under the control of small doses of quinine or arsenic; on the other hand, the agues of India and the hotter regions of America may cause death by the first paroxysm, and very frequently the patient does not survive the third. Now, in such a state of things, it is absolutely necessary that the disease should be cut short at once in order to save the patient; and here small repeated doses of quinine, requiring time for their action, are inadmissible.

At the outset of the paper, the author states that the largest single dose of quinine he has administered was eighty grains; but the ordinary dose recommended by him is fifteen grains dissolved in water by the aid of a little vinegar. Suppose this to be given in the afternoon, at three P.M., the patient having had an attack of intermittent on the same day, commencing at nine A.M. and terminating at two P.M. The fever, being a quotidian, will return the succeeding day at the same time, despite the quinine; the chill and fever will be of a lighter grade, but will be as distinctly marked, and will remain as long; but the third day the patient will be entirely free from the disease, and will not experience, during any part of the day, the slightest symptoms of it. In treating many hundred cases of fever in Florida, the author has not met with more than twenty exceptions to this rule. If the bowels are in good condition, the quinine is given at once; if loose, in combination with twenty drops of laudanum. In some cases, even this dose of quinine has not proved sufficient; but the cause of its failure could not be determined.

He thinks that in those cases where a return of the paroxysms takes place, this occurs most frequently on the seventh day, then on the fourteenth and twenty-first. In these cases the same dose of quinine is administered shortly after the paroxysm, and the disease is again cut short. When quinine is given in anticipation of the attack on the seventh day, the fever is very apt to change its type and return on the eleventh; and hence he draws the inference that quinine should not be given in *anticipation* of an attack on a critical day.

Having mentioned some cases of periodical disease, complicated with inflammation, in which the patient was first treated with quinine for the removal of the ague, and the inflammation subsequently removed by antiphlogistic measures, he says—"Every intermittent disease is to be checked immediately. Quinine, as a remedy for periodicity, is to be given regardless of any existing state of inflammation. Never give quinine in divided doses, when directed for the immediate cure of periodical disease. To be certain of the operation of quinine, in a constitution with which you are not acquainted, it must be given eighteen hours before the desired result. In emergent cases it may be given in the lowest state of prostration, or the highest grade of fever. As a general rule, fifteen or twenty grains will be necessary for an intermittent, and thirty to fifty for a congestive, fever. Never give quinine for the cure of a periodical disease, in anticipation, when the periodicity exceeds five days."

Small continued doses harass and irritate. A patient who has taken sixty or more grains of quinine in the course of a month, in small doses, is indignant at the idea of a fifty or sixty grain dose being given in Florida, which suffices for the same period. This is illustrated by reference to calomel, of which a very large quantity may be taken at one time with no bad effect, whereas the same quantity in divided doses would produce irritation, fever, and ptyalism.

Extracts from the hospital books of the station in Florida are adduced as proofs that comparatively small quantities of quinine were given by him in lengthened periods, although the doses were large. The largest quantity mentioned is 220 grains, in six months and seven days—by no means a large amount.

His reasons for the large doses given in Florida are sufficient. In the diseases of that climate, eminently periodic in their character and of a highly dangerous type, it is apparent that the plan of giving quinine in divided doses cannot be entertained. The disease is one in which so much time cannot be lost. The immediate effects of large doses are thus described. The patient feels a buzzing and murmuring in the ears, a partial deafness, which often continues for twenty-four hours; a great sense of fulness about the head, and after, a dull pain across the forehead; there is generally more or less excitement or partial delirium, without excitement of the spirits in any degree. Dr. Holmes has often seen patients under the effects of quinine wander and talk incoherently, as if from the influence of alcohol. Occasionally it will produce a pricking sensation in the skin, and a quivering in the muscles of the fingers and eyeballs. One patient he knew who was always made perfectly insane, so that he had to be confined; and this even by the administration of five grains of quinine. He never saw any of these symptoms last much longer than twenty-four hours.

"Enlargement of the liver and spleen have," says the author, "been attributed to large doses of quinine as well as subacute inflammation of the alimentary canal, dropsy, and palpitation of the heart." These are really effects of miasmatic fevers, and were well known long before quinine was discovered. Chronic affections of the liver and spleen are incident to hot and malarious climates without disease even as a cause. He believes them to be often the pure result of malaria. Enlarged spleens are quite common, chiefly with those who have suffered from intermittents, but sometimes in persons who have never been sick, though living in a malarious district.

One circumstance has attracted the author's attention in cases of disease from miasmatic origin in Florida—the abnormal action of the heart: its beats, if the patient has been weakened by disease, are so tumultuous and diversified, but withal afford so little sign of organic lesion, that, if not acquainted with the former condition, the prognosis will be most unfavourable. He has seen but few permanently bad results from this cause.

The following description of the condition of a person even in "good health," in a miasmatic region, is interesting, as showing the inferior degrees of influence of this subtle agent:—"His rest will be broken at night; his appetite will not be so good as formerly; he will not enjoy that feeling of full health he has been accustomed to; his system will be attacked from time to time by the offshoots of the disease preying on others around him, though he will not be sick, and may escape with a like freedom from disease during all his sojourn in the country; but the whole constitution seems in some degree to labour under the influence of malaria; slight wounds that would elsewhere heal in a few days' time must here undergo the slow process of suppuration and granulation, and even this does not come on early, the wound remaining some days without any visible advance towards a cure. You cannot persuade a slight incision of the skin to heal by adhesive inflammation; and I have repeatedly seen wounds, in habits that were to all intents healthy, assume the deep burrowing condition.

STATISTICAL ACCOUNT OF THE ACCIDENTS BROUGHT TO THE LONDON HOSPITAL.

Admitted as In-Patients	2,358
Treated as Out-Patients	4,660
Total during the year	7,018

CONSISTING OF THE FOLLOWING

		In-Patients.			Out-Patients.		
	No.	Male.	Female.	Total.	Male.	Female.	Total.
Fractures	954	390	107	497	321	136	457
Wounds	1,384	279	101	380	768	236	1,004
Contusions	3,092	669	190	859	1,535	698	2,233
Sprains	624	106	46	152	306	166	472
Dislocations	119	23	3	26	64	29	93
Concussions	44	33	9	42	1	1	2
Burns and scalds ..	422	131	86	217	115	90	205
Hernia	63	35	14	49	14	..	14
Bites of dogs	52	2	1	3	39	10	49
Attempts at suicide ..	30	9	21	30	..	..	..
Various	234	80	23	103	85	46	131
Total during the year 1846	7,018	1,757	601	2,358	3,248	1,412	4,660
" " 1845	6,555	1,502	549	2,051	3,139	1,365	4,501
More	463	255	52	307	109	47	156
Less	..	..	..	..	..	..	..

London Hospital, Jan. 8.

SOME OBSERVATIONS ON MR. SYME'S LAST PAPER ON POPLITEAL ANEURISM, IN THE MONTHLY JOURNAL.

Mr. Syme's communication opens with the narration of a case of popliteal aneurism successfully treated by the Hunterian operation. The ligature separating on *the 36th*, and the patient allowed to leave the hospital *on the 39th, day*. We are then told that this is the "sixteenth" time Mr. Syme has tied the femoral artery without experiencing any bad effects from the operation; and he goes on to state that "the public opinion" of the profession having reproached him for continuing a practice replete with danger, however fortunate his results have hitherto been, he has considered it to be his duty "to make a careful inquiry into the present state of the question." How far the professor has succeeded in arriving at the *truth* of the question, I shall leave those who may read these remarks to determine. Mr. Syme and Mr. Busk (surgeon to the Dreadnought Hospital Ship) having applied a ligature to the femoral artery twenty-five times, without death having ensued in a single example from the operation, Mr. Syme assumes from this fact, and from this *alone*, "that the operation is *nearly*, if not *entirely*, free

from danger." As well might Cheselden, Martineau, and other successful lithotomists, assert that the operasion of lithotomy is one unattended with danger, because they had had a succession of fortunate cases. The professor of surgery, being gifted with second sight, years ago predicted that "ulcerations, sloughs, and even fatal results, would not be wanting;" and, marvellous to relate, a portion of his prophecy has come to pass. Slight ulcerations, possibly sloughs (when pressure has been improperly used), have occurred; but Mr. Syme has failed, by the *unsuccessful* (?) cases he has quoted, to prove that death has resulted from the *treatment by compression*. Let us examine the cases (three in number) brought forward to support Mr. Syme's argument. The first patient, under the care of Dr. Bellingham, dies from erysipelas (prevalent at that time) attacking the diseased limb. Is it fair to assume that such a result was caused by pressure, however improperly applied; and how much more probable is it that such a result would have ensued from a wound of such an extent as that required in the application of a ligature to the femoral artery, involving, more or less, every structure composing the limb, the bone and its immediate investment excepted? Although Mr. Syme may have tied the femoral artery successfully under circumstances "so unpromising" (hospital sore and erysipelas prevailing) that no surgeon of the least prudence, except from urgent necessity, would perform the operation, can such a statement be admitted as an argument against the employment of compression, because, on the other hand, a patient *has* died from erysipelas excited by a slight abrasion of the cuticle on the thigh? Let me ask Mr. Syme whether the case just quoted is sufficiently "unpromising" for him to have recommended the application of a ligature to the femoral, a patient, from Dr. Busk's account, labouring under "*anasarca, anæmia, enlargement of the hea.. and valvular disease*? Again, the second case, one occurring in the practice of Mr. Busk, is one of gangrene supervening upon complete obstruction of the artery, proves too much for Mr. Syme. The history of the case is briefly as follows:—J. B. comes under the care of Mr. Busk for popliteal aneurism of ten days' duration, accompanied with effusion into the knee-joint. Pressure is applied in the usual manner; the knee-joint (previously full of fluid) becomes red, swollen, and tender, and the patient dies from gangrene commencing in the limb as soon as the circulation through the popliteal artery ceased. An examination being made of the limb after amputation, it was found that the disease was *cured*, but that the cavity of the joint had been perforated by the pressure of the aneurismal tumour, and that an abscess had formed external to the sac. Mr. Busk naively remarks, "It is of course impossible to say that under these circumstances the operation would have been attended with a more happy result, although I am inclined to believe that it would in a great degree have been prevented, by an earlier dispersion of the aneurism."

If we are to deal with assumptions, I for one do not wish to enter the lists with such speculative minds as Mr. Busk. It is, however, but fair to the treatment by compression to observe, that there are two facts against his hypothesis—the one being, that the knee joint was seriously affected previously to any treatment; the other, that the rapid dispersion Mr. Busk writes of would, most probably, not take place in fourteen days—the duration of treatment in this case. Gangrene caused this patient's death, probably accelerated by the swelling about the knee obstructing the collateral circulation; but to say that such a result would have been avoided by the Hunterian operation is more than any surgeon is justified in asserting. Let me ask Mr. Syme, if he had known the condition of the parts [illegible], whether he wou'd have recommended [illegible] performed his favourite operation?

The third, a case well-known to those interested [in] the subject, occurred in the practice of Mr. Cusack; the patient clearly died of heart disease (of which there was abundant evidence before the treatment was commenced) forty-eight hours after the popliteal artery had become impervious. It was an unfortunate coincidence; but where is the argument against pressure?—and who can say that the cure of the local disease caused the death of this man?—why did the heart allow forty-eight hours to elapse before it ceased to perform its functions?

The next remark Professor Syme makes betrays very gross or very wilful ignorance; he says—"Indeed there seems to be some peculiarity in the Dublin reports on this subject, since, with regard to another case, it is said, 'that after recovery the popliteal artery of the affected limb pulsated as strongly as that of the sound one;' which is plainly quite impossible, if there really had been an aneurism." This is not only possible, but probable, and a pathological fact which I should have supposed it impossible for a professor of surgery to be ignorant of. In the spontaneous cure of an aneurism, the sac may become filled up by coagula, and the canal of the artery remain pervious—a fact observed long ago by Hodgson, who records a case where so small an artery as the anterior cerebral remained pervious, although an aneurismal sac, in connection with it, had undergone a spontaneous cure. The cure effected by nature, and compression *when properly applied*, intimately resemble one another; and I can see no reason why the popliteal artery should not remain pervious, although the aneurismal sac is closed by fibrinous deposits. Mr. Syme, with great confidence, asserts that the operation is rendered much more difficult by the previous application of pressure. From the successful results that have attended upon the treatment by compression, few opportunities have been given to *dexterous* operators, like Mr. Syme, to test their anatomical and manipulative acquirements. There are, however, enough to show that it offers no valid objection to the practice, and that no difficulties of any importance have as yet occurred in the published cases.

If Mr. Syme is founding his remarks upon the unpublished cases he alludes to, it is his duty to communicate the facts of those cases to the profession, or to reserve his opinion until the surgeons to whom they have occurred imitate the example of Mr. Busk.

Mr. Syme writes of the ease, rapidity, and safety with which the operation may be performed, and gives some commonplace rules for the observance of the operator. If my memory serves me rightly, Mr. Syme's operations are not always unattended with what, to bystanders, appears to be danger. Not long ago, I remember hearing, and, I think, reading, of gushes of blood that followed the introduction of the aneurism needle beneath the artery: Mr. Syme, however, pulled the ligature tight, and ultimately all went on well. Dr. Bellingham's table, containing twenty-three successful cases, is next alluded to; and Mr. Syme finds that the average duration of compression in each of those cases is thirty-eight days, which he describes as—"thirty-eight days and nights of misery to escape a few minutes of trivial uneasiness"! The whole merits of the question appear to me to rest on the just estimate of this passage.

Felicitous as Mr. Syme is in his description of the operation for popliteal aneurism, and although even the objection (through the labours of our transatlantic brethren) "of a few minutes of trivial uneasiness" is now removed, I venture to assert that the merits of the practice are not thus disposed of. It is true that thirty-eight days were occupied as an average of the treatment; but I would remind Mr. Syme that the surgeons did not, for thirty-six days, look with anxiety to the separation of the ligature, nor had they the same fears of gangrene that every rational man must look forward to when the circulation through the principal channel of a limb has been *suddenly* cut off.

Mr. Syme next sneers at those who he imagines are unable to apply a ligature to the femoral artery, because they employ compression; and he then attempts to make a comparison between the treatment of aneurism by compression, or ligature, and the treatment of retention of urine by the catheter or trocar. An analogy cannot be said to exist, and I need hardly observe, that when this practice receives the cordial support of two of his own countrymen, so eminently distinguished as operating surgeons as Messrs. Liston and Fergusson are, and when the very table Mr. Syme quotes contains such names as Cusack, Hutton, Liston, Porter, Harrison, and Bellingham, amongst the surgeons to whose practice Mr. Syme alludes, I need not attempt to prove that these are not the men, to use the professor's own words, "who feel it necessary to choose inferior means" in the treatment of surgical disease. "Let every man act according to his powers," says Mr. Syme; but I would beg to remind him, that that tribunal to which both great and small must submit—the public opinion of the profession—will judge of a man's powers by his acts; and I fear that, when they deliver their verdict upon Professor Syme's recent literary labours (*vide* observations on lithotomy, amputation in the thigh, and upon "dear Liston's" case of traumatic aneurism, and now upon popliteal aneurism), it will not be in favour either of Mr. Syme's good sense or his liberal appreciation of the labours of his contemporaries.

Your obedient servant, C. J.

Feb, 12.

ON A SINGLE AND DOUBLE CELL ETHER INHALER.

By A. SMEE, F.R.S., Surgeon to the Royal General Dispensary, and Lecturer on Surgery.

I have already called the attention of the profession to three forms of ether inhalers, which I am informed are in constant use. To distinguish them I should recommend them to be called the pipe inhaler, the inverted pipe inhaler, and the hot water ether inhaler.

In spite of all my entreaties, I cannot persuade the manufacturers to make the air ways and valves half large enough for my fancy; and I therefore beg that this point may be particularly regarded, before the instruments are purchased. Of the three former ones described, I give a decided preference to the last, next to the second, and I conceive that the pipe inhaler may be altogether abandoned.

The valves should also play in all positions of the instrument, and for that reason I prefer the flat-door valves—which, also, allow the respirations of the patient to be observed by the surgeon.

These forms of inhalers, I believe, however, will be superseded by the single and double cell ether inhalers, which I am now about to describe. These single-cell inhalers, consist of a box, crescent formed, and made of silver, silver gilt, soft metal, tin, copper, electro-plated, glass, or other materials; in fact, a nipple-glass will do for a glass single-cell apparatus. The front surface is pierced with holes for respiration, and, when in use, a piece of sponge saturated with ether is placed in the box, and the whole is ready for use. By this contrivance, valves, flexible tubes, and all other cumbrous appendages are abandoned, and respiration is freely accomplished.

The double-cell apparatus merely differs from the single-cell, by having a narrow chamber between the sponge, and another to prevent any fluid ether, by any chance, reaching the mouth. In both cases, a little pad may, or may not, be employed, at the will of the operator.

The double-cell apparatus may have a valve at the intervening chamber for expiration, but I do not think it necessary. Experience alone can decide whether it will answer for all cases, though I have ascertained its great superiority in many instances. This, together with the hot water ether inhaler, will be found to answer in all cases, and produce far more rapid effects than other inhalers employed. These inhalers are neither patented nor registered; and Ferguson, Horne, Jones, and Maw are conversant with the manufacture.

Finsbury-circus, Feb. 9.

ON THE EFFECT OF ETHER.

By W. PHILPOT BROOKES, M.D., M.R.C.S. England, Surgeon to the General Hospital and Dispensary, Cheltenham.

Since reporting my former case, I have successfully performed the following operations under its effect:—

Ann Weston, aged sixty-nine, living at No. 1, Burton-street, had been suffering for the last twelve months with fistula *in ano*, and had been during the whole of the time confined to her bed. She was of a very nervous, debilitated habit, and would not give her consent to the performance of an operation; but, upon hearing of my former painless case, she sent for me and desired to have the operation performed. On examination, I found the whole verge of the anus in a state of ulceration, accompanied with great pain; the probe discovered a fistulous sore extending full four inches into the rectum, the walls of it of some thickness. Having put her in train for performing the operation, it was done in two days afterwards. The patient was laid on her back, with the head elevated (so as to have no difficulty with the ether), the buttocks raised, knees drawn up and held apart; I then passed up my finger and inserted the director, when the inhalation of the ether commenced (with merely a bladder and elastic tube), and she was in a complete state of unconsciousness in two minutes; the bistoury was then introduced, and the fistula divided in its whole length, without her showing the slightest symptom of pain or uneasiness. When it was over, I asked her—"If she had quite made up her mind to have it performed?"—she said "Yes, please, go on with it as quickly as possible." When told it was over, she expressed great surprise. At this operation the following gentlemen were present:—Drs. Wright, Bagnall, Bell, Smith; Messrs. Eve, Orrell, Peach, Alex, Tibbs, Rowe, Norman, Churche: and all expressed themselves satisfied with the result.

The next case was that of Ruth Monk, aged twenty-one, who wished to have the last molar tooth extracted, under the ethereal influence. She is of a full plethoric and excitable habit: in one minute and a half she was in a state of unconsciousness, from the ether, and became quite unmanageable; her face flushed, and she required two persons to hold her. I lanced the gum without any sign of pain, and she recovered her sensibility immediately, as she was very anxious to have her tooth extracted. She again inhaled it, and when under its influence some excitement returned, and on drawing the tooth with the claw, she cried out, "Oh!" but, on coming to herself, stated she had had no pain, and, having had out nine teeth before, she could judge of its effect, and said, "I will never lose another tooth except I am prepared in a similar manner so as to give no pain."

Feb. 1.—The following cases were operated on to-day, in the presence of fifteen gentlemen, most of them members of the profession:—

John Coombes, aged fifty-six, a labourer on the roads, residing at Charlton, of a strong plethoric habit of body. Whilst at work he met with an accident (three weeks back) to the middle finger of the right hand; mortification took place, and the first joint sloughed away; still he would not consent to the loss of the finger, and the disease extended to the metacarpal bone. Having heard he could have it taken off without suffering any pain, he applied this morning to have the operation performed. The ether was inhaled, and the man under its effects in six minutes; he remained so for five more. The finger was taken off by a V-shaped incision, opening the metacarpal bone half way down, with Liston's bone-nippers. The patient did not show the slightest sign of pain, and stated he heard the bone cut, but positively asserted he felt no uneasiness of any kind, and grumbled much at the suffering we gave him when taking up the arteries afterwards. I allowed this case to remain for half an hour before I dressed it, as I am inclined to think secondary hemorrhage will often occur after the effect of the ether has passed away; reaction does not until then become perfectly established; small arteries often escape untied if we dress it immediately, and union will not take place so well on account of extravasation of blood. The pulse in this case was, before the operation, 84, and during the ethereal process it varied from 60 to 70.

William Guy, aged twenty-one, residing at 44, Duke-street, of a pale, exsanguineous habit of body. Has had phymosis from syphilis for several months, and, wishing to have the glans penis liberated, submitted to the operation. (The ether was inhaled, and produced its effects in three minutes). This was performed by dividing the skin down to the end of the gland, without any sign of pain, and he states he did not feel anything of it. Pulse, when in the ethereal state, was 75, and soft, and before that time, 90.

A servant, aged thirty, had four stumps extracted, without giving her the slightest pain, by Mr. J. Tibbs, surgeon-dentist, of this town. The ether was inhaled from a modification of Dr. Snow's apparatus, and she was put under its influence in less than two minutes, and remained so nearly five; and positively states she felt nothing.

Lot Organ, aged thirty-six, residing in Grove-street, of a spare habit of body, has had a disease of the left elbow-joint for the last year or two, and would not consent to its being amputated before; but, the general health becoming injured, he now consented. The ether was given with Dr. Snow's apparatus, and after its inhalation during four minutes he appeared quite unconscious. The circular incision was made through the skin, and he cried out most lustily, and continued doing so through the whole stage of the operation. After it was all over, he stated "he felt the first cut and also the bone sawed, but he was in a dream and smoking a pipe, which some one tried to take from him."

I can only view this case as a failure; and I think it right alike to report all, whether failures or not. The other cases were decidedly satisfactory. I may state that, in the above operation, the mouthpiece did not fit nicely to the mouth, and he appeared to have inhaled fresh air by its side.

Albion-house, Cheltenham, Feb., 1847.

PROGRESS OF MEDICAL SCIENCE.

France.

ACADEMY OF SCIENCES.

Meeting of Feb. 15; M. Brongniart in the Chair.

Election of a Member.—A seat having become vacant by the demise of Colonel Bory de St. Vincent, a ballot took place for the election of a new member of the Institute. M. Civiale was the fortunate candidate: he obtained thirty six votes (fifty-six members present), and was therefore declared to be duly elected.

Inhalation of Ether.—The discussion of this important subject continued this day to occupy the attention of the academy; but no new or interesting facts were elicited. The debate which had acquired a personal turn, chiefly referred to the nature of the accidents experienced by a patient of M. Velpeau.—The meeting adjourned at half-past five.

ACADEMY OF MEDICINE.

Meeting of Feb. 16; M. Begin in the Chair.

INHALATION OF ETHER—DEATH—POST-MORTEM EXAMINATION.

M. Jobert remarked that in two cases death after operation had occurred in his wards, and that the inhalation practised in both instances did not appear to him to have been altogether unconnected with the fatal issue. The first case was that of a woman, who breathed the ethereal vapour during thirteen minutes; insensibility was not completely produced, and the operation was attended with considerable pain: heat of the head, and pain in the trachea and bronchi, were afterwards complained of; erysipelas appeared, and the patient died suffering from violent bronchitis and badly-defined nervous symptoms. The *post-mortem* examination had, unfortunately, been very incomplete, the deceased's friends having objected to dissection of the brain or spinal chord; but the trachea was found red, and the heart gorged with blood.

M. Jobert had since then the misfortune of losing a second patient, who had suffered amputation of the thigh in consequence of white swelling of the knee. Inhalation of ether had, after four minutes, brought on complete unconsciousness; the operation was painless, and it was only two hours later that the patient recovered her senses. The following day the ideas were incoherent, and articulation of words difficult; headache was present, and a violent cough, which lasted seven days. On the ninth day, violent neuralgic pains were observed in the face, and contraction of the sterno-mastoideus muscle, and also of the abdominal walls. On the fifteenth day the patient died, and the body was examined with the greatest care. The small blood-vessels of the pia mater, of the brain, and spinal chord, were in a state of congestion, and the cerebral substance, also, overloaded with blood. At the union of the cervical with the dorsal region of the chord, was noticed a red softening, by which the symptoms observed during life were fully accounted for. The ventricular cavities of the brain were filled with serum, the mucous membrane of the pharynx was of an intensely red colour, and the basis of the tongue denuded of its epithelium; some pus was also found in the pharynx. The œsophagus was much congested; the pulmonary artery was red on its internal aspect; the heart had somewhat lost its consistency. The first patient was thirty years of age, the second over forty. M. Jobert proceeded to say, that in this second case it appeared evident to him that the inhalation of ether had a good deal to do with the symptoms observed: he was of opinion that it had caused congestion of the nervous centres and irritation of the mucous membranes, and that these cases showed with what caution the new method should be used. He had observed during operation that the arterial blood lost in some degree its florid aspect, but he had not seen this effect so well marked as M. Amussat had stated. Several of the learned surgeon's patients had been seized with universal tetanic contractions of the muscular system, which had rendered it necessary to give up the inhalation.

M. Renaud, director of the Veterinary School at Alfort, stated that in the experiments instituted on animals at that establishment the dark colour of the arterial blood had not been observed; but the serum exhaled a strong odour of ether, and, in all cases, dry ecchymotic patches had been met with under the pleuræ: no anatomical change whatever had been detected in any other texture.

M. Amussat remarked that the differences in the results of observation mainly depended upon the method of conducting the experiments. If, at the beginning of the operation, an artery and a vein were simultaneously uncovered, the artery was observed to acquire gradually a darker colour, so as not to be distinguishable, except by its pulsations, from the vein, when complete unconsciousness was established.

Professor Piorry gave an account of the results of inhalation of ether in four cases of neuralgia. Pain had been suspended in a temporary manner, but violent hysterical attacks had been produced.—Meeting adjourned at five o'clock.

FACULTY OF MEDICINE.

Lectures on General Pathology, by Professor Andral.

Looking further into the subject we have begun in our last lectures, viz., Sympathy, we find that when the irritation of any one organ causes the appearance of sympathetic symptoms, these may chiefly arise from some part which

previously was the seat of disease. The contrary is sometimes observed, a new irritation of any viscus causing a temporary cessation of morbid symptoms in another, e. g., the frequent arrest of phthisis pulmonalis during gestation; it may also happen that an ancient irritation, which had disappeared, recurs when a fresh irritation invades another part of the system. In acute disease sympathies are more numerous than in chronic affections. We may also notice that a singular diversity exists between the different viscera with regard to their liability to become the seat or the origin of sympathetic symptoms. Thus the brain and the stomach very readily occasion sympathetic suffering in other parts, and also take a notable share in the maladies of distant viscera; serous membranes, on the other hand, are often the occasion, but seldom the seat, of sympathetic symptoms; lastly, the heart is much oftener the seat than the occasion of sympathy.

Sympathetic phenomena may be studied in the various tissues, or in the organs formed by the assemblage of these tissues: the latter investigation being far more important than the former to the pathologist. The influence of climate and temperature on sympathies must be carefully noticed; in warm countries they are more numerous, and more easily developed, than in temperate or cold latitudes; hence the peculiar physiology of many diseases of tropical climates, where the brain and liver frequently testify the part they take in the irritation of the other viscera: the former by giving to inflammatory affections an ataxic form; the latter by the ready production of hepatic alterations under the influence of intestinal suffering.

The sympathetic phenomena, of which we have endeavoured to lay before you a short history, are vital manifestations which do not admit of any one of the numerous explanations which have been brought forward. Community of structure or of function, the distribution into different parts of nerves emanating from one source, nervous anastomosis, are each and all theoretical explanations of sympathy, which account for a certain number of phenomena, but which do not apply to all. We know no more of the intimate nature of sympathy than that of the electric fluid, the existence of which is proved to us only by its effects.

DIMINUTION OF IRRITABILITY.

This diminution is betrayed to the observer by a decrease in the activity of vital phenomena, and produces a condition which has been termed asthenic or hyposthenic, in contradistinction with the hypersthenic state—a division introduced by the Italian school, represented chiefly by Rasori and Commasini. The asthenic state may be congenital or acquired, and may be in itself the only morbid condition appreciable, or coincide, on the contrary, with numerous diseases. It may exist in disease as an element of variable nature—as a cause, as an effect, as a symptom, or a complication. We find that it acts as a cause in consumption, and in many chronic affections; it is an effect or result in the tedious convalescence which follows protracted illness; it is a simple morbid element in typhoid fever, and it is often an important complication which changes the aspect of the symptoms, and modifies the treatment.

If the hyposthenic condition be congenital, its cause is not to be sought for in the composition of the blood, or in the state of the nervous system: for both the nerves and the circulating fluid have been changed originally by the nisus formations which presided at the formation of the being; their alteration is an effect, not a cause. Acquired asthenia recognises numerous producing causes—some of which are external, others inherent, to the organism. Amongst the first we may class the influence of moisture, particularly combined with heat: extreme heat depresses the system by causing abundant perspiration, and it is well known to all those who have practised medicine in tropical climes that antiphlogistic measures must there be used more sparingly than in our more temperate latitudes. The weakening influence of warm baths is a fact very generally admitted. Vitiated air, by the presence of miasmata, or by the respiration of many persons, also exerts a very debilitating action. The influence of bad or insufficient food on large populations is admitted to promote the development of fevers of a putrid character. The excessive indulgence in watery drinks must also be carefully guarded against; and we may say that British practitioners have been perfectly correct in deprecating the continual and exaggerated exhibition of *tisanes*, to which French physicians have been so much and so long addicted. Medicines, poisons, often act as useful or injurious agents in depressing the general or local irritability: it is thus that digitalis acts upon the heart. The undoubted action of a certain class of medicines, called counter-stimulants, is to diminish irritability: under their influence a remarkable languor is established; the heat of the body seems to diminish (we say *seems*, because thermometric proof of the fact has never been brought forward), the arterial pulsations lose their strength and frequency; a tendancy to syncope, attended with nausea and vomiting, is sometimes produced; vertigo, and also some irregular nervous symptoms. When contro stimulant medicines are xhibited to a healthy subject, the above train of symptoms is met with; but it is not so in disease, when, the irritability of the system having been carried more or less beyond its healthy standard, hyposthenic accidents are produced by the exhibition of these drugs, only when irritability has first been by them brought down to its physiological level.

Diminution of the globules of the blood, and excessive excitement of the nervous system, are the principal proximate causes of diminution of excitability. The asthenic condition thus induced may be general, or confined to one organ. When asthenia is physiological, the functions are languid, and require for their accomplishment the exhibition of hygienic or pharmaceutical stimulants: venesection readily occasions palpitations of the heart and dyspepsia, and most diseases acquire a tendency to pass into chronic sufferings, or to assume an adynamic form. This general debility may in itself constitute a morbid entity, in consequence of which the functions become more or less impaired, and the digestion difficult, particularly that of non-stimulating food. In this state, aqueous drinks are not usually well tolerated by the digestive organs, and frequently occasion obstinate vomiting. The pulse loses its regularity, and syncope is easily produced; with regard to its frequency, it is not uncommon to find it increased—a circumstance usually noticed in cases of abundant hemorrhage and of advanced chlorosis. Capillary congestion is also the possible result of debility—a fact we have not long since established in these lectures. Dyspnœa also shows itself; and the various secretions, particularly perspiration and urine, are increased in quantity, and more watery in their nature. Various disturbances of innervation are likewise observed; by prolonged abstinence, loss of vision has been produced, and also paralysis of motion of the lower extremeties in cases of nervous disease of the stomach, in which the patient had been for some time deprived of food. We may here notice that we have often been struck with the absence of any anatomical change in the spinal chord, in persons who had died from the progress of paraplegia resulting from debilitating causes. Perversions of excitability are also noticed, such as delirium, hallucinations, and convulsions. Asthenia may, lastly, show itself in the form of a complication of existing disease, and give a special character to the general aspect of the malady.

SENSIBILITY.

This property of living textures manifests its existence only where organized matter is arranged in a peculiar form, and requires for its production a particular apparatus, viz., *the nervous system*. The numerous causes which increase, diminish, or destroy sensibility are very much the same as those which exercise an analogous influence over the vital property previously alluded to. Some special agents tried, however, to diminish it: for instance, the drugs called narcotic. Disease modifies sensibility by increasing or diminishing its intensity, or by abolishing it altogether.

Increase of sensibility bears the name of hyperesthesia, and may either show itself by augmentation of sensibility in any part, or by producing in organs which naturally do not convey their impressions to the sensorium, the property of so doing when in a diseased state. Sometimes this production of sensibility is preceded by congestive or inflammatory appearances; sometimes, on the contrary, as in neuralgia, nothing of the sort is observed. A natural or acquired neurosthenic condition of the system, considerable mental exertion, &c., favour the development of abnormal sensibility. Often, under the influence of these causes, the stomach becomes the seat of excessive pains and of other troublesome functional symptoms; it is in such cases that cold ablutions have been found of material service by their invigorating influence on the nervous system. After abundant hemorrhage, prolonged abstinence, or chronic disease in different parts of the body, pains are frequently experienced, which often remain unknown in their nature, and may occasion errors of diagnosis: for instance, cephalalgia in chlorosis, the clavus in hysteria, &c. In the last-named disease, pain appears as one element of a more general disturbance of the nervous system. Increased sensibility thus gives to all diseases with which it is connected special characters; it modifies their ymptoms, interferes with their regular progress, and gives rise to particular practical indications. This is not all: hyperesthesia, at first the only morbid manifestation, may after a time disturb the circulation of the blood in the part it has invaded, and occasion congestion or alterations of nutrition of various kinds. Other nervous accidents may also be the consequences of hyperesthesia: thus great pain is not unfrequently the cause of delirium, and of intellectual aberrations: it may also produce convulsions, or diminution of activity in the accomplishment of the functions of the muscular system, even of organic life; hence palpitations of the heart, or arrest of the contractions of that important viscus, and consequently pothima, during which death may occur.

Contractility is the third vital property which is presented to our study; and we prefer, for reasons which will appear obvious, to use the word motility. Independently of chemical or physical operations, motion in living bodies recognises four causes—tonicity, contractility, expansibility, and vibration.

Tonic motions are neither very readily appreciable nor susceptible of any great development; they consist in the constriction of solid parts deprived of muscular envelopes. Their result is the diminution of cavities, and the consequent expulsion of fluids contained. In the skin, particularly of the scrotum, that property is manifest: we observe it in the parietes of excretory ducts and of small arteries. In large arteries, tonicity is not very evident: after death the diminution of their diameter is due to elasticity; and the curious experiments of Tiedemann, Müller, and others, have established that, during life, large arteries, in the accomplishment of their functions, diminish more in diameter than after death: the difference being due to the presence of tonicity. Schwann, in experimental researches proved by Müller to be correct, has shown that if minute arteries, meandering through transparent parts, be placed under the microscope, and put in contact with cold water, they will be reduced to one-half or one-third of their size, which they slowly resume in the course of half an hour, when the refrigeration has been removed. The smaller the artery, the more distinct the constriction. Nothing of the kind is observed in small veins. We may now, to a certain extent, account for the local action of styptic or astringent substances on our tissues: they throw tonicity into play. The nervous system is not

without action upon the manifestations of that property, *e. g.*, cutis anserina from mental emotion. Tonicity is, of course, more or less developed, according to the conditions of strength or weakness, of age, sex, and constitution of each subject. Its energy may be morbidly increased or diminished; to its diminution some passive forms of congestion must be referred.

The motions due to contractility are more appreciable, though not more important, than the former. Muscular fibre is their necessary agent; and they can be produced only when the fibre receives arterial blood, and nervous influence. Hence the state of the nervous system will have much to do with their modifications. The enormous development of muscular contractility in hysterical attacks is a striking illustration of the fact. Changes in the composition of the blood will likewise influence the alterations of contractility; and, as a proof, we need only remind you of the deficiency of muscular action in scorbutic and chlorotic patients. Contractility may be perverted: in the muscles of relation we may find it explained by anatomical changes of the nervous system, or by sympathetic action of the brain, as it is often observed in children; or by no appreciable anatomical alteration whatever, as in hysteria. As to the muscles of organic life, they are often seen to contract with morbid energy from the excitement of their membranous linings, or even from simple disturbances of innervation in the heart. Perversion of contractility is met with in chorea, in catalepsy, &c. Muscular trembling is brought on by causes of very different nature—such as age, intemperance, inhalation of mercurial vapour, &c. The diminution or total disappearance of contractility may be due to physical changes in the nerves or nervous centres, or even to a dynamic disturbance of the nervous system: in hysteria, paralysis is not uncommon; great impoverishment of the blood may also occasion it. In his interesting researches on inanition, M. Chaussat has seen, in animals, paralysis of the posterior extremities produced by prolonged abstinence from food.

Expansibility is the special property of erectile tissue. The capillary system has been said to be possessed of it, and a theory of congestion and inflammation rests upon the supposition; to us it is anything but proved.

Microscopic research shows on the skin of inferior, and the mucous surfaces of all, animals the presence of a vibratile movement, caused by the agitation of minute bodies, analogous in appearance to lashes. After death these motions persist as long as muscular irritability; and electricity has no influence on their production. Narcotics—opium, belladonna, nux vomica, prussic acid—do not modify them; but these motions are disturbed by acids and alkalies; blood excites and bile arrests them. They are, in all probability, subservient to the displacement of fluids within our body.

MEDICAL PERIODICALS.

(From the *Revue Medico-Chirurgicale*.)

POLYPUS OF THE RECTUM AND FISSURA ANI, IN CHILDREN, BY DR. PERRIN.—The characteristic symptoms of these affections in children appear to be the excessive constriction of the sphincter ani, and the slight hemorrhage which in both accompanies defecation; but they can be distinguished from each other only by the results of ocular inspection. Two cases of fissure are related—observed in the words of Professor Trousseau, and cured by the injection of a solution of extract of rhattany (1 gramme to 100). In one case the treatment was successful in three days, in the other in nine. A case of polypus of the rectum is also brought forward, observed in a child two years and a half old. The treatment, successful in this instance, and recommended by the author, is the rupture, with the fingers, of the pedicle of the tumour.

GOUT AND RHEUMATISM, BY DR. BUCKLER, OF BALTIMORE.—The author recommends the exhibition of phosphate of ammonia in the treatment of these affections, and brings forward four cases in which that medicine produced most beneficial results. The theoretical object which the drug is expected to accomplish is to decompose the insoluble urate of soda, which forms the deposits of gout, into phosphate of soda and urate of ammonia, both soluble, and which, therefore, may be readily eliminated by the secretions. The dose employed is ʒj. daily, in solution in water.

TRAUMATIC HERNIA OF THE TESTIS, BY M. MALGAIGNE.—Two interesting cases are related by M. Malgaigne, in which the testis was expelled from the scrotum through a division of its anterior wall. The progress of cicatrization of the wound, far from causing the spermatic gland to return to its natural cavity, increased gradually the deformity; and M. Malgaigne was obliged, in both instances, to employ a practice which proved successful, and which he recommends in similar cases, although he has not found any authority for it in surgical works—viz., to dissect the scrotum, and there make a bed for the testis, into which the organ shall be replaced and maintained by a sufficient number of sutures.

ON SIMULTANEOUS DOUBLE AMPUTATIONS, BY DR. BROUZET, OF NISMES.—After relating a case of success of this practice, Dr. Brouzet, in opposition with Boyer, Velpeau, and others, recommends the simultaneous removal of two extremities, in chronic as well as in traumatic lesions. The editors of the *Revue Medico-Chirurgicale* approve of the practice only in traumatic injuries.

A letter is published in one of our political contemporaries (*Galignani's Messenger* of Feb. 18), in reference to the discovery of the stupifying properties of ether. It is claimed by Dr. H. Wells, who states that in November, 1844, he made known the results obtained by inhalation of exhilarating gas, nitrous oxide gas, and ether, to Drs. Warren, Hayward, Jackson, and Morton, "the two last of whom subsequently published the same without mention of their conference with Dr. Wells."

In the *Gazette des Hôpitaux* of Feb. 16 we find an operation of lithotomy performed on Feb. 4, by M. Guersant, jun., on a child aged eight years. In three minutes insensibility was produced, and the calculus extracted without pain; the child is doing well, and has had no fever. Three other operations, on children, in the same hospital, have been performed without pain, namely, fistula *in ano*, and two disarticulations of fingers; no secondary fever was observed.

The same journal publishes the *projet de loi*, deposited on the table of the Chamber of Deputies, relative to the practice and instruction of medicine. Many of the suggestions of the Congrès have been adopted, and amongst others the establishment of bachelors and licentiates in medicine.

NECROLOGY.—Dr. F. D'Arcet, at Rio de Janeiro in his 39th year. The deceased, son of the celebrated chemist of the same name, was burnt to death by the explosion of the mixture of essence of turpentine and alcohol, used in the lamps, called "lampes à gaz hydrogène." M. D'Arcet, who had been intrusted with a scientific mission by the Minister of Public Instruction, was late *interne* of the Parisian hospitals, and had distinguished himself considerably in several *concours*.

D. M'CARTHY, D.M.C.

Great Britain and Ireland.

CAUSES OF DENTAL CARIES.—Mr. Tomes attributes this chiefly to the action of a free acid, whether in the saliva or in the food. He believes that the dentine, from abnormal action, loses its vitality, and with the loss of vitality the power of resisting chemical action; and consequently the dentine is, under favourable circumstances, decomposed by the fluids of the mouth. In reply to the postulate, why, as the decomposing agent enters through the enamel, is it that that tissue is not the first to suffer? he says:—"Strictly speaking, it may be the first; but, as a much stronger solvent is required, or the longer application of the same solvent, to produce similar impressions on the enamel, the effect is first produced in the dentine." If we place a tooth in a weak solution of muriatic acid, we shall find that the exposed dentine is affected before the enamel, and the exposed dentine before that covered by the enamel. The saliva is in many cases, where decay is rapidly progressing in several teeth at the same time, strongly acid. After salivation this is particularly the case. There is a sufficient amount of acid in our food to effect the slow decomposition of dead dentine. The mineral acids, taken medicinally, produce the same effect.

DR. HAKE'S METHOD OF TREATING PROLAPSUS ANI consists in returning the bowel or hemorrhoidal tumour with great care after the daily motion; in assisting its return by means of soap lather; in applying a coil of moist sponge firmly upon the anus, and, while retaining it there with one hand, to bring the nates together by means of a broad strip of adhesive plaster, as in approximating the edges of a wound. The sponge should be four or five inches long, an inch and a half wide, and half an inch thick—the more elastic the piece the better; this is to be rolled in a damp state, tightly, so that the roll, if relaxed, would be ready to spring back into its full length—its length, when thus rolled, will of course be an inch and a half. Vinegar and water is recommended as one of the best astringent lotions.

PAINLESS OPERATIONS BY THE VAPOUR OF SULPHURIC ETHER.—With regard to the claim of priority in the adoption of ether in this country, Mr. Brett claims to be the first to prove its value in the delicate operation of extraction of the cataract. We must add that some of the newspaper reports, to our certain knowledge, have been much more flattering than the *facts* which we have witnessed at several of the operations at the West-end hospitals.

M. Malapert, knowing the poisonous properties of the saponacia officinalis, and the corn-cockle (agrostemma cethago), and considering that these properties might depend on the saponine, thought that other plants of the same family ought to contain that principle. He, therefore, sought for it in different parts of plants belonging to the natural order caryophyllacead. He ascertained that the different parts of the plants did not always possess the same properties. The seeds of the agrostemma contain saponine, but it was only contained in the cotyledons, together with a mild, yellow, saponiferable oil, and a matter which became yellow under the action of alkalis.

The roots of the same plant contained much saponine from the time of growth to that of maturation of the seeds. The stems, leaves, and calyces did not contain it, or at least in inappreciable quantities; it was, however, discovered in the ovaries, even before the expansion of the flowers. It was produced in these different parts of the plants in greater abundance in proportion to their growth till the ripening of the seeds, which explains the fact, well-known to agriculturists, that cows suffer no inconvenience from eating the plant before flowering, while the secretion of milk diminishes, or even wholly ceases, in these animals, after eating the plant in flower or fruit for several days.

The silene nutans contains as much saponine as the saponalia officinalis, but M. Malapert discovered this principle in every part of the plant except the seeds. He has discovered the same principle in the cultivated and wild pink, and also in the double varieties; but it is not equally distributed through the whole plants. It is abundant in the roots; in small quantity in the leaves and stems. It was not discoverable in the petals or seeds. The lychnis divica, silene inflata also contain saponine; but it was not to be found in the stelloria holostia or stelloria media (chickweed). From the quotations cited by M. Malapert, from different authors on *materia medica*, that all the plants containing saponine, such as the different species of lychnis, the horse chestnut, &c., possess peculiar properties,

far from being at present ascertained with exactitude, which deserve the attention of the physician. It is well known that the red and blue lychnis (mouron) poison horses, dogs, and birds; that the saponacia destroys fowl; that the horse-chestnut, when not deprived of its bitter principle (saponine), prevents fowls from laying their eggs; that the seeds of the agrostemma kill dogs and poultry, and that they prove poisonous to man; that the plant in flower or fruit prevents the secretion of milk in cows; that these animals eat it mixed with other plants, and are not desirous of it. We are far from agreeing as to the mode of action which this principle, and the plants containing it, exercise on the animal economy, and consequently on their medical properties. The ancients attributed to all the plants which contain saponine the power of resisting poisons, of curing the bites of venomous animals, and even hydrophobia; the moderns, that they possess only diuretic and sternulatory properties. Setting aside the exaggerations and imaginary statements of the properties of saponine, the apparent active properties, its injurious effects when accidentally mixed with the food of animals, are sufficient motives for presuming that it might be useful in medicine. In calling the attention of experimentalists to this substance, and ascertaining more directly its properties, M. Malapert has performed a useful task.

Alum in Pertussis.—The fittest state for its administration will be a moist condition of the air-passages, and freedom from cerebral congestion; but an opposite condition would not preclude its use, should this state not have yielded to other remedies. Its laxative effect obviates the necessity for aperient medicine. Dose for an infant, two grains, three times daily; and to older children, four, five, and up to ten or twelve grains may be given, mixed with syrupus Rhœados and water. It is seldom disliked.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—Feb. 9.

Mr. Arnott in the Chair.

An Account of a Case of Encephaloid Disease of the Heart. By Edw. L. Ormerod, M.B., Demonstrator of Morbid Anatomy at St. Bartholomew's Hospital.

The subject of this communication was a man, aged forty-eight, who had had his right testicle removed, for what was supposed at the time to be simple enlargement of the organ, in August last. Shortly after the operation a tumour appeared in the epigastrium, but the wound healed rapidly and he returned to his work. In the course of a week or two he had to give up work from debility, and came into St. Bartholomew's Hospital, under the care of Dr. Roupell, for the last fortnight of his life.

The chief point of interest concerning the tumour in the abdomen was the fallacy thrown over the diagnosis by the discovery of pus in the urine, a fact explained after death by the existence of suppurative nephritis in the right kidney. On examination of the heart, a systolic murmur, of a musical character, was heard at the apex, and a blowing murmur at the base prolonged equally along the aorta and the pulmonary artery.

On examination after death, a large tumour was found to extend down the front of the spine, but loosely attached to it, traversed by the aorta and ascending cava, the cavity of the latter being almost obliterated by pendulous, flocculent masses connected with its walls. The right common iliac vein was ulcerated, the left obstructed by a laminated coagulum, the circulation being apparently maintained by enlarged lumbar veins. None of the abdominal viscera were implicated.

The right ventricle of the heart contained a mass of encephaloid matter, of a lobulated form, springing from its anterior wall, one lobule extending into the ring of the tricuspid valve, or at least intervening between its tendinous cords, another reaching up nearly to the pulmonary valves, and a few more, smaller ones. lying towards the apex of the heart. The wall of the ventricle was a good deal changed at the point whence the lobule sprung; elsewhere it was healthy. The tumour consisted of nucleated, with some caudate, cells, dispersed through a loose amorphous tissue.

The author limited his observations to two points,—the auscultation of the heart, and the nature of the tumour there. With regard to the auscultation, this case seemed to show that the presence of a growth of this kind, even of such a size, could not certainly be made out during life by any signs proper to the tumour itself; it could only be detected, as any other foreign body might be, by its accidental interference with the functions of the heart. It was casually illustrated, while on this part of the subject, how cancer of the pericardium might also exist without being detected by auscultation.

With regard to the nature of the tumours (which part of the paper was omitted, on account of the length of the following interesting paper) the author endeavoured to place in the order of their different stages of growth the few cases of endocardial cancer hitherto published. Presuming an analogy to exist, according to Rokitansky, between these tumours and the globular vegetations of Laennec, there seemed to be a regular gradation from the masses which hang on the endocardium, as if deposited there by the blood, to the lobular growth, which, true to the nature of cancer elsewhere, had destroyed the muscular structure of the heart in one part of the preparation exhibited to the society.

Case of Internal Strangulation of Intestine relieved by Operation. By Golding Bird, A.M., M.D., F.R.S., Assistant Physician to Guy's Hospital; and John Hilton, F.R.S., Assistant-Surgeon to Guy's Hospital.

Dr. Bird remarks, that the attention of the society having been lately occupied with the consideration of the practicability of diagnosing the seat and nature of the obstruction in cases of internal strangulation, with a view to its relief by operation, he ventures to hope that the history of the following case will not be considered devoid of interest.

Dec. 21st, 1846.—Dr. Bird was called to Bocking, in Essex, to see Mr. C——, a young gentleman twenty years of age. Eight days previously he was as well as usual, having merely had constipated bowels for a couple of days, when, in the morning, whilst in bed, he became sensible of slight dragging or sense of giving way about two inches to the right of the umbilicus, towards the spine of the ilium. This sensation was soon replaced by a sense of soreness and tenderness. During the following six days, nothing passed from the bowels except with the aid of a copious enema. Purgatives and a tobacco enema failed in procuring stools. Three days previously sickness commenced; a sense of uneasiness and distress was produced by firm pressure on the spot where the dragging was first felt; the abdomen was flat and collapsed. On inquiry it appeared, that when a child he had been the subject of mesenteric disease, and some years afterwards, of an ailment, supposed, from the symptoms, to have been peritonitis. The absence of hernia, as well as of any previous hemorrhage from the intestines, or of exposure to the influence of lead, the improbability of the presence of malignant disease, proved the non-existence of the most ordinary cause of insuperable constipation. Recollecting the dragging sensation and previous existence of peritonitis, Dr. Bird ventured to give an opinion that the mechanical obstruction depended upon a knuckle of intestine becoming strangulated in some manner under a band of false membrane. The character of the vomited matters and the empty state of the cæcum and colon at once referred the seat of obstruction to the small intestines. Trial was made of metallic mercury, after which the pain and vomiting ceased, and no important change occurred until Dec. 25th, when pain and vomiting returned. The propriety of an operation was entertained; and Dec. 28th, the writer requested the assistance of Mr. Hilton for this purpose, and they arrived at the patient's house at nine o'clock P.M., being just fifteen days from the commencement of the illness. The abdomen was scarcely more distended than on the 21st, but the muscles were more irritable, assuming a state of spasmodic contraction on the slightest manipulation. No great uneasiness experienced on pressure. Pulse 90; skin soft and cool, and tongue moist. The patient was placed in a room in which a temperature of 88° to 90° was maintained.

Mr. Hilton states, that having arrived at the same conclusion respecting the nature and seat of obstruction as that described by Dr. Bird, he fairly represented the various arguments and facts for and against an operation to the patient, who expressed himself decidedly desirous of the attempt being made to relieve him. An incision was made from the median line to within an inch of the pubic symphysis, and the abdomen opened. Several convolutions of distended and congested small intestine so completely blocked up the opening, that it was necessary to enlarge the incision for about one inch and a half above the umbilicus. After dividing a band of adhesion between two portions of small intestine, and making a careful search in different parts of the abdomen, Mr. Hilton found on the right side about six or seven inches of ileum in a state of strangulation, having passed through an annular opening formed in part by another portion of the same small intestine, and by some old membranous adhesions to the brim of the pelvis, over the external iliac bloodvessels. By gentle traction on the strangulated intestine at the opposite side of the opening through which it had passed, Mr. Hilton succeeded in liberating it from its incarcerated position. The intestines were replaced with some difficulty, and the abdomen was closed by a continued suture. After the operation, which lasted about hour, the patient was somewhat collapsed, but there was no marked anxiety of countenance. He afterwards became restless and delirious, and died about nine hours after the operation. On examination of the body, several strong cellular adhesions were found between the convolutions of the intestines. The cæcum and colon were distended with fæculent matter. Mr. Hilton regards the direct results of the operation as very satisfactory, and in a surgical aspect, successful. The hiccough and vomiting ceased; the obstruction was relieved, and fæculent matter had passed as far as the upper part of the rectum. So long as any doubt remains as to the seat of obstruction, the author thinks it the safer plan to adopt the median section of the abdominal parietes. After noticing the disadvantages arising from the patient's friends not consenting to an operation at an earlier period, he observes, that the circumstances of the case fully justified the proceeding which was adopted; and, notwithstanding its fatal termination, he would advise the same plan to be pursued in a similar case, provided the indications be as clearly expressed. Mr. Hilton remarks, in conclusion, that he believes this to be the first recorded instance of any surgeon in this country having succeeded in his attempts to relieve an internal strangulation by an operation.

Mr. Fergusson thought the operations which had been so frequently performed for removal of enlarged ovaria had proved that there was not such risk on opening the peritoneal cavity as had been generally supposed, but that it was an important matter to decide, in the case given, as to where the incisions should be made. He thought that, as a general rule, the linea alba should be selected, and that the surgeon here had very judiciously chosen that part.

Mr. Bransby Cooper contended that there was no analogy between cases similar to the one detailed and those in which ovarian cysts had been removed, for the peritoneum in the two cases was altogether in a different condition. He thought that the danger of opening the peritoneum had been underrated, and referred to our success in those cases of hernia in which the

strangulation had been relieved without opening the sac, as evidence of the truth of his remark.

Mr. Quain entertained the opinion that an operation would be justifiable if the internal strangulation were clearly ascertained.

Mr. Hilton felt pleased at finding that the gentlemen agreed, on the whole, in the propriety of doing what had been done in this case; and that their remarks might be made available in recommending such a proceeding in another case of the same kind.

SURGICAL SOCIETY OF IRELAND.—Jan. 23.

J. W. Cusack, Vice-President of the College, in the chair.

Mr. Tufnell read a report on some experiments with the vapour of ether, made with a view of testing its effects on individuals in their natural healthy condition. The experiments, four in number, were performed on soldiers, some of whom were of robust habit, while in the others the constitution was of rather an opposite character. These modifications of constitution were attended with corresponding modifications in the results of the experiments with which our readers are now sufficiently familiar.

Sir Philip Crampton next exhibited Mr. Squire's apparatus for the inhalation of ether.

CASE IN WHICH LARYNGOTOMY AND TRACHEOTOMY WERE PERFORMED.

Mr. M'Namara related the following cases. A child while eating some bread stooped to pick up a plaything, in doing which the bit became impacted in the œsophagus. Symptoms of suffocation came on immediately; but, owing to some untoward circumstances, a considerable time elapsed before the child was seen by Mr. M'Namara. When first seen by him, death had almost put an end to the little patient's sufferings. The whole body was in a perfectly rigid state, the eyes were protruded from their sockets, in fact life was on the point of closing.

Mr. M'Namara turned to his study-table for a gum catheter, or any other means that might be at hand, to enable him to push down the foreign body, which he was just able to touch with the fore finger. As nothing of the kind was at hand on the instant, however, and seeing that even a few seconds delay must be disastrous, he took out his pocket-case and at once opened the larynx.

For a short time the result was extremely satisfactory: the little girl gradually recovered; the respiration came round; the body lost its rigidity; the eyes assumed their natural appearance; and sensibility was soon so far restored that the child put out its tongue when asked.

Symptoms of obstinate respirati[illegible] now reappeared, however, and, with the ear applied to the chest, it became evident that the right bronchus was obstructed by something that entirely prevented the access of air to the right lung. In a consultation with Dr. Porter, jun., and Mr. Rumley, who just came in, it was decided that tracheotomy was now the only chance, and as such, though with hardly a hope of any benefit whatever, the trachea was opened by Mr. Rumley. The child soon after sank and died.

In examination, a bit of hard bread, not crust, was found in the right bronchus, which it may be supposed was detached from the bit impacted in the œsophagus, while the latter lay high up in the neighbourhood of the glottis.

In the difficulty of accounting for the unfortunate termination of the case from the mere obstruction to respiration in one lung, Mr. M'Namara is inclined to attribute death to coma, induced by an absence, for so long a time, of arterialized blood in the brain.

GOITRE TREATED BY SETON.

Dr. H. Kennedy related the following case:—

A woman, aged thirty-five, nine years married, and mother of four children, applied to him on account of enlarged thyroid gland, in November, 1845. Of late years she has lived in Dublin, and always considered herself healthy. In the year 1832, thirteen years before his seeing her, the gland began to enlarge; its growth was very slow until the last year or so, when it began to increase in size rapidly. When first seen by Dr. Kennedy the tumour was at least the size of the largest orange, or small melon, very hard to the touch, as if solid, but was divided into two portions, of which that on the right side was much the larger.

Its bulk did not vary during the menstrual periods. It was not, however, on account of the bulk of the tumour that Dr. Kennedy was consulted, but because of the dysphagia with which it had been attended, in some degree, from an early stage, and which had latterly become distressing. She now stated that the act of swallowing any solid required care, and that large mouthfuls occasionally, though not always stopped, the stoppage being referred to the seat of the tumour. The tumour had been seen by other gentlemen, and had, it appeared, been treated for the previous nine weeks by the external and internal use of iodine, but the woman considered it still increasing.

Viewing the circumstances of this progressive increase of the tumour and dysphagia, the failure of the iodine treatment, and an anxiety on the patient's part to have something done, Dr. Kennedy adopted the treatment by setons as holding out the best prospect of success, having first brought the woman's health into the best possible condition, in order to guard against the occurrence of any untoward event. On the 30th of November, 1845, a common curved needle, of the largest size, nearly full of double threads of silk ligature, was passed, from below directly upwards, through the anterior portion of the tumour, about half an inch from the middle line of the neck, and including a space of at least one inch and a quarter between its entrance and exit. The patient was desired to stay in bed for two days, and to keep a poultice constantly applied. No unpleasant effect whatever followed. Suppuration soon became established, but to so trifling a degree as not to affect the bulk of the tumour. At the end of ten days the seton was withdrawn, the poulticing, however, being steadily continued. In three weeks a second seton was introduced, double the thickness of the first, in the same direction, but further from the middle line, and included a larger space between its entrance and exit. The treatment otherwise was the same as before. Next day a considerable amount of constitutional irritation had arisen: the pulse 130; tongue furred; skin hot; with burning thirst, and other febrile symptoms—which, however, with simple treatment and three or four days' rest, subsided, and suppuration became much more fully established than in the first instance. While the febrile symptoms lasted, the tumour was much increased in size; and the swelling not only engaged the neck, but extended to the soft parts below the clavicle for a considerable distance. The suppuration being considerable, it was deemed advisable to to remove the ligature in twelve days. In a period of four months, that is up to April, 1846, nothing more was done than continuing the poultices, and attention to the general health; and in this time very perceptible alterations had taken place in the part of the gland lying to the left of the middle line, and about an inch to the right. It had lessened very considerably at these points, and become remarkably hard. The part of the gland lying furthest to the right of the middle, however, remained entirely unaltered. Indeed—whether it arose from the diminution of the other portion of the tumour or not—yet so it was, that the part alluded to seemed to have grown larger, at least it was thrown more strongly into relief, than at first.

The third and last seton was now passed in the middle of April, 1846, its direction being upwards and outwards, so as to ensure its traversing the larger axis of the remaining portion of the tumour. It was of much larger size than either of the former ones, probably four times larger. The external jugular vein, passing at its point of exit, had to be avoided. The needle was a common packing-needle, prepared at the point and edges for the purpose. In sixteen days, the suppuration being now considerable, this last seton was withdrawn, and its employment was followed by no unpleasant effects. At the end of between three and four months, after a similar process as before—hardening and gradual contraction of the swelling—the tumour had nearly disappeared; and now (Jan. 9) no traces at all of it remain.

Dr. Kennedy thought this case worth bringing under the notice of the society, as cases of the kind are not of frequent occurrence—such, at least, as it would be justifiable to operate on. He had not himself seen a case so treated here, though he believed it had been done in some of the Dublin hospitals.

In one of the volumes of "The Medico-Chirurgical Transactions of London" would be found an interesting account of some cases of the sort. Cases calling for direct interference have much decreased in number since the introduction of iodine into practice. He was indebted to the kindness of Surgeons Hughes and Bannon, of Jervis-street Hospital, for an opportunity of seeing a very remarkable case of great general enlargement in and about the thyroid gland, in which the use of iodine was followed by very marked effects. But iodine will not always succeed; on the contrary, in the foregoing cases the tumour increased under its use.

Dr. Kennedy still felt in doubt as to the real nature of the tumour in the foregoing case. Before the passage of the first seton it had every appearance of being a solid one, but on the introduction of the needle it gave exit to a small quantity of fluid very like ink, from which it might be inferred to be encysted. No subsequent occurrence, however, tended to such an inference, and his present impression was, that but a small portion of the tumour was encysted, while the remainder was solid. The introduction of the last and largest seton strongly conveyed to his mind that the needle was passing through a solid tumour.

It was worthy of remark, he said, that it was the second seton which produced, for a few days, symptoms of high constitutional irritation. One would rather have expected these to have arisen from the first, because it was the first; or the last, on account of its much larger size. The fact appeared to point to some particular state of the system as the cause, though what that state was he could not determine.

He need hardly observe, he said, that in bringing forward the case, he was far from a wish to make it a rule for the general treatment of similar cases: for, though the operation is in itself simple, it is not to be undertaken on light or trivial grounds. It might, he conceived, be followed by very untoward circumstances—indeed he believed such have occurred—not to speak of the great length of time which the process of cure occupies, and which in the present case was nearly nine months. Neither must the constant poulticing and prolonged suppuration be lost sight of, and occasionally the very unpleasant smell.

Not being very certain what the result of the case might be, Dr. Kennedy, unfortunately, had no cast taken of the tumour in the beginning. He might state, however, that at the commencement the patient was seen frequently by Dr. Clarke, of Herbert-street, who kindly assisted him, and was much interested in the case. In the progress of cure it was also seen by Drs. Bellingham and Jonathan Labatt; by Surgeons Hughes and Bannon; and that day by his friend Dr. C. King.

No deformity whatever remains, and scarcely any marks where the setons were passed. The patient now says, too, that she is scarcely conscious of any difficulty of swallowing.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—ST. VALENTINE'S DAY.

By ιΕ.

Long previous to three o'clock, the hour appointed for the delivery of this annual valediction upon the memory of John Hunter, the small, inconvenient, and ill-ventilated theatre of this institution was crowded to the ceiling. Whether this attraction was due to the expectation of a scene in which the malcontent members should be actors, or to the popularity of the orator, we will not determine; but it is certain that the provident and prudent council had made arrangements by which any demonstration of public feeling should be neutralized. In various

parts of the theatre well-drilled platoons of *claqueurs* were skilfully placed, so that, by an uproarious applause, they might drown any expressions of discontent.

In the selection of their advocate, also, the council evinced a good deal of shrewdness. Mr. Green is known to be, in his feelings and conduct, the perfect gentleman; and, by his addiction to an eccentric kind of philosophy, has possessed himself of so peculiar a phraseology that he can convey to an audience the most unpalatable assertions in a guise the most perfectly unintelligible.

This kind of accomplishment, now that the glory of the triumph achieved by the council over the divided and dispirited commonalty has been tempered by time, was thought more suitable to the occasion than the vulgar and insolent perspicuity of Lawrence.

The victory is now undisputed; the members at large are contented with their serfdom; and it would have been impolitic, by new insults, to provoke into action any lingering leaven of independence that might still be found in the degraded mass of members.

Consedere duces, et vulgi stante coronâ. Four rows of seats were kept vacant for the use of the fellows, who very properly object to sitting promiscuously with the *canaille* of the college. Different classes of men exhibit different virtues; and it is very becoming in the chosen few to feel a disdain for the crowd, whose chief virtue happens to be that which is exemplified in certain quadrupeds who have tasted the whip.

The council mustered strong, and some of their members received the ready homage of the *claqueurs*. Mr. President Lawrence, who looked in his red gown like a respectable parish beadle, was greeted with certain significant marks of disapprobation; but these wholesome expressions were neutralized, in a great measure, by the laudatory performances of the "trained bands."

The oratorical performance of Mr. Green proved to be, what our recollection of his former address led us to anticipate, a metaphysical *mélange* in which a hazy and obscure verbiage would be found to cloak a considerable amount of objectionable matter. So perfectly transcendental as to sense, indeed, was the whole effusion, that the *claqueurs* were at first ludicrously at a loss when to applaud. After a time, however, they discovered two occasions, which served as clearly as the *baton* of a conductor to regulate the concert of their "sweet voices." Whenever the orator made a Latin or a Greek quotation, or when he bowed his head to a given distance from the cushion, were incidents which served as signals for applause. Mr. Green possesses many of the qualities which the ancient rhetoricians enumerated as necessary to the orator. He stands six feet four inches in his stockings. He has a handsome and dignified countenance, an agreeable manner, perfect self-possession, a sonorous voice, an easy elocution, and the most continuous and integral *copia verborum*. Such a casket is fit for the custody of jewels; but, alas! if it should contain nothing but beads and pebbles?

The mild and intellectual bust of Hunter seemed to regard the whole spectacle with a smile of incredulity. Could the Witch of Endor have, for the nonce, raised the great original, and placed him in the seat of "Mr. Bumble Lawrence," we would have predicted, without fear of contradiction, that the *etherizing* diatribe of Mr. Green would have speedily dismissed him from the earth in a second fit of apoplexy.

Generalities are proverbially barren; and Mr. Green, by his fondness for abstract notions, far-fetched similitudes, and flatulent metaphors, involved himself in a kind of scientific euphuism, which was perfectly impenetrable to the majority of his audience. We will endeavour, on another occasion, to *translate*, however, for the amusement of our readers, a few of the string of conceits which formed the subject matter of the oration.

He began by likening the series of orations, delivered in honour of the presiding Lar of this temple of surgery, to *a cairn*, or heap of stones, raised in early times to the memory of departed heroes. He now threw his stone on the epitaphial pyramid of Hunter.

"Hunter was the father of scientific physiology, which was the basis of all surgery. He was the originator not merely of an orderly arrangement of facts in physiology, but the founder of a science 'in the unity of a scientific idea.' He had demonstrated 'life' to be a *law* and a *power* antecedent to organization, and his eloquent museum beautifully displayed the development of this principle of life, from the simplest to the most complicated forms of living beings. He had first applied an enlightened physiology to explain the phenomena of surgery, and thus reduced a conjectural art to the authority of science.

"But Hunter was a man of splendid genius. How, then, could he be held up as an exemplar to ordinary men? The solution of this question depended upon the definition of genius. Was this attribute of the mind an extraordinary endowment vouchsafed to a few favoured individuals? or was it a result of the cultivation of good talents not differing in kind from such as are conceded to men in general?

"Whichever way the problem may be solved, the effects of a liberal education are equally beneficial, for no powers, without great labour and perseverance, have ever sufficed to the production of great works. Even the genius of Milton could not have created his immortal epic if he had not, by assiduity in his early life, acquired a perfect control over the riches of language. Whether or not powers of originality could be conferred by training, it was certain that the efficacy of all the mental powers might be enhanced by a proper system of education, and the usefulness of the human agent consequently increased."

The orator said his intention was not merely to pronounce a eulogium upon Hunter, as that was a theme which had been exhausted by his predecessors, but to vindicate the conduct of the council in founding an order of fellows who should excel the remainder of the college, not only in professional attainments, but in general literary and scientific accomplishments. His conviction was, that a liberal education would not merely improve their efficiency as surgeons, but raise them in the scale of social respectability.

None of Mr. Green's auditory would think of denying these very palpable propositions, because it happens to be notorious that the social exaltation of the profession, and their concurrent improvement in science and literature, are entirely due to the general practitioners, who form the body of the college.

Mr. Green quietly assumed, throughout his address, that the great body of the commonalty was buried in Cimmerian darkness, and that the council constituted the sole focus of light.

This must be admitted to be a pretty audacious assumption, when the converse is so obtrusively true, and it is known that the "pressure from without" has alone forced and shamed the council into the only measures of improvement they have adopted. How the creation of an order of fellows was to secure the social and scientific elevation of the college more certainly than rendering the examination of *all* members more searching and stringent, Mr. Green did not attempt to prove. His purpose was not so straightforward. By a dazzling description of his "*beau ideal*" of a liberal education, he wished to seduce the attention of the members from the real point at issue. And a very beggarly "jackdaw" of a "*beau ideal*" does this prove when stripped of its fine feathers. Afraid, however, of absorbing all the glory of the "*beau ideal*" in himself, the champion very modesty ascribes a portion of the merit to "his revered master and friend S. T. Coleridge," "whose memory shall not pass away, and whose name shall live from generation to generation."

Now, every body knows who poor Coleridge was. He was a writer of Tory leaders in the *Morning Post*, and an inveterate opium eater; a man endowed with considerable genius, which was much counteracted by vicious habits, and was consequently prolific of nothing but *fragments*, whether poetical or metaphysical. He must, therefore, be a very sorry authority for any system of education.

"The object of all education," says Mr. Green, upon the authority of Coleridge, "is to develop the individuality of man. This is realized by the concurrent triumph of free will and reason, which in their union constitute a *moral potentiality*.

"The realization of this perfect individuality is never attained by frail humanity; the most distinguished of mankind for energy and influence over their fellows, Luther, Milton, and Dante, do but approximate to this goal."

"It is a gross mistake to suppose that any knowledge can be *impressed* from without; education consists in the development of powers within the microcosm of the mind. It is by reflection upon the acts of our own consciousness—a power which is matured slowly—that we acquire a knowledge of our own powers." "When man is occupied in the study of the phenomena of his own being, his contemplation of these phenomena adds a new phenomenon to the list already under his inspection: it adds the new and anomalous phenomenon that he is contemplating these phenomena."

"In carrying forth the physical sciences, man very properly takes no note of his contemplation of their objects, because this contemplation adds no new fact to the complement of phenomena connected with these objects. But in constructing a science of himself, man cannot suppress this fact without obliterating one of his own phenomena."

"The act of philosophizing is the act of contemplating our own natural or given phenomena. But the act of contemplating our phenomena unsystematically is no other than consciousness. Thus, in attending to the fact which philosophy brings along with it, we find that philosophy and consciousness become identified; that philosophy is a systematic or studied consciousness; and that consciousness is an unsystematic or unstudied philosophy.

"By this exercise of reflection we are made familiar with those two intellectual powers which form the peculiar excellence of the human mind, and are the factors by which our various kinds of knowledge are accumulated and appropriated to ourselves. These are '*abstraction*' and '*generalization*:' without these faculties man would be utterly incapable of constructing a science, of conceiving an ideal unity, and civilization could have never existed, because no one generation could have improved upon its predecessor."

Mr. Green now drew an outline of the whole of human knowledge, and pointed out the share which these faculties, ministered to by reason, (which is simply the power of comparison), exercise in the creation of science. Mr. Green began with the alphabet, "a splendid proof of the activity of the generalizing faculty." He next proceeded to the accidents of speech, which furnish so many indexes of the logical process employed in the development of this knowledge. In this stage he was not very lucid. He defined the class "substantive" pretty clearly, but the verb, and minor parts of speech, he left untouched, and gave no description of the distinct provinces of grammar—logic and rhetoric. The acquisition of a new language, he said, was the acquisition of a new limb without its deformity. From the consideration of the *literæ humaniores* the lecturer proceeded to treat of natural history in its most extensive sense, including chemistry, geology, mechanics, meteorology, and astronomy; and here he indulged in very tumid expressions, and highly grandiloquent tones, without imparting a single new idea, or one impressive sentiment. The natural history of the human race naturally led to reflections upon the gathering together of nomadic hordes, and the rude commencements of political societies;

upon the use of language as a means of intercourse amongst nations, and its share in the conversion of a barbarous tradition into the authentic records of history. Of the use of language as an instrument of thought he said not a word.

The mathematics were next considered, as a means of developing the intellectual powers; and, though pompously panegyrized, were determined not to be so good an exercise for the generalizing faculty, as logic.

This last art, which is daily practised by every one who speaks and reasons, was defined to be "the art of drawing conclusions from premises." Some trite observations were expended upon the use of this science, as well as upon the obstacles (fallacies) which impede right reasoning. These points will be found better and more fully explained in the works of Whately and Walker.

Having traversed the whole field of natural and metaphysical knowledge, the speaker now turned to the moral nature of man; and we cannot in this province congratulate him upon the perspicuity of his views. Instead of a moral sense in directing conscience, we have the term "*moral will*" introduced, as something distinct from ordinary volition. He here employs a single term to express a compound fact, namely, the subjection of the will to the moral power. This subject speedily led him to speak of the cognate themes of *natural religion* and *revelation*, and to a desperate effort to concatenate the two classes of truths by a natural link. Thus completing, as he termed it, the unity of idea which constitutes the individuality of man.

This is evidently an attempt to revive the theory of Plato, that man, by gaining possession of the "divine idea," acquires the key of all knowledge, and unites himself to the Divinity. "By cultivating this unity of idea, and approximating to the perfection of the 'moral will,' man assimilates himself more and more to the λογος who created him." Ἐν αυτωζαὴ ην, καὶ ἡζωὴ ην το φῶς των ἀνθρώπων, quotes the orator. "In the word was the life, and the life was the light of man." If the truths of revelation could be reached by any logical process, where was the necessity of a revelation at all?

Thus concluded this visionary effusion, which we humbly opine cannot be of the slightest edification to any except, perhaps, to the author of the "*infidel lectures*," who sat in the red cloak opposite the orator. The whole production was a vain effort to display the learning of the speaker. It exhibited neither ingenuity nor eloquence; it contained scarce a single reflection likely to instruct the medical student, and was devoid of those natural considerations which would occur to a healthy mind on such interesting occasions. Nothing was said by the teacher of the studies best fitted to form an efficient medical character; no rule was given by which to economize mental labour; no maxims promulgated by which the independence of the will was to be realized!

If such as these are to be the exhibitions which the wisdom of the council is to hang out to the world, why, then, let them have rope enough. The contempt of an indignant public opinion will speedily wrench from them an authority which, though they have the insolence to usurp, they have not the skill to handle to any useful or honourable purpose.

The conclusion of the long and tedious harangue was hailed with uproarious applause; and, the red-coated president, upon rising, was saluted with hisses and groans. (E.

*** There are of all things two estimates: and, though we can hardly be expected to accept both, there can be no harm in hearing them. Saying this, we must add, that our estimate of the lecture—apart from its medical politics—would be far more genial and eulogistic than that of our correspondent.

APOTHECARIES' HALL.—Gentlemen admitted members on Thursday, Feb. 18:—John Bleeck, Temple Chevallier Paley, Edward Monement, George Pretyman Hubbard, and Anthony Unthank.

TO CORRESPONDENTS.

THE MEDICAL TIMES is the only Medical Journal published at its own Office, and which is free from the control of all Booksellers and Publishers. Gentlemen may procure it by an order on any Newsman or Bookseller, or it will be sent direct from the Office of the Medical Times *to Annual Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d. No number of the* Medical Times *can be forwarded, except to gentlemen paying in advance.*

A HANDSOME PORTFOLIO *for holding the* "MEDICAL TIMES"—*very desirable to those who would keep the numbers clean for binding, and easy of reference—may be had, by order of any Bookseller, or at the Office, price 5s. An allowance is made to the trade.*

We regret the delay in publishing Mr. Close's contribution. We shall set ourselves right with our valued correspondent in a few days.

Mr. Cheesman, *surgeon to the South Hants Infirmary, records to us two cases of surgical operations under the influence of ether. In the one case the patient was conscious the whole time of the circumstances of the operation, though free from pain; in the other he was conscious part of the time. In the one instance an arm was amputated by Mr. Lest; in the other, some diseased bone, by Mr. Bullar.*

D. H. G. W. *had better consult a bookseller's catalogue, and judge for himself. A preference in the case he names would be invidious.*

☞ Subscribers *who yet remain on our books in arrear will oblige us by immediately forwarding their remittances to the office.*

A. B. C. *will find an answer to his question in one of our advertisements.*

Fifa.—*Startin's inhaler may be procured through any bookseller or wholesale druggist. Our publisher will send the numbers wanting by post, on receiving an order with postage stamps to the amount.*

H. R., *who wishes to hear of a harmless medicine which shall make him look pale in the face, is informed that his question is one of those that should have the opposite effect on him, and make him blush. It would be no benevolence in us to give our space and time to reply to such inquiries.*

Common Honesty's *indignant protest would be thrown away in print. It is the man's destiny to live on "libel" in one shape or another. The encomiums on our labours receive our acknowledgments.*

A Correspondent, *who sends us another advertisement of the* Silurian, *only advertises a gentleman who is sufficiently ready to perform the service for himself.*

Mr. Preshaw's *request cannot be complied with, from the numerous claims on our space.*

Mr. King *will find our opinion on inhalers in our last number.*

Mr. Davies.—*Mr. Tucker Hunt ceased to have any connection with the* Medical Times *long before the present management commenced.*

A Victim.—*It is against our principles to play the inquisitor on any gentleman's private practice. If made notorious by public inquiry, we should not then hesitate to give our opinion.*

The several gentlemen (some, too, anonymously) who have addressed us on the Hounslow inquest, in especial reference to ourselves and our own labours, are respectfully informed that, while we admit that the vindication of justice through the first court in the kingdom has cost us more money than it should (between one and two hundred pounds), we yet cannot lend our columns to the purposes they kindly propose. We will not even indirectly be parties to any such suggested acknowledgment. We possibly do not deserve it; and if we do—but we have sufficiently explained our views.

☞ *Our readers' attention is directed to Müller's magnificent work on Physics, commenced in the* Pharmaceutical Times *of to-day. It will be illustrated by 585 beautiful engravings.*

THE MEDICAL TIMES' PRIZES FOR THE BEST REPORTS OF MEDICAL AND SURGICAL CASES.

The results of our last Prizes have been so far encouraging that we propose for Professional Competition, for the year 1847, the following Prizes:—

Twenty-five Guineas for the twelve best reports of original cases in hospital or dispensary practice.

Ten Guineas for the twelve reports of original cases, as above, second in merit.

Five Guineas for twelve reports of original cases, as above, third in merit.

In offering these prizes we repeat that our aim in this, as in other matters, is to promote the SCIENCE of our Profession. The groundwork of the best part of our *practical* science and of most of our subsequent Professional worth is laid down in our studentship; and the great and the only true teacher of the student must ever be—hospital practice. Lectures and books have their uses; but it is by the bed which holds a human being, with the joy of health or the pain of disease, the chance of life or the peril of death, depending on the aids of science, that we acquire our true knowledge. There is there for the student no listless ear, no dull eye of the lecture-room; it is not the memory alone that is appealed to, or some abstract love of a pedantic and inapplicable lore. Every power of his mind is engaged: he is forced by the sympathies of his nature to hear and see, to observe, to reason, to prognosticate, to be EXPERIENCED: each patient's case is a volume of medical science in its most practical aspect, forced on his acquaintance for life!

The authors must be students who shall not have received any medical diplomas or licenses.

Six of the cases are to be medical, and six surgical.

The cases must have occurred during the year; and the names of the gentlemen under whose treatment they may have principally come must be distinctly mentioned.

Three arbitrators will be appointed—one surgeon, one physician, and one general practitioner—whose names will be duly announced. The decision will be on the 1st of July.

The Prize Reports will be published in succession in the "Medical Times," with the names of their authors.

They are to be sent to the Editor of the "Medical Times" on or before May 1, 1847, accompanied by a certificate from a surgeon or physician to a hospital, declaring that the writer is *bonâ fide* a medical student. A motto or device must be inscribed on each report, to identify the author, whose name, with a duplicate of the motto or device, must be mentioned in a private note, which will be opened when the award shall have been made.

THE MEDICAL TIMES.

SATURDAY, FEBRUARY 27, 1847.

THE NATIONAL INSTITUTE.

Ὦ πόποι, ηδη μεν γε και ὅς μάλα νήπιὅς ἐστι,
Γνοίη, ὅτι Τρωεσσι πατὴρ Ζεὺς κῦδος οπάζει.
HOMER.

IT is no new discovery in politics that the multiplication of ruling powers, instead of adding to the security of the subject, only tends to weaken those ties by which his liberty and happiness are held together. Greece had enlightened views of government, but, split into various little states—each having separate interests to maintain, and independent of each other—their energies could neither be consolidated, nor their vices permanently held in check. The Council of the Amphictyons, composed of the wisest and most virtuous men of the republic, it must be admitted, whose decisions were held sacred and inviolable, served, in some measure, to restrain the licentiousness of the turbulent little states; yet even this august assembly was found inadequate to accomplish the end designed, so that one and all, at last, became an easy prey to a more consolidated enemy.

In our system of medical polity there is one glaring defect—a want of unity. We have separate and independent bodies, intrusted with the regulation of our affairs, each bent upon advancing its own interests to the utter subversion of true liberty and honourable elevation of the profession for whom they ostensibly

legislate. In them we have a picture to the life of the Grecian republics, so far as the elements are concerned, which worked their destruction, without the watchful care of a supreme tribunal to direct and control the whole. In these chartered monopolies one principle has been abundantly manifested—a supreme regard of self. It is not to be expected that it would be exhibited in all its native deformity, or there would have been at once such a revulsion of public feeling that even medical colleges would have been unable to resist; such a unanimous cry for justice that tyrant corporations would be compelled to respect; but the monster has been dressed, adorned, and vested with the beautiful garments of patriotism, honour, and good feeling. The cloven foot, however, has too frequently peeped out to deceive men any longer, the veil has been boldly lifted up, and the hideous features have been seen, which have frightened men into a firm resolution to strip off the borrowed raiment, and, so far as possible, leave the monster without one factitious ornament to deceive. Impudence, like charity, can cover a multitude of sins; but our colleges have not had impudence enough to hide *all* the sins which they have committed. They have been, like the sons of Telamon, armed with brazen shields, yet there have been some arrows shot so true, and so strong, that they have pierced to the very heart, and even now rankle in the wound. It has been already seen that these colleges are not impregnable, that the members are not quite noodles, and that, though they have been shorn of nearly all power, a little has been left which, working gradually, will, like the little leaven, leaven the whole mass.

It is as evident as the simplest equation that our old colleges can never, or will never, do do what is required of them by the members of the profession. We want wise and humane counsellors, not supercilious and despotic lords, institutions where the voice of the people is heard, not those which will have none speak but a privileged, self elected few—where Science is the presiding deity, and the worshippers offer the sweet incense of an enlightened intellect from off the altar of a willing heart; not Mammon, whose cursed thirst for gold leads her to ape Science, that her votaries may be robbed. This these old institutions will never do for us they are sinners long inured to sin, and therefore hardened in it, cunning as the serpents which some of them sport on their shields, and, like them, can be traced by the slimy impressions they leave behind The delinquents may be brought on their knees by the force of public opinion, and cry with all meekness "Peccavi", there they must be kept chanting their own requiem, till substantial security be taken for their future good behaviour—that they may for ever after keep the peace towards all her Majesty's subjects, and the medical profession in particular, and this can only be accomplished by the permanent establishment of the National Institute

Nothing less than the urgent wants of the profession could justify the founding of a new college amongst us, as we have already on hand such a stock of the old materials as would glut any country upon the face of the earth. It is to be hoped, however, that if they are past mending, and if there be no possibility of shipping them to some far-distant clime, that they will at least become "old curiosity shops," where future generations may, for a small sum, view these antique follies, once as celebrated as they were injurious.

In our day the general practitioners are numbered by thousands; and, as a body, they are universally admitted to be gentlemen, scholars, and philanthropists. It is granted that, when the physicians and surgeons received their charters of incorporation, so much could not be said of the multitude who practised the healing art. There were then no barriers to prevent individuals with little knowledge and much brass from using physic, under the false pretence of bringing health to the sick, while the real intention was to extract gold from his pocket. Such a state has passed away, never more to return, and yet the old colleges act, and would legislate, as if patronage and protection were things which we ought not to expect, and certainly do not deserve. They have, to all appearance, lived only to themselves, with closed eyes and open mouths; and the sins of these honorary corporations have brought such mischief on the profession that it has been compelled, in self-defence, to associate in one common brotherhood. It is not to be expected that a commonalty of enlightened minds is to be ruled with the iron hand of despotism, without any effort to be freed from its unmerciful grasp. The Philistines had caught Samson napping, and they tried to bind him with new cords, as skilfully fabricated as any cords could be, to take away his strength; but when the cry was heard, "The Philistines be upon thee"! in a short time the bonds were snapped as if they were very tow. Medical men would have proved themselves "snobs" to the very core, if they had truckled any longer to the corporations, which let slip no opportunity of insulting them, and courted the Home Secretary to put an extinguisher upon them. After this a new Institute was inevitable, if there were to be any exhibition of honour or courage—one which would not be contaminated with the vices of its predecessors, but strong in the number, the affection, the endowments of her sons, would, like another Hercules, cleanse the Augean stables of Lincoln's-inn-fields and Pall-mall. Let us see how far the infant college, baptized with the name of "National Institute of Medicine, Surgery, and Midwifery," is calculated to accomplish these desirable ends. The little stranger is strong-limbed and well formed, and has entered struggling into life with an energy which bids fair for a long and useful existence. To use the pugilistic metaphor of the celebrated "Boz,' in his account of little Dombey, it has entered the world squaring, not at existence, but at the wall eyed old corporations, who would have gladly strangled it in the birth

The new Institute will be no patron of close-boroughism, and will have nothing in its constitution that will admit of its existence. The officers are the public servants of the household, chosen by the members, and responsible to them for the manner in which they discharge their functions. Their places are to be purchased by the sterling coin which bears the image and superscription of intellect and moral worth, not by a baser metal which nations have invested with a fictitious value merely to facilitate the commercial dealings between man and man. We search in vain for anything approaching to this in our present chartered bodies, the big ones must have all to themselves; and it is rather curious that old Bartlemy and Guy's, &c., should enjoy the unspeakable privilege of begetting these professional magi, who are to astonish the world by their feats in surgery, and the profession by their feats in lawmaking.

The National Institute, moreover, has not only a good constitution, but it will confer collegiate respectability. Now, medical men have a name, and nothing more. The Lincoln's-inn diploma is but a sorry exchange for twenty substantial sovereigns. The new fledged member, leaving the college doors with the precious rag in his possession, hastens to have it duly protected by frame and glass, and then bedecks his surgery wall with the dear-bought toy. Oh! as he casts his eye upon it in after days, it should continually remind him of his wrongs and degradation a member without privileges, a surgeon for ordinary emergencies—a professional leper having a name amongst the chosen people, but virtually excommunicated—"a goose," whose down and feathers must be plucked to make a warm nest for supercilious rulers. How passing strange that enlightened men should have so long submitted to such a galling bondage, and that there could be found rulers so much puffed up with the pride of office as to inflict the most outrageous evils upon those who are their brethren! The National Institute discovered no "mare's nest," when it announced to the world the perilous situation of nine-tenths of the profession, nor is the scheme Utopian which it proposes to adopt for their salvation. In the memorial which the president, vice presidents, and council recently addressed to her Majesty's Principal Secretary of State for the Home Department, there are enunciated "burning truths" which which will not fail to make an indelible impression upon the Government, and the class to which they especially relate. Here it is boldly stated, "that the general practitioners of medicine, surgery, and midwifery are without a head or home amongst the institutions of this country, and their position is, at present, most anomalous. That the College of Physicians, by its constitution and by-laws, can have no sympathy with them, but a direct interest in maintaining the class, in point of education, general and professional, and qualification to practise medicine, *at as great a distance* from the standard of that college as possible, and the College of Surgeons, since the recent grant of a charter, has no sympathy with them, but has a direct interest" to inflict the same injury as her beloved sister of Pall-mall: and that this College of Surgeons, moreover, "has rendered it *totally impracticable* for any great portion of them as general practitioners, although possessing its own diploma as surgeons, *ever to become fellows of the col-*

lege." Pretty colleges these! and a nice pickle the medical advisers of the labouring population of this country are in! Hear more:—"That though the general practitioners may now be estimated at many thousands, and have rapidly advanced in scientific and professional acquirements, and are possessed of great individual influence, *they are unknown in a collective capacity;* and legislative enactments have been attempted under the auspices of special institutions, representing particular sections of the profession, having interests peculiar to themselves, and diametrically opposed to those of the general practitioners, without even an allusion to their existence." And it is further said, that the constant efforts of the enemy are to depress the general practitioner in his attainments, his character, and his *status.* Who is there amongst the champions of corruption that can gainsay these things? or who amongst the thousands of the profession that will not humbly admit his present qualifications give him no collegiate respectability? The Institute, whose officers have just sent a memorial to the Government, a portion of which we have now quoted, will elevate its members to that position which gentlemen, scholars, and philanthropists deserve. Here there will be no fetters for the intellect, and no gags for the mouth, to prevent the free use of the mind, and the legitimate employment of the tongue. No playing at political leapfrog, where the members are compelled to bend low their backs that turncoat radicals, metropolitan hospital apprentices, and individuals of favoured families may take flying leaps over them to place and power: no; for as the doors will be opened to none but those who are duly qualified to enter, so those who have entered will be recognised as duly qualified to act. The present surgical diploma of membership is like the mark of Cain upon the possessor—making him, in a particular sense, a corporate vagabond: and the brand can only be effaced, and the calamities to which the individual is exposed averted, by the benign efforts of the newly-formed college.

And this is not all that it will do: raise the general practitioners as a body to that respectable station which they ought to occupy; but it will give them that which will enable them to maintain it—*political force.* All experience tells us that it is not the numbers of an army which ensure the victory, but the compactness and discipline with which they are marshalled. Three hundred Spartans, at Thermopylæ, could resist, for three successive days, the most brave and courageous of the Persian forces, which, according to some historians, amounted to five millions; and, doubtless, that little band laid the foundation of the future greatness of the republics. Though we count ourselves by thousands, it will avail us nothing without an effective organization. The past has seen us divided and scattered: thu rendering ourselves so perfectly contemptible as to be "unknown in a collective capacity." Are we then to remain without the flame of honour and of patriotism burning brightly in our bosoms?—to be, like the unresisting sheep in the hands of the shearers, absolutely dumb? It is not enough that, having fought one battle and brought the enemy to a stand, we should, barbarian like, disband our forces, and every man to his home; no, the crisis is not yet arrived which is to seal for ever our greatness or insignificance: for the question is not whether we retain our present situation, but whether we advance or retrograde. The Brodie phalanx is still in the field, armed to the teeth, and manœuvring to obtain such vantage-ground as shall ensure it a certain victory when the decisive action shall be fought. We have before observed, "that if ever there was a time when the organization of our body, commenced by the National Institute, should be energetically carried forward on one side, and warmly supported on the other, that moment is the present. We have our ranks to form and discipline, and we have a careful watch to keep over the movements of the enemy. Nothing but forcible and active measures on our side can prevent the question of Medical Reform from being settled in detail, away from us, and without our participation." To accomplish this, we have to show the Home Secretary that we are a people consolidated, determined, and energetic; a community of master-spirits, refusing to give that servile homage which supercilious corporate despots endeavour to exact; and satisfied with nothing less than the enjoyment of rights which justice must approve, laws which justice must enact, and a position which justice must accord. The beginning is with ourselves, which will afford a proof of our sincerity, and an earnest of our success.

One act of the profession in the hour of peril has been sufficient to teach us what union can do. The National Association was the offspring of necessity: it seemed to rush into existence with the same quickness, and the like perfections, as Minerva from the brain of Jupiter; and "the Great Unknown" averted impending destruction. It contained within itself, however, the elements of its own dissolution, but with this peculiarity, that from its ashes should arise an embodiment more glorious and substantial—*the National Institute.* Here the general practitioner gets what he wants—"a local habitation and a name;" here he can consolidate his strength, and treat upon the best terms with the Imperial Government for future privileges; here he has a college upon the "voluntary principle," which it will be for the honour and interest of the Executive to make a permanent incorporation; here, in a word, is a substantial reality which will answer of our respectability, concentrate our energies, and be the guardian of our rights. As we have said before, though young, it is in vigorous action:—suffering no opportunity to escape that may accomplish the ends for which it exists—appearing before the Minister with a power equal to old-established chartered institutions—and receiving the marks of respectful attention. "Well is it," we repeat, "that the profession could use the opportunity. Well is it that they can use it through the instrumentality of an organized body, which to *the power of numbers* adds the influence and respectability of responsible official position."

Having adverted to the benefits arising from the establishment of the Institute, the question naturally arises, What are its prospects? Were it to receive according to its deserts, unmingled prosperity would mark its career; yet such seems to be the unfortunate condition of our nature, that we are always backward in according to excellence that which is its due. Never was there a philanthropist who has not suffered from the ungrateful opposition of a thoughtless multitude. From obliquity of the moral vision, the best motives have been mistaken, and the best efforts have been frustrated; and the consequence is, that while

"The good is oft interred with our bones,
The evil that men do lives after them."

It is too much for us to expect, then, that this new Institute will escape all the afflictions which have in times past assailed those who were truly great. There will be opposition to encounter from those who will shoot their arrows from a quiver hidden under the cloak of good intentions, as well as from open and undisguised enemies. A liberal college will make the corruptions of the old institutions more prominently repulsive; and injured reputation will goad on their abettors to revenge. All the strategy of war will be called into requisition by them, and, with the cruelty of cowardice, no quarter will be given. Justice, however, will maintain her own rights, and upon her standard will inscribe the inspiriting and prophetic motto, "Sub hoc signo vince."

Nor must it be forgotten that the Institute may have difficulties from the state of its treasury. Men's fingers become particularly sensitive when directed towards the pocket; and the button-hole which guards the sacred receptacle is stubbornly tenacious of its hold, unless omnipotent gold or silver demands admittance. This one thing is certain, however, that there is a wonderful sympathy between the heart and pocket; and when the former opens, the latter invariably yields to its influence. We know not, of course, how successful the Institute has been in pecuniary matters, but sincerely hope that a liberal profession will maintain its character in this particular department.

Let us not, while regarding the difficulties, forget there are great encouragements also. The cause is a good one: for it involves the honour, the happiness, the usefulness of the medical community. It seeks to provide for the general practitioner "an efficient control over the education of the members of the class to which he belongs, so that they may not only maintain the high standard of qualification which is now adopted, but that, by the cultivation of collateral sciences, they may promote the progressive improvement of the class, and thereby secure the true respectability of the great body of practitioners in this country, to whose skill and judgment the limbs and lives of the mass of the population are intrusted." And can so good a cause ever fail for want of support? Certainly not: for it carries with it the certain tokens of permanent stability. Respected by the profession, it will gradually secure its friendship,—by the Government, it will ultimately receive a charter of incorporation; while the existing colleges, compelled to profit by so good an example, will diligently "set their houses in order," lest a righteous judgment should be pronounced upon them.

ETHER.

Our office is literally inundated with details of new operations performed on patients under the influence of sulphuric ether. Operations would appear to have become the rule, rather than the exception, of surgery; and we had to await the present flood of communications to understand on one side the world's amount of chirurgical misery; on the other, how much that contemned small agent *ether* is destined to alleviate it!

Without troubling our readers with details of operations that have now no novelty to commend them to notice and which might fill our journal without imparting one iota of scientific knowledge not previously known, we will briefly note a few points which should be commended to especial notice, and investigation, in the further experiments which may be imposed on what has now been the usual routine of professional practice.

Are those erotic feelings which have been noticed, especially in females, and convulsive phenomena observed occasionally in both sexes, under the influence of ether, a physiological effect of that agent on certain temperaments, or a result of ether, either adulterated or misapplied? We know that ether, unless of a specific gravity of 730, contains alcohol. Now, if an apparatus be used which is heated to a temperature which will convert alcohol, as well as ether, into vapour, we have, in fact, a new process—alcohol is inhaled; and we have a condition approximating, if not identical, to drunkenness, in which are elicited phenomena like those educed by nitrous oxide. We have here obviously a very important point to be attended to; and it would appear of no little consequence that the apparatus used should, under this aspect, be constructed on the principle of Startin's inhaler, by which the application of heat may be carefully regulated.

Another question, which may not unreasonably be discussed, is "whether the ether, in producing insensibility, acts on the nervous tissues as a sedative, like opium, or exercises a direct influence on their structure and composition?" This is a subject of no small interest, and invites the experiments of the curious.

A third point, which may well be looked to in all future operations, is, whether the relaxation of the muscles, observed undoubtedly in many cases, is a concomitant of all? If the phenomena be producible at will, by means of ether, it is obvious that we have an important agency in the reduction of fractures, that must place ether's permanent establishment as one of the most valued appliances of surgery wholly beyond a doubt.

A fourth point, which is perhaps as important as any, is a faithful record of unsuccessful cases —or cases marked by unfavourable consequences. Hitherto our records have been Napoleonic bulletins—very ample on successes, very brief and taciturn on failures.

We add a further suggestion, and will leave the subject to another week. Have the uses of ether, *medically* as well as surgically, been essayed? What important services does it not suggest, with the modern apparatus, in asthma —and diseases generally of the lungs! Cases of this character would be really interesting as novel.

REVIEWS.

A Treatise on the Diseases of the Air Passage, Chronic Bronchitis, Laryngitis, Clergyman's Sore Throat, &c. &c. By Horace Green, A.M., M.D., Vice-President of the New York Medical and Surgical Society. Wiley and Putnam, Waterloo-place, London.

The medical and the non-medical world have recently been thrown into a state of great excitement, in consequence of the suggestion of the inhalation of ether in surgical operations by our American brethren; and we have now to make known another transatlantic novelty, which we are sure will take many of our readers by surprise. Indeed we can readily imagine that many will be disposed to doubt the veracity of the author, so opposed to all commonly received opinions are the results with which he has furnished us in the work before us.

Dr. Green declares that during the last eight years he has treated upwards of 400 cases of diseases of the lining membrane of the larynx, *by the direct application of a saturated solution of the nitrate of silver to that cavity!* Now, when we remember what great irritation arises from the accidental introduction of any foreign substance beyond the epiglottis—when we know that a morsel of food, a single drop of tea, or even of pure water, entering this cavity, almost produces suffocation—we can scarcely conceive it possible that the passing of a sponge, saturated with this strong caustic solution, could be borne for a single moment; in fact, entertaining our former notion on the subject, we should fear that it would be attended with imminent risk to the life of the patient. Dr. Green acknowledges that when in 1840 he read a paper before the New York Medical and Surgical Society, giving the details of the treatment of fifteen cases by this novel method, such was the scepticism on the part of the society that they appointed a committee to investigate the matter; and, notwithstanding their previous incredulity, they made a favourable report. Aware of the suspicions likely to be excited by the announcement of his method of treatment, Dr. Green has seen fit to append the testimonials of Dr. Post, a distinguished surgeon connected with the New York Hospital, and other members of the profession, among whom we observe the name of Dr. Lee, the editor of the *New York Journal of Medicine*, all of whom corroborate the assertions of our author, and leave no room for doubt, that the practice which he recommends is not only unattended with danger, but, in many cases, is productive of the greatest benefit to the patient. Strange as it may appear, we doubt not that such of our readers who have been much engaged in surgical practice will, on reflection, recollect cases where, in introducing the tube of the stomach-pump, by mistake it has been passed into the trachea, and yet has excited but little irritation. Baron Larrey relates the cases of several who, by gunshot-wounds or other accidents, had lost the epiglottis, and who were under the necessity of receiving nourishment through a gum-elastic tube; and he declares that it was not unfrequently passed into the larynx without producing any annoyance. Mr. Ryland, in his work "On the Diseases of the Larynx," makes numerous observations which go to confirm the statements of our author; and those familiar with the writings of Desault are aware that he proposed that in cases of bronchotomy the elastic tube should be passed through the larynx into the trachea. We could cite other testimony on this point, but we must recommend those interested in this matter to peruse the work for themselves. Dr. Green has devoted several pages to the examination of the objections which may be offered us to the practicability of his method, and has given illustrations of the instruments which he employs. There are also several coloured plates, representing different affections of the pharynx, &c. &c. The position of the author, as vice-president of the New York Medical and Surgical Society, is a sufficient warrant of the respect in which he is held in that city, and is calculated to increase the confidence of those to whom he has been hitherto unknown.

We shall, doubtless, have occasion to refer to this subject again; in the meantime we may safely assert that, whatever opinion may be formed as to the expediency of adopting this method of treatment by the direct application of these strong solutions of nitrate of silver, we must award to Dr. Green the credit of having done more towards the establishing of the practicability of the operation than any preceding writer. Although Trousseau and Belloc refer to the same proceeding, Dr. Green avers that, long before he had been made acquainted with their views, he had resorted to this proceeding, and that he was first indebted for the suggestion to a conversation which he had with the late Dr. Johnson, whilst on a visit to London in 1838. That distinguished physician, having spoken of the great prevalence of affections of the pharynx and larynx among public speakers in this metropolis, remarked, if the remedies could only be brought into contact with the parts affected, the efforts of the physician in these cases would be crowned with much greater success. On his return, Dr. Green lost no time in carrying out this hint, and the result has been, not only in his own practice, but in that of others, truly surprising.

Royal College of Surgeons.—Gentlemen admitted members on Friday, Feb. 19:—H. Davies, T. Pratt, L. P. Madden, J. Nash, J. W. Poland, A. Gozybowski, A. Asmar, R. B. Power, E. L. Webb, and J. Hutchinson.

Naval Appointments.—Surgeons: T. H. Keown, to the Marine Detachment at Port Essington; J. Caldwell, to Mariner.—Assistant-Surgeons: Dr. Wm. Smith, to Ocean; J. Lilburne (acting), to Belleisle; H. Gervais (acting), to Mariner; D. O. West, confirmed to Trafalgar.—Surgeon-Supt.: J. Lardner, to Asia, convict-ship; and R. G. Pashley, to Mariner.

At the late meeting of the Royal Society the minutes of the Physiological Committee were publicly read. In addition to many papers sent in and received, there was one announced as sent in, and rejected amid the general laughter of the learned audience—"Erasmus Wilson, on the growth and development of the epidermis."

Mr. Gale, an aëronaut, has constructed a balloon on an improved principle. All the gas which escapes by expansion, or otherwise, is collected in air-tight bags and attached to the middle of the balloon, and the car, grapnels, &c., are of improved construction.

MORTALITY TABLE.

For the Week ending Saturday, Feb. 20, 1847.

Causes of Death.	Total.	Average of 5 Winters.
All Causes	1253	1068
Specified Causes	1252	1061
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	156	183
Sporadic Diseases.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	100	112
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	187	170
Diseases of the Lungs, and of the other Organs of Respiration	514	354
Diseases of the Heart and Blood-vessels	68	32
Diseases of the Stomach, Liver, and other organs of Digestion	77	70
Diseases of the Kidneys, &c.	14	8
Childbirth, Diseases of the Uterus, &c.	10	12
Rheumatism, Diseases of the Bones, Joints, &c.	3	7
Diseases of the Skin, Cellular Tissue, &c.	3	2
Old Age	78	81
Violence, Privation, Cold, and Intemperance	31	30

No. 388. SUMMARY. March 6.

LECTURES ON SELECT POINTS OF SURGERY.

By WILLIAM FERGUSSON, Esq., F.R.S.E..

Professor of Surgery in King's College, London; Surgeon to King's College Hospital, &c.

ON CLEFT PALATE, AND ON STAPHYLORAPHY.

Author's experience increased since the reading of his paper on these subjects in 1844, before the Medical and Chirurgical Society of London; nature of cleft palate; different forms and kinds of; it's complication with harelip; effects of malformation on deglutition and on voice and speech; method of obviating defects before modern operation of staphyloraphy; advantages and disadvantages of latter proceeding, indifferent success of the operation, although performed by most of the leading surgeons in Europe and America; success of Roux, Mutter, and Dr. J. M. Warren, apathy of British surgeons on the subject, author's investigations; anatomy and physiology of cleft palate first described by him; new operation proposed and performed by author, and its success in various instances; reviews of different proposals, by Roux, Bushe, Dieffenbach, Pancoast, Liston, Mittauer, and J. M. Warren; fit cases for operation; age proper for its performance; author's operation described; ligatures and knots; new knot; after treatment; causes of failure of operation, examples of success of author's plan; effects of operation on voice and speech, &c.

Two years have now elapsed since I delivered a special lecture on these subjects, and about the same time I communicated a paper to the Royal Medical and Chirurgical Society, which was afterwards honoured with a place in the volume of "Transactions" for the year 1845. During the interval my experience has accumulated, and I am now desirous of stating the results, while, at the same time, I bring before my pupils as much upon such topics as pertains to the duties of the chair which I occupy in this college.

The state of the mouth, familiarly known under the name of cleft palate, is congenital, although a condition somewhat analogous to it occasionally results from injury or disease. It is chiefly to the natural malformation that the following observations apply, although they are suitable in many respects to other imperfections in the palate and roof of the mouth generally. The congenital defect is met with in a variety of forms: in some instances the fissure is limited to the uvula, when that part appears double; in others the fissure extends further forward, so as to leave the velum in two halves; the whole, or a portion only of this part, may be thus; the fissure may extend partially or entirely through the hard palate; the alveolar ridge may also be implicated, in which case the condition is usually, if not always, accompanied with fissure in the upper lip as well. The harelip and cleft palate very frequently go together, although it is by no means unusual to see either the one or the other by itself. The fissure in the uvula and soft palate is invariably in the mesial line; even in the hard palate it appears to be so, although commonly the vomer is attached below, directly in the middle, and the fissure communicates with one nostril only. When the alveoli are divided also, the fissure is always to the side, and this is particularly conspicuous when there is a double harelip present at the same time. There is, then, an intermaxillary bone immediately underneath the columna, on which rests the middle portion of the upper lip. Sometimes the fissure appears as a narrow slit, and in other instances is so wide and large as to cause the mouth and nostril to appear like one huge cavity.

The effects of cleft palate are observable in various ways. In infancy, if the malformation be at all extensive, there may be imperfect nourishment, in consequence of part of the food passing into the nostrils during deglutition; and in advanced years the peculiar tone of voice and defective pronunciation are remarkably characteristic of this condition. Infants sometimes die from inanition in this state; and in the adult the deficiencies alluded to are often such as to mar his prospects in life. The tone of the voice often gives rise to unjust suspicions against the sufferer, and there are many so conscious of the unpleasant sound that they use it as little as possible.

Until the present century, the means known for obviating the defects alluded to were of a very imperfect kind. In the adult, the opening could be closed only by an obturator or false palate; and in the child, even now, we know of no other remedy for the defect than a spoon or bottle, with some contrivance attached to it whereby the food is passed almost into the pharynx at once. In modern times, however, something more has been done for the adult; and it has been proposed to treat the fissure in the palate on the same principles as have long guided us in cases of harelip. Roux and Graefe in Europe, and Warren in America, pared the edges of the cleft, and brought them into contact in such a manner as to permit union by the first intention; and so the malformation was soon remedied, as in the more familiar example of hare-lip.

The intention with which an obturator or false palate is applied is, that, by closing the direct communication between the mouth and nostrils, the sound of the voice may pass outwards through the mouth without the nasal accompaniment which gives its unpleasant character. It is also used to prevent the escape of food upwards: for although the adult, by long custom and constant care, can generally swallow all his food and drink, yet, in an unguarded moment, a lapse may occur, and cause much annoyance. The objects of the operation being the same as those just alluded to, it will be very apparent that, if the two sides of the palate can be brought together to have the same effects as the obturator, the advantages are great in favour of such a proceeding. If the operation be successful the parts are put in a condition similar, in most respects, to their natural state, as if no such malformation had ever been present. As regards the voice and articulation, this was remarkably evinced in the case of the first patient on whom Roux operated. When the gentleman, a student of medicine, returned among his former friends, there was such a change for the better that he could not have been recognised by his speech alone.

Notwithstanding the apparent merits of the surgical operation for cleft palate (staphyloraphy, as it is called), there are certain disadvantages connected with it which should always be borne in mind when an opinion is required on the propriety of performing an operation, or the probability of its results. Even with the utmost care the proceeding when done may end in partial or complete failure. There may be some portion of the tissue, perhaps in the hard palate, which may baffle the surgeon's skill; or, from causes over which he has no control, the union of the soft parts, which it is his object to effect, may not occur. Even under the most favourable circumstances, as regards union, the patient's speech may not be so much improved as had been anticipated. Then there are difficulties connected with the operation so vexatious, so trying to the surgeon's patience, as well as to the endurance of the patient himself, that it must always be looked upon as one of the most harassing that we are ever called upon to perform. The slightest opposition on the part of the patient may prevent the operation being performed; and a trifling indiscretion, in not attending to the injunctions of the surgeon afterwards, may mar the effect of the proceeding, however successfully it may have been accomplished at the time. All these circumstances, as observed in different cases, have, no doubt, had effect on the surgeon's mind, and as the successful results have not been commensurate with the seeming disadvantages, have rendered him somewhat careless regarding the proceeding.

The operation has, nevertheless, been done by most of the leading surgeons of the day, among whom may be mentioned Roux, Graefe, the Warrens—father and son, Dieffenbach, Brodie, Guthrie, Liston, Bushe, Cusack, Crampton, Mittauer (of Virginia), Mutter, and Pancoast (of Philadelphia), &c. In 1842 it was said that Roux had performed it upwards of one hundred times. In two-thirds of the simple cases, and in one-third of those

which were complicated, the proceeding had been beneficial. In 1843, my friend Dr. Mütter had operated twenty-one times upon the soft and hard palate, and out of this number "had failed to relieve the patient but in two cases"; and Dr. J. Mason Warren had been equally successful in thirteen out of fourteen instances, in which he had operated. Indeed the success of these gentlemen had seemingly been greater than that of the distinguished author of the operation —Roux, although it would be observed that the cases were far fewer in number than had been treated by that surgeon. Few though they are, however, comparatively, I do not suppose that any surgeon in this country has operated on so many; no statistics have been drawn; no one has had the courage to publish an account of his cases; and a general impression has prevailed that the proceeding has been very unsatisfactory. Among the various cases that had come under my own notice, until within a comparatively recent date, the constant failures had been such as to induce great apathy on my part towards the proceeding —an apathy which had been somewhat increased by the failure of an operation performed on a gentleman in London, by Roux himself, when here on a visit a few years ago; and also by a similar result following an operation done by Mr. Bowman, in whose hands the proceeding had received every justice. I mention the latter case thus pointedly, because I shall have to draw attention to it again in a future part of this lecture.

I had not, however, given up all interest in cases of this malformation, and certain circumstances induced me, about three years ago, to bestow more attention and study on the subject than I had done previously. A preparation of cleft palate in my possession gave me an opportunity of investigating the anatomy, and this led me to draw certain conclusions regarding the physiology and surgery of these parts, such as I believe had never been made before.

It had long been familiar to those accustomed to see such cases on the living body, that during deglutition the two portions of the uvula came together in the middle line; but no one had attempted to explain how this could happen, and even such an acute observer as M. Malgaigne (a) stated, that it was "by a muscular action, of which it is difficult to give an explanation." The dissection of the parts enabled me to explain this in a way which I imagine is incontrovertible; and to show you how this happened, as well as for other purposes, it will now be best that I should explain to you the condition of the parts in this malformation, and contrast it in as far as may be requisite with the natural state.

The preparation now before you exhibits the upper part of the mouth and pharynx of an aged female subject. The muscles of the pharynx have been carefully dissected, as have also those connected specially with the palate. A glance at the roof of the mouth shows the gap in the mesial line, and how the uvula, soft palate, and a portion of the hard, are involved in the defect. Behind it may be observed that the constrictors are not so broad,—so capacious, as in the natural condition, but that the muscular fibres are nevertheless as strongly developed. The upper border of the superior constrictor is especially well marked, and here it may be seen to form a kind of semicircular margin, extending between the basilar process of the occipital bone and the internal pterygoid plate, on which margin the levator palati muscle seems to rest. A perpendicular incision has been made through the pharynx behind, exactly in the mesial line, and, the mucous membrane having been stripped off the inside, the muscularity is thus rendered still more distinct. The mucous covering has also been taken off the upper surface of the palate, whereby one side of the nostril immediately above, and the muscles of the palat have been more extensively exposed.

It may now be seen how the two portions of the uvula and corresponding parts of the soft palate touch each other during deglutition, for it is evident that, as the superior constrictor muscles act, they must throw or push the soft tissues in front forwards and inwards;—an effect which will be aided by the superior fibres of the middle constrictors, which, stretching across as they do from one side to the other, having no attachment mesially, as is also the case with the lower fibres of the superior muscles, must contribute powerfully to the result in question. A remarkable difference may here be observed between this and the normal state of the parts: the palato-pharyngei muscles are not attached to each other, as in the well-formed palate. These muscles are seen to form the principal part of the free margin of the palate along the line of fissure; their course is somewhat ...ender from their upper end to their lower, ...avexity being towards the middle; and it ... that during action, if not opposed in any the ... must pull the parts outwards—an ...tion the reverse of that described by Dzondi, Muller, and others, as belonging to the muscles in their natural condition. T... ...vator p...atı is ... throughout its entire co... and the ... pal... may as be clearly ... out. The ...tor, it will be p...eive... ... its ... by pulling it, not only acts very efficiently ... the moveable portion of the palate, ... its sphere of action, from the muscle being ... muscular throughout its entire course, is so great that, during rapid contraction, it must forcibly pull the soft parts upwards, backwards, and outwards. It is worthy of special observation, that the tensor or circumflexus palati has hardly any influence on the velum, for, pull as I choose upon it, there is only the slightest movement to be observed at the parts where its tendon spreads on the surface of the soft palate. Neither in the natural nor in the cleft palate can this muscle have a power at all to compare with the levator, which, from its length, position, and character generally, is the principal motor of this very mobile part. The anterior pillar of the fauces is very slight, and the fibres of the palato-glossus are indistinct; the posterior pillar, however, is distinct enough, and formed as in the natural state by the bundle of fibres of the palato-pharyngeus. The azygos uvulæ is by no means distinct; a bundle of fibres, about the size of a crowquill, may be seen on the lower part of each free margin of the soft palate.

From such an inspection as this preparation afforded, I was led to take those views of the physiology and surgery of the parts, the explanation of which forms the principal object of this lecture. It required no great foresight to perceive that the movement of each side of the palate must depend chiefly upon the action of the levator muscle and palato-pharyngeus. The influence of the levator muscle might have been calculated on from previous knowledge, but that of the palato-pharyngeus could scarcely have been thought of. Both must evidently have the effect of widening the fissure, especially the levator; and the various conditions under which the palate may be seen can be explained by reference to these two muscles. When the mouth is looked into, and the soft portions of the palate are in a quiescent state, the fissure will then appear probably in a medium state. A slight irritation, with a probe or point of the finger, will cause a corresponding movement—the soft parts will be drawn upwards and outwards, so that the gap will be enlarged. If the irritation be increased, the same parts will be so acted on that they will almost disappear on the sides of the fissure, but even now, if an effort at deglutition be made, the two portions of the uvula will be forced together, by the action of the superior constrictors, as already explained. It seemed to me that under ordinary circumstances, after the operation for closing the fissure, the slightest irritation would be likely to call the levatores and palato-pharyngei into action, and so induce that dragging on the stitches with which surgeons were so familiar—an influence sufficient, in some instances, to cause ulceration in the seat of the threads, or, in others, to cause separation of the recently-united parts. I therefore supposed that, if these muscles could be divided before bringing the edges of the palate together, the parts would remain so quiet immediately afterwards that there would be greater probability of union in the mesial line taking place than if the muscles were left entire or untouched. It was not long before I had an opportunity of testing the project on the living body. The result was so satisfactory that I tried it in another instance shortly afterwards, and here the effect was most complete. The two cases were appended to my paper on this subject when laid before the Royal Medico-Chirurgical Society (a), and since that date I have operated on eight more, making ten in all, in eight of which I have been perfectly successful in closing the soft palate. In some of these there has been fissure of the hard palate as well, and the parties have been ...tent with the remaining comparatively sma... apertures, or have had them closed by obturators. I know of four other instances where the operation, conducted on the plan recommended by me, has been successful, and a fifth which failed. During the same period I have known three examples of failure by the ordinary method. Thus, out of fifteen cases on my plan, there have been three which did not succeed, while all those done in accordance with Roux's operation were failures.

(To be continued.)

(a) "Manuel de Médecine Operatoire. Paris, 1834; p. 486.

(a) Trans. 1845.

A COURSE OF LECTURES ON CLINICAL MEDICINE,

...ed in the Theatre of Queen's College, Bir...

By SAMUEL WRIGHT, M.D.,

...sician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

...quelæ of the bowel complaint of 1846, meaning of the term sequela, illustrations, injury to the knee, and relations thereof to the stomach; the converse, injury to the knee followed by pericarditis; concussion from a fall, illustrations of it, sequelæ of the bowel complaint of 1846, as they applied to children, anasarca, two varieties of it, one from simple debility, the other from congestion of the kidneys, relative treatment of them, observations upon particular remedies; ascites, a sequela of the bowel complaint, varieties of it, pathology; treatment; post-mortem appearances, intestinal flatulence a sequela, localization of it; observations thereon; treatment, mesenteric disease; observations upon, treatment.

Gentlemen,—We have now to speak of the *sequelæ* of the bowel complaint of last year, and of their treatment. The term *sequela* is applied to any form of ailment which succeeds to another, as its *consequence*. Some diseases are particularly liable to *sequelæ*. Thus, smallpox is apt to be followed by gastro-intestinal irritation, by bronchitis, or bronchorrœa; measles by ophthalmia, and scarlet fever by anasarca. These secondary diseases are not *necessary consequences* of the preceding, for smallpox, measles, and scarlet fever, often enough occur without leaving any morbid succession; and what are sometimes their *sequelæ*, at other times appear as primary and unconnected affections. Still these things frequently relate to each other as *cause* and *effect*. Observation has given us the fact, and pathology its explanation. It is to pathology that we owe the distinction between *sequelæ proper*, and those that are only *apparently such*. You must not infer that because one ailment comes shortly after another, it comes as a *consequence* properly so called; it may come quite *accidentally*. A man accustomed to very

active habits, and much out-door exercise, falls upon a slide and breaks his leg; the fracture is a simple one, but it confines him to his bed, and, after a fortnight's stay therein, he loses his appetite, and becomes dyspeptic. There is nothing surprising in this. Had he, without having broken his leg, shut himself up in his bedroom for mere fancy, and never breathed the fresh air for a fortnight, it is more than probable that the sudden change would have considerably disturbed his digestive function. Suppose, again, that his arm, instead of his leg, had been broken, and that his accustomed recreation had been little suspended, the chances are that his stomach would have suffered in only a mild degree, perhaps not at all. Could we then say, that in the first instance the dyspepsia was directly consequent upon the fractured leg? I think we should rather say that it was the result of confinement, and other sudden change of habit. We know of no morbid sympathy which would be likely to obtain between the gastro-intestinal function, and such a fracture as I have spoken of, except what might be the natural consequence of altered living, or of sympathetic fever; therefore the dyspepsia would not deserve to be called a *sequela* of the injury.

The man, however, instead of breaking his leg in the fall, sprains his knee very seriously; his tongue becomes furred, and his appetite is gone in twenty-four hours; perhaps he has epigastric tenderness, and frequent retching. Is this stomach trouble a *sequela* of the sprain? I should say so. And why? Because it has occurred too soon to be accounted for on the score of confinement, &c.; because we know that a severe injury to a large joint like the knee, with its complicated ligamentous structures, and its ample synovial membrane prone to inflammatory action, is more serious than a simple fracture of the arm or leg; and because experience tells us that injuries of this joint are apt to be followed by sympathetic disturbance of the stomach. This fact is familiar to our observation - it is one of the unexplained truths of pathology; but it is still a truth, for it has numberless attestations. Moreover, it is variously corroborated. Not only will injury to the knee-joint *directly* produce gastric disorder, but, if this occur even casually in a chronic case of knee disorder or disease, it will effectually retard the progress of cure. Primary dyspepsia, again, is not an unfrequent occasion of mischief, simple or serious, in the articulation I allude to. I have more than once directed your attention to anomalous pains of the knees, successive of dyspepsia, in cases that have come before us; in one, in particular, there was an approach even to synovitis. None of these had the character of rheumatism, commonly so called, and they all subsided as the gastric function improved.

Suppose, again, that this fall and injury to the knee-joint, instead of being followed by disorder of the stomach, was followed by pericarditis, would this properly be a *sequela*? It would certainly deserve to be called so, if the pericarditis had nothing more directly to account for it than the injury to the knee. In this case there would be both a physiological and a pathological reason for the inference. We know the relation which holds between the ligamentous structures of the large articulations, their synovial membranes and secretion, and the fibro-serous investment of the heart and *its* secretion. We know them to be so allied in nature and function that, *à priori*, we should say they would be as likely to sympathise as distant mucous membranes. And we know this, also, from pathological experience. We see articular rheumatism connect itself with pericarditis much oftener than does muscular rheumatism; and a subacute form of pericardial inflammation is not an anomaly as a sequence of injury to the knee-joint.

This fall, however, instead of fracturing any bone, or spraining any joint in particular, might have shaken the individual excessively: what would be the likely result? We know how mental emotions of joy or grief will paralyse and prostrate the nervous system; death, instantaneously or slowly, has often followed a sudden shock produced through the mind. And why may not a sudden concussion produced by a fall have a fatal termination? It frequently has, especially in old people. A severe shake of this sort in advanced life is not uncommonly succeeded by gradual sinking, without the least effort of nature to rally. We sometimes see robust people injured thus. I am at this time attending a dispensary patient, a female, thirty-five years of age, who, three weeks ago, tripped upon a slide, and fell with great violence upon the lower part of her back. The fall so shook her that she was unable to stir until helped by a policeman, who conveyed her home. At the time of her accident she was in good health; for two or three days, subsequently, she felt excessively sore all over; this, however, passed away, leaving her in a state of great prostration, as she still continues. Her appetite is impaired, she sleeps indifferently, and she has lost nearly twenty pounds in weight: the *mammæ* in particular, which were previously ample, firm, and round, have wasted and shrivelled until there is scarcely any left. No organ in particular seems to suffer, but the nervous power appears to have sunk through the shock. This sinking is a *sequela* of the concussion produced by the fall.

Instead of the depression, however, the general soreness first complained of might have extended itself to rheumatism. I have lately attended a case of this kind in consultation with Mr. Wood. A lady, in her usual health, fell down a whole flight of stairs. She was not stunned, but excessively shaken. Within twenty-four hours she was the subject of general rheumatism of a very urgent kind, which was only relieved by very prompt and active treatment. In its subsidence it left the heart irritable and intermittent in its action, with occasional violent palpitation, but without any evidence of inflammatory process, or of structural change. In this case there was a succession of *sequelæ* the morbid action of the heart was a sequence of the rheumatism, and this of the fall.

Sometimes *sequelæ* do not make their appearance until after the cessation of the more manifest symptoms of the diseases of which they are successive. This generally happened with the ailments which were consequent upon the bowel complaints of last year. We will first speak of them as they appeared in children.

In these subjects a common *sequela* was anasarca. I saw many examples of this, but there appeared to be only two distinct varieties. In one, though the quantity of water passed every twenty-four hours was less than natural, yet it was not conspicuously so; the secretion rarely being more than one-third deficient. This urine was sometimes clouded with mucus, but it never contained albumen, or the colouring matter of the blood: it was passed freely, and without any evidence of straining or pain; there was no tenderness on pressure over the kidneys, nor any sudden twitching of the legs whilst this pressure was being made, or at any other time. The children had an exsanguined, emaciated look, lost their appetite and flesh, and some of them had profuse night sweats. These, however, did not relieve the anasarcous condition, which gradually increased, unless efficient remedies were given; and the sufferers at last died, some apparently from exhaustion, and others from serous effusion in the cranial, thoracic, or abdominal cavity. In these cases the anasarca seemed to be the offspring of laxity of tissue and impoverishment of blood—the consequence of the excessive drain from the bowels, and the debilitating effects of it. There were no morbid appearances observed, except a striking bloodlessness of the internal organs, and local accumulations of transparent, almost colourless, serum. These states of debility, and these terminations thereof, you sometimes meet with in the impoverishment of chlorotic subjects; after severe mercurialization of leuco-phlegmatic people; and especially after large losses of blood, either by the lancet or during parturition.

These cases were only successfully treated on a tonic plan. Good milk, beef-tea, sago, arrowroot, stale bread, and, if the child were old enough, small quantities of finely-chopped mutton, and occasional small doses of wine and water, were amongst the best materials of nutriment. Fresh air, whenever the weather permitted, early bed, and sponging with tepid salt water, were serviceable adjuncts. The medicinal treatment of most use, when the bowels were not irritable, were occasional doses of sulphate of quinine, with tincture of bark, and some cordial, such as tincture of cardamoms, or ginger. With weak stomachs, quinine alone will often not agree, and it is advisable to give, in conjunction, some stimulant which will prevent its producing coldness, flatulence, or pain. Some stomachs, however, cannot bear cold liquids, whatever they may be. It is useless to give a quinine mixture in such cases, unless you order each dose to be slightly warmed. I have often done this without at all deteriorating the operation of the tonic, and with the desirable advantage of enabling it to sit easily and without inconvenience on the stomach.

When the bowels were irritable, tender on pressure, and disturbed with flatulence, a vegetable tonic, such as gentian, calumba, or cuspaira, with soda or ammonia, was of great service. Nitric ether was conveniently added to this or to the other form of mixture, whenever a sluggish state of the kidneys suggested its administration.

Occasionally, a small dose of grey powder proved useful by aiding absorption; but great care was required for its exhibition, for when the prostration was severe, any form of mercurial was dangerous.

In the other variety of anasarca, the kidneys were clearly implicated. The urine was always considerably less in quantity than natural; sometimes the secretion was almost entirely arrested. It was rarely deficient in albumen, and often contained this in considerable quantity. Not rarely blood globules were distinctly visible in the urine; and again, it had a tawny hue, derived from the colouring matter of the blood, such as you not unfrequently see in certain forms of typhus fever. Micturition was slow, difficult, or painful; there was tenderness on pressure over the kidneys; and the little patients, who could describe their sufferings, complained of shooting pains down the thighs.

These cases were difficult to treat, and too generally proved fatal. Besides the anasarca, or local serous effusion, in which they corresponded with those above mentioned, there was always found more or less congestion of the kidneys, which not only accounted for the deficiency of their action, but for the abnormal character of their produce.

In these instances, the best treatment consisted of local depletion, by leeches or cupping, over the kidneys, followed by sustained counter-irritation. Additionally, salines with excess of alkali (potash the preferable), and mild diuretics, such as nitric ether, nitrate or acetate of potash, were of frequent service. If the renal secretion improved in quantity and quality, its restoration was the signal for tonic treatment; and such cases generally did well. If, however, local depletion and diuretics produced little effect, the patient rapidly became worse, and died without affording any prospect of recovery.

Ascites, again, was an occasional *sequela* of the bowel complaint of 1846. In one or two instances I had reason to suspect, from tenderness and fulness in the right hypochondriac region, that some structural alteration of the liver, probably congestion, was the cause: but, not having had an opportunity of verifying this from *post-mortem* aspects, I am not able to speak confidently.

In other cases, perhaps the more numerous, the abdominal dropsy was evidently the result of subacute peritoneal inflammation. The origin of this, it is difficult precisely to account for; but it may have arisen sympathetically with the irritated and inflamed state of the mucous membrane of the intestines, the probability of which we learn from what we know occasionally

to result from the operation of drastic purgatives; it may also have occurred as a consequence of exhaustion, for we know that states of vital depression are apt to be terminated by peritoneal inflammation. Whatever the cause, at least we know that there was, not unfrequently, subacute peritonitis, and that this was followed by abdominal effusion. There were tension and tenderness of the abdomen; a quick, somewhat hard pulse; sickness and subsequent retching, flatulence, and faintness; and, if these were not remedied, soon fatal sinking and death.

In either example the cases were difficult of treatment. The amount of leeching that would have been necessary to produce any good effect was quite inconsistent with the strength and health of the patients. Purgatives, again, were inadmissible, not only because they might restore the bowel complaint, but because there was no direct indication for their use. Hydriodate of potash ointment, constituted of one drachm of the salt to one ounce of spermaceti cerate, was ordered to be rubbed over the hypochondriac region in those cases in which the liver appeared to be deranged. At the same time, vegetable tonics, with alkalis and hydriodate of potash, were occasionally administered internally, and less often alterative doses of grey powder or blue-pill; but it was seldom that any evident good was the result of this treatment. The abdominal dropsy gradually increased, the skin became yellow, and the patient sunk.

When the ascites was the result of subacute peritoneal inflammation, counter-irritation, and that mild, was the only local treatment that was practicable. If active remedies were used the patient threatened to sink before them; and, if remedies were abandoned, the case seemed to be utterly hopeless—and where was our choice?

There were many instances of recovery during treatment, but I am not prepared to say that *nature* was not curative—there were many instances of death during treatment, and I am not satisfied that even our best means in any degree averted or arrested the fatal issue.

In the unfortunate cases there was found a variable amount of fluid in the abdominal cavity; sometimes clear, and, again, turbid and flaky. The mesenteric veins were congested; the peritoneum thickened, in some places coated with lymph, and in others loosely adherent to the adjoining tissues.

In other instances, intestinal flatulence was the particular *sequela* of the bowel complaint. Usually this was general; that is, on percussing over the abdomen, the tympanitic sound was heard pretty equally everywhere, and, on pressing and attempting to grasp the bowels, their distention seemed to be uniform. Occasionally, however, there were strange local accumulations of air, here and there, giving very much the appearance of a circumscribed tumour. It was very resistent, bounded, and, on a superficial examination, might easily have been mistaken for a substantial swelling. On percussing this spot, the sound was purely tympanitic, and hence there could be no doubt of the nature of the local enlargement. I am not able to account for the anomaly of a diffusable gaseous fluid being thus confined in a particular part of an extensive and permeable cavity, but it is not a very uncommon pathological feature amongst dyspeptics, who suffer from intestinal flatulence. They will tell you of swellings in this place, and that, of the abdomen, and call them tumours, and on careful examination you find these said said-swellings to be nothing but wind.

In the cases I speak of, friction to the surface of the abdomen had often an excellent effect in dissipating the flatus; again, the same end was answered by local stimulation, by a mustard poultice or turpentine, over the tympanitic part, and again, by the administration of an assafœtida enema. This rarely failed to be effective. It is a remedy of most excellent service in such cases, and their like, and I confidently recommend it to your adoption. You will often find an assafœtida enema produce a dislodgement of flatus from the colon, and even from the smaller intestines, after carminatives and purgatives given by the mouth have failed to be of service.

Tonic carminatives were also beneficial. In young subjects, appropriate doses of aromatic confection, carbonate of ammonia, or sal volatile, with peppermint-water, and, if there were much pain, with syrup of poppies or tincture of opium, were useful remedies. In older patients, the place of peppermint-water was well filled by some tonic vehicle, such as calumba, gentian, cascarilla, or cusparia. Your *materia medica* has taught you the relative properties of these, and you will anticipate the cases in which they would be respectively serviceable.

Gentle aperients of the unirritating class were necessary, and I found none better than castor oil. When not using this, I gave colocynth pill, with its equivalent of soap to moderate its action.

Mesenteric disease was another *sequela*, amongst children, of the bowel complaint of 1846. It was chiefly characterized by an increase, often rapid, of the size of the abdomen. In some instances parents deceived themselves with the idea that the child was getting fat. On pressing the abdominal surface, however, well-defined masses of hardness were felt here and there, which clearly told that the enlargement was not due to fatty deposit. On percussing over these several spots a dull flat sound was elicited, which showed there was no accumulation of flatus; and as there was no fluctuation whatever, fluid in the cavity of the abdomen had no share in its augmented magnitude. These masses of hardness might have been *scybalæ* in the intestines; but the previous purging, and the present absence of all *symptoms* of intestinal accumulation, were strong evidences against the probability of such a thing. Moreover, the masses felt to be more superficially seated—in fact, were more easily recognised by the touch than are *scybalæ*; and, more than all, there was that peculiar physiognomy—the anxious, haggard, old look, and the dingy, yellow complexion, which are so constantly remarkable in the mesenteric disease of children.

These cases never improved or recovered. Strangely enough, they were rarely accompanied by even looseness of the bowels; and we know that even mesenteric disease in general is attended by a most intractable purging. Perhaps the sensibility of the bowels had been so weakened by the previous irritation and discharge that it was not affected by the altered condition of the mesenteric glands. The sufferers gradually wasted and shrivelled, except in the abdomen, which generally continued to enlarge, and at last died, apparently from exhaustion. The nervous vigour appeared to have received a shock from which it never rallied; and upon this, as its consequence, came a cachectic state, and the effects of both were fatal.

Tonic treatment, medicinal and alimentary, with counter-irritation with iodine, was tried, but without avail. The sufferers fared alike, whether well or ill attended. In some cases the mesenteric glands were found simply enlarged and indurated; in others, they contained a cheesy-looking scrofulous matter; and in others, again, a similar deposit was scattered over the peritoneum.

DUMAS ON ORGANIC CHEMISTRY. No. XIII.

ON THE URINE.

(Continued from p. 7.)

We have already stated that fresh urine, in its normal state, invariably possesses an acid reaction. M. Berzélius affirmed that this property of reddening litmus-paper was owing to the presence of a certain quantity of free lactic acid. Latterly, this opinion has been somewhat shaken by the following experiments due to M. Liebig.

If fresh human urine is saturated by baryta, we have a precipitate thrown down; and, by taking the precaution of not exceeding the point of saturation, we shall find no trace of baryta in the filtered liquid. Calcined or carbonate of magnesia will present a similar action. Now, if the urine owed its acidity to lactic acid, we ought to find in it a lactate of baryta or magnesia (which are soluble in water), and these bases would be revealed under the action of reagents, —a circumstance which does not take place. But, as the urine contains alkaline phosphates, and as baryta and magnesia form insoluble salts with phosphoric acid, the neutral lactates, produced during the neutralisation of the urine, might have been converted into alkaline lactates, in which case there would have remained neither baryta nor magnesia in solution. To resolve this problem, we must then have recourse to a direct experiment.

M. Liebig admits that putrefaction does not destroy lactic acid; therefore, if this acid exist in fresh urine, we ought, according to this chemist, to find it in putrefied urine; and, if we cannot succeed in demonstrating its existence in the latter liquid, we must conclude, not only that it does not exist in fresh urine, but that this fluid contains no substance likely to aid in its formation. It is very possible, however, that the lactic acid may disappear in the midst of so complicated a fermentation as is that of the urine.

Let us now, however, describe the process adopted by M. Liebig, for discovering lactic acid in putrefied urine.

The urine is evaporated to dryness, at first over the naked fire, then in a water-bath; the residue treated by a mixture of alcohol and sulphuric acid, and then saturated by oxide of lead. The precipitate is separated by filtration, and the filtered liquor decomposed by a current of sulphuretted hydrogen. The solution, separated from the sulphuret of lead, is evaporated to dryness in a water-bath and treated by alcohol, which precipitates the chloride of sodium. To remove the remaining soda, we must dissolve oxalic acid in the alcoholic solution while hot, and, after having separated the oxalate of soda, saturate the liquor by oxide of lead. The clear solution is again precipitated by sulphuretted hydrogen, concentrated in a water-bath, and mixed with an excess of subacetate of lead; we have thus formed an abundant white precipitate, which is to be separated from the liquor by filtration. The limpid solution resulting from this treatment should contain lactic acid.

The lead, which is present, is finally precipitated by sulphuretted hydrogen. The liquor, after partial evaporation in a water-bath, is subjected to ebullition with hydrate of baryta, and a large quantity of ammonia thus driven off. After the decomposition of the ammoniacal salt, the barytic compound is carefully decomposed by sulphate of zinc. Every conceivable plan for extracting from this liquor crystals of lactate of zinc has been adopted; but, hitherto, these attempts have been totally unsuccessful.

M. Liebig has also employed other means for procuring lactic acid from the urine, but all his experiments have given a negative result. He has, however, constantly been able to prove the presence of some organic acid, but this he found to be acetic acid mixed with a highly azotized, brown, resinoid matter. Proust has also confirmed this fact.

M. Liebig affirms that the acidity of fresh urine is owing to the presence of hippuric and uric acids. The following is the method which he adopts for isolating hippuric acid:—Fresh urine is evaporated to a syrupy consistence; the residue, acidulated with a little hydrochloric acid, and then agitated with its volume of ether; to facilitate the separation of the ether, we should add to it a twentieth part of alcohol. The hippuric acid will be found dissolved in this mixture, which also contains a little urea. On agitating it with water, this liquid attracts the urea and the alcohol; the ether, when removed with care, furnishes by evaporation crystals of hippuric acid.

M. Liebig admits that hippuric and uric acids are found in a state of solution with the phos-

phates of soda and potass contained in the blood, and which pass thence into the urine. The disappearance of the alkaline reaction of these salts in the last-named liquid must, therefore, be owing to the presence of the above organic acids, and perhaps, also, to a certain quantity of sulphuric acid, arising from the combustion of the sulphuretted materials of the organism. This manner of viewing the constitution of urine led M. Liebig to manufacture an artificial kind. By dissolving 90 grains of phosphate of soda, $P^2O^5 \begin{matrix} 2\,NaO \\ HO \end{matrix}$ + 24 aq., in a pint of water, he obtained a solution which possessed an alkaline reaction. On adding 15 grains of uric acid and a like quantity of hippuric acid, and then applying a temperature equal to that of the human body, viz., 37° or 38° C., the two acids were dissolved. A few hours after cooling, he observed a deposit of uric acid containing soda: it greatly resembled the uric acid which is, after the lapse of some time, thrown down in the urine. The deposit, collected twenty-four hours afterwards, weighed but 7½ grains. The dilute mineral acids produced a precipitate in the filtered liquor.

The foregoing considerations necessarily lead us to inquire the condition in which the urea itself is found in the urine. MM. Cap and Henri affirmed that it was combined with lactic acid. M. Pelouze has since proved that lactate of urea does not exist. Some observers have imagined that the urea might be combined with uric acid. MM. Cap and Henri admit the existence of this combination in the urine of birds and of reptiles. In that of the herbivorous mammiferæ, the urea, according to the same chemists, is found partly in the state of hippurate of urea. But the existence of all these salts is at the least doubtful, and I am more inclined to believe that the urea is present in a state of liberty; still, as we know that this principle may combine itself with sal ammoniac and chloride of sodium, we should perhaps admit the existence of these combinations in the urine, to a greater or less extent.

The alterations which the urine undergoes, when left to itself, are not very difficult of solution. M. Gay-Lussac has proved that the access of oxygen is necessary for putrefaction to manifest itself in this fluid. When preserved from contact with the air, in well stoppered bottles, it loses neither its transparency, its acidity, nor its odour, and throws down but a very slight quantity of uric acid. But, so soon as the access of oxygen is allowed, this gas is absorbed and gives rise to a true fermentation.

It may be, that by its combination with the azotized extractive matters contained in the urine, and perhaps also with the colouring matter (as is the opinion of M. Liebig) the oxygen transforms these substances into azotized ferments which are precipitated in an insoluble state. Under the influence of these combinations, the urea is rapidly transformed into carbonate of ammonia by fixing the elements of water. The urine becomes strongly alkaline and produces a lively effervescence when treated by acids. The surface of the liquid is covered with a white pellicle, sometimes of a perfectly mouldy character, and at the same time small crystals of the ammoniaco-magnesian phosphate are deposited on the sides of the vessel. The uric acid is partly thrown down, while the hippuric is transformed into benzoic acid. Such is, according to Dr. Ure, the origin of this body, which was discovered in the urine by Scheele and Proust. This last-named chemist, a long time since, pointed out the presence of acetic acid in putrefied urine. His observation has been confirmed by M. Thénard, and more recently by Liebig; but we do not know the origin of this acid.

To form a complete chemical history of the urine, we must now regard it in another point of view. Like all animal secretions, that of the urine is subject to certain variations, according to the conditions in which the organism is placed. After laying down a few general principles upon the urinary secretion, considered in a chemical point of view, we must then endeavour to trace the conditions which are capable of modifying it. As one safe step in this study, we will first cite some analyses of normal urine, made by MM. F. Simon and Lehmann.

The following is M. Simon's analysis of the urine of a man, thirty-three years of age, of a sanguineous temperament, but whose digestion and general appearance were not very good:-

	1.	2.
Density	1·011	1·012
Water	963·20	956·00
Urea	12·46	14·58
Uric acid	0·52	0·71
Alcoholic extract and free lactic acid	5·10	4·80
Spirituous extract	2·60	5·59
Aqueous extract and mucus	1·00	2·55
Lactate of ammonia	1·03	
Sal-ammoniac	0·41	
Chloride of sodium	5·20	7·28
Sulphate of potass	3·00	3·51
Phosphate of soda	2·41	2·33
Phosphate of lime and magnesia	0·58	0·65
Silica	trace	trace
Solid residue	36·80	44·00

Other analyses of the urine of the same individual.	The urine of the morning.— He had drunk a little water through the night. — Acid.	After drinking a glass of water and of coffee.— He was for two hours in a state of general excitation, so that the pulse beat 100 per minute. — Less acid than the first.	Urine collected half an hour after the foregoing. — Very acid.
Density	1·010	1·008	1·014
Water	972·60	980·00	957·60
Urea	8·40	7·57	15·26
Uric acid, Extractive matters, Ammoniacal salts, Chlorides	13 90	8·62	19·11
Phosphate of soda	1·85	1·25	2·75
Sulphate of soda	2·97	2·20	5·00
Phosphate of lime and magnesia	0 48	0·26	0 65
Solid residue	27·66	19·00	42·40

These different analyses suffice to show how variable is the proportion of urea contained in the urine of the same individual, according to the circumstances attending its production. Indeed, we can scarcely hope to arrive at a satisfactory knowledge of the principles of the urine, unless we adopt the precaution of operating on the whole of the fluid collected during a space of twenty-four hours, and then taking the mean composition, as compared one day with another.

The following analyses have been made by M. Lehmann, on separate quantities of urine voided during the day:—

	1.	2.	3.
Water	936·76	931·41	932·41
Urea	31·45	32·91	32·90
Uric acid	1·02	1·07	1·07
Lactic acid	1·49	1·55	1·51
Aqueous extract	1·62	0·59	0·63
Alcoholic and aqueous extract	10·06	9·81	10·87
Lactate of ammonia	1·89	1·96	1·73
Chlorides of sodium and ammonia	3·64	3·60	3·71
Alkaline sulphates	7·31	7·29	7·32
Phosphate of soda	3·76	3·66	3·98
Phosphates of lime and magnesia	1·13	1·18	1·10
Mucus	0·11	0·10	0·11
Solid Matters	63.24	68·58	67·59

Physiologists had supposed or admitted from the earliest times, that the kidneys wholly elaborated the urine and the soluble organic matters which are found in it. M. Prevost and myself have, however, demonstrated that urea—the most abundant principle of the urine—exists in the blood after the extirpation of the kidneys, and that the functions of these organs are consequently confined to eliminating this principle, without aiding in its formation. The same may probably be said with regard to the uric acid and the other organic and inorganic principles of the urine.

Kidneys are found in all the superior classes of animals; but urea does not invariably constitute the most abundant principle which these organs are charged with secreting; in birds, serpents, &c., almost the whole of the urine is composed of uric acid—a product which exists in the human urine in but very small quantity. However this may be, the azotized principles, in all the superior classes of animals, constitute the most abundant and the best defined organic materials of the urine. In considering the composition of those different bodies, one is struck, at first sight, with the large quantity of azote which they contain; and, if we bear in mind that the excreting organs are, in general terms, destined for freeing the economy of those materials of the organism which have become unfit for the purposes of life, we are naturally led to the following conclusion:—that the function of the kidneys consists in collecting and eliminating the urea or uric acid arising from the metamorphosis of our tissues, or from the excess of aliments introduced into the system. Add to this, that the urine also bears off all the soluble inorganic salts, of which the organism requires to be freed, and we shall at once perceive the full importance of the functions which the kidneys are destined to fulfil.

There is a beautiful system of mutual dependency in the animal economy. The functions by which life is manifested are never accomplished singly, but are combined one with another in the most intimate manner. And, perhaps, one of the best exemplifications of this harmonious action of our organs is found in the relations which exist between the functions of the kidneys and those of the lung. The oxygen of the arterial blood, passing into the capillaries, there destroys, by a true combustion, the tissues which have become unfit for life: while the carbon and hydrogen of these tissues tend, at least in part, to transform themselves into carbonic acid and water, ultimately to be rejected by the lungs. But what becomes of the nitrogen? The most simple combination which it could form would be that of ammonia; but, as this body cannot exist in a state of liberty in the economy, nature causes it to undergo some modification; for this purpose it has merely to be brought into contact with carbonic acid, and, by eliminating from this combination the elements of water, it is transformed into urea. This principle, being inert and soluble in water, can pass without the least danger through the current of the circulation, and be eliminated or rejected by the kidneys. Such is the origin of urea in the economy. We see that it is, in some sort, a product of combustion, arising from the oxidation of the azotized matters of the system.

The relation between the urinary secretion and the phenomena of respiration has been experimentally proved. We may also readily perceive this dependency by a glance at the following table, in which we have placed in apposition the mean quantity of urea secreted in twenty-four hours, and that of carbon burned in one hour, calculated, in each case, upon individuals nearly of the same age:—

	Urea excreted in 24 hours.	Carbon burned in one hour.
Child, eight years of age	13·5	5 *grammes.*
Adult male	28·1	11
Adult female	19·1	6·3
Old man	8.1	7·4

We may here state, that for the respiration to have burned, without danger to the economy, 11 *grammes* of carbon in the hour, it necessarily follows that the alimentation must have been

more abundant than in those cases where the quantity of carbon consumed merely amounted to 4 grammes, and consequently that the production of urea must have been increased. But, from what we have already said, it is easy to understand that all those circumstances which excite a greater or less degree of activity in the respiration must at the same time modify the urinary secretion.

MM. Simon and Lehmann have found, by direct experiments, that, after violent exercise, the quantity of urea increases in the urine; this may, perhaps, be dependent on the copious perspiration which will have augmented its relative quantity, for everything which favours the circulation and the respiration tends to reduce the absolute proportion of the urea. Uric acid, which is richer in carbon than urea, will be formed in preference when, in consequence of a less active respiration, the matters burned by the arterial blood undergo an imperfect oxidation. We know that persons attacked with gout, or with calculous affections, lead in general a sedentary kind of life—one very likely to favour the formation of uric acid.

On the other hand, it has been remarked that, as a consequence of fatigue and over-exercise, the urine may become alkaline. We can readily explain this fact, by bearing in mind that uric acid is capable of being transformed into urea, when subjected to the action of an excess of oxygen, and that hippuric acid itself may undergo an analogous oxidation. As a consequence of these principles disappearing, or being formed in less quantity, we find that the urine must necessarily lose that acid reaction which is due to their presence alone.

Proust has shown that the ingestion of fatty aliments (which introduce an excess of carbon into the system) causes the urine to become thick and to give a deposit of minute crystals of uric acid. All these facts prove the remarkable influence which the respiration exercises over the urinary secretion.

ORIGINAL CONTRIBUTIONS.

DR. BUSHNAN'S VISIT TO DIEFFENBACH.

PLASTIC OPERATIONS.

Letter II.

[To the Editor of the Medical Times]

(Continued from p. 259, Vol. XV.)

Sir,—It was Dieffenbach's plastic operations that first gained for him a European reputation. In these operations, which truly require for their successful results not only a peculiar talent, but the most practised eye and the most expert hand, his volume on the subject had declared him to stand alone as the great master and most successful operator; and, since my translation of this had brought him more before the English profession, I was glad to hear that there were two or three cases in the Klinic for operation; and, when I had witnessed one of these, I was convinced that the celebrity of Dieffenbach in these cases was well merited, and his adroitness far from overrated. I will shortly relate a case, and then proceed to a few details of one of the most extraordinary and remarkable plastic operations that has ever yet been attempted.

A man, about forty years of age, was introduced to the theatre. The left ala of his nose was entirely wanting, and a ragged surface extended round the margin of the cheek, the nasal bone, and septum; the columna was unimpaired. With one stroke of the scalpel, the edges of the sore were entirely removed and a groove formed in the cheek. Dieffenbach then roughly formed in sticking-plaister the shape of the absent ala—much larger, however, than that of the right side—and applying it to the forehead, he dissected from it a similar piece of skin, leaving a long narrow slip or connecting tongue extending between the eyebrows to the nose to carry on the circulation. Letting this flap hang down over the nose, he drew together with strong ligatures the sides of the great wound he had made in the forehead; and I was surprised to remark how nearly they approximated. He afterwards told me he had ceased to make incisions under the hair on the temples, in order to diminish the tension of the parts and to allow the lips of the wound to come into closer contact, according to the method recommended by Celsus; since doing so caused much greater irritation to the system, and retarded recovery, while it did not proportionally ameliorate the appearance of the scar.

Lint was placed in the wound, and tightly secured by sticking-plaister. An incision was now made along the ridge of the nose connected with the left side of the long neck of the flap, which had much contracted in its dimensions, and curled inwards, as I think Petit, Hill (of Dumfries), John Bell, and others, have remarked the scalp to do when removed. The parts having been well washed with water, all bleeding ceased, and all coagulated blood removed, the flap was turned round, its long neck fitted into the groove prepared for it on the ridge of the nose, and its broad part adjusted so as to replace the absent ala, to whose cut margins it was securely attached by needles and ligatures. The man left the theatre with his appearance much improved, having a well-shaped and perfect, though much enlarged, nose.

Dieffenbach's great experience has taught him that transplanted parts always shrink after union with the surrounding parts has been accomplished; and hence it is necessary, in these operations, not only to make the flap of a size much larger than will eventually be required, but also to calculate with nicety its probable diminution. I carefully watched this case; for the first few hours the nose was dressed with pledgets soaked in cold water, after which it was freely exposed, without dressing or covering of any sort. About twenty-four needles and ligatures kept the new organ *in situ*, and at the end of eight days so perfect was the union that all these had been withdrawn. Dieffenbach told me I had witnessed one of his best cases; and truly the improved appearance of the man assured me that few could be better. I did not witness the termination of the case, but, so soon as the wound on the forehead had entirely healed, the twist and the connecting neck that had been introduced between the eyebrows and along the ridge of the nose would be removed, the edges of the wound brought together with a few needles, and the cure completed. No sensation was retained in the transplanted part, and Dieffenbach said it would be several months before it would be re-established; and its tardy return will be easily understood when we reflect that sensation every where depends on certain nervous filaments, called sensific, extending between the part in question and the sensorium, and that these filaments are necessarily cut through in the operation; nor is it until they have become connected with other nervous trunks proceeding to the sensorium that sensation is re-established. A transplanted part is thus for some time in the condition of the greater number of the organs of the body, living by virtue of its ganglionic nerves alone, while few or no sensific nerves extend from it to the sensorium.

I witnessed two other operations for improving the appearance of the nose—one where a crooked organ was made straight; the other where deformity of the ridge was remedied—with remarkable success. But, as those methods are described in Dieffenbach's work, I need not enlarge upon them here. I shall merely observe that in all rhino-plastic operations the surgeon should be in no hurry to complete them, and be remarkably careful not to attempt the union of parts until all bleeding has ceased, and lymph begun to exude from the cut surfaces; otherwise the blood, which is poured out both from the flap and the prepared grooves, will act as a foreign body between them, and retard or altogether prevent union; in the same way as in a fractured bone, the blood effused is an obstacle which must be removed before bony union can take place.

I will here relate a very interesting case, which I witnessed. A young lady had travelled from the south of England to consult Dieffenbach. Some years before she had had fever; which, as often happens, had been followed by glandular swelling of the neck. A surgeon, most unwisely meddling, had opened it; no matter, however, found exit, and the wound, healing by granulation, had left a deep and very ugly sulcus on the inner margin of the sterno-cleido-mastoid muscle. It was a *hole* more than an inch long, and fully a quarter of an inch deep and wide; its base was strongly attached by a fine skin to the jugular vein, which was plainly distinguished, blue, beneath it. Dieffenbach enclosed the whole scar or hole within two semilunar incisions, meeting at each extremity; and then, with a very fine scalpel and small hook, he entirely removed the cicatrix. It was a most delicate operation—indeed, it was as removing and preparing for demonstration upon a living subject a coat of the jugular vein—so intimate were the attachments. The dissection occupied nearly five minutes, great care being necessary, since the slightest indiscretion might have wounded the vein, and entirely prevented a successful result. It was nearly a quarter of an hour after the dissection that Dieffenbach brought the edges of the wound together. He waited till all bleeding had ceased, and assured himself that no blood was left in the wound. Then its sides were brought accurately together, and secured by six fine pins, such as are used in entomological cabinets to transfix insects. The wound was covered by a pledget of lint kept constantly wet with cold water. On the third day three needles were removed, and on the 6th the last was taken away, their places being supplied by sticking-plaister. I saw this young lady five weeks after the operation; the frightful hole in the neck was no longer there, and in its place was merely the unpuckered cicatrix of a simple incised wound healed by the first intention. In six or eight months all redness will probably disappear, and the scar be scarcely perceptible.

I now proceed to describe one of the most dreadful deformities that can be imagined, and I wish I could tell the tale in the same graphic manner as Dieffenbach told it to me.

"It was late one evening," said he, "that three strangers requested to see me—a man and two women; and one of whom, who was closely veiled, wished to speak to me, as I was informed, alone. Her companions having retired, she seemed to cast her eyes around the room to ascertain that no one else was present; and then, with some hesitation, and without uttering a word, she slowly raised the thick black veil by which her face and head had been concealed, and a great portion of her person enveloped.

"I had seen much in my life," continued he, "that was shocking; and, as I thought, the most hideous deformities of face and figure were so familiar to me that I could behold them comparatively unmoved; but here I started back, shuddering and horror-struck. A death's head, a skull with glistening eyes, red and everted eyelids, and a skeleton face, stood involuntarily grinning before me. The cheeks and lips were absent, and in their place a thin red skin covered scantily the almost denuded bones. In place of a nose was a large triangular hole, through which, when she gave utterance to sounds—speak she could not—the tongue protruded, for the palate bones were gone, and the œsophagus was freely exposed to view. At the upper portion of this dreadful orifice, through which three fingers could be introduced, a red and bony process protruded, extending upwards between the remains of eyebrows, while its lower margin was the remains of the upper jaw, now reduced to a small and toothless bony rim. Where cheeks had been, red and indurated cicatrices crossed each other in all directions, and, as I have said, ectropium existed to a great degree. This is no exaggerated portrait of a young girl of eighteen

ears of age; member of a noble and powerful family, but nevertheless the victim of scrofula. I stood late at night and alone with this dreadful apparition—a foul thing, which forcibly reminded me of the prophet of Khorassan, when he raised his veil. Instead of a human voice, hissing and unintelligible sounds proceeded from the cavity in the face; and I drew back with horror, as she advanced to place her finger on my nose. Well did I understand the appeal, and deeply did I regret my inability to ameliorate the condition of this unfortunate lady. When I had made her understand by signs—for she spoke but Polish, which I did not understand—that I could do nothing for her, an exciting scene followed; she cast herself before me in a state of the deepest mental agony, imploring by signs my assistance; and when I summoned her companions, one her brother, the other her governess, to assist in calming her, she hastily resumed her veil; for, for years she had not allowed her family to behold her deformity. The governess spoke French, and I told her I could do nothing but recommend a mask; and then I hastily withdrew from this strange midnight scene, the recollection of which will never be effaced from my mind.

"The next day I left Berlin for Vienna; and scarcely had I arrived there, than the veiled lady again presented herself to me. She had heard of my departure, and had immediately followed me. Here I called in the assistance of the great dentist Carabelli, with whose aid I succeeded in procuring a set of teeth, and a false palate which facilitated eating, and made her speech more intelligible.

"The more I considered this case," continued Dieffenbach, "the more convinced I felt that I could do nothing further; and that it was utterly impossible to obtain a nose, or even a fleshy covering for the hole in the face. The bones of the forehead were nearly naked, and the thin, spare, and cicatrized skin of the temples was not sufficient for the purpose. A casual examination of the arm, however, showed much loose and thin skin, and, as I raised a fold of it between my fingers, and pressed it into the form of a nose, the idea struck me that I might transplant a portion of it to a spot near the inner edge of the right eyebrow, where the skin was not so much destroyed, and afterwards remove it by degrees in the same manner as heavy monuments are sometimes slowly transplanted from one place to another."

Dieffenbach acted upon this idea, and proceeded to relate to me the steps of the operation, or rather series of operations, which extended over a period of eighteen months, exhibiting as much the skill and perseverance of the operator as the patience and confidence of the unhappy lady. I am very unwilling to lengthen this letter by describing the operations; but since, in the letters which are to follow, I shall not recur to plastic operations, I may briefly state, that a nose was formed from the skin of the upper part of the left arm, and that in a very novel manner. A triangular piece was marked out, about a third larger than the supposed size of the required nose; an incision was then made along its sides and upon the outer and inner thirds of its base. By subcutaneous dissection, this triangular portion of skin was separated from the muscle, but still left attached to the arm by its somewhat broad apex, and the middle third of its base. The edges of the wound on the arm were then brought as much together as possible by straps; and the sides of the triangular portion of skin turned inwards and properly secured. It was three months before the parts had healed, and then Dieffenbach had obtained what may be called a triangular *loop of flesh* attached by its base and apex to the arm. This was to form the new nose. The parts being healed, Dieffenbach proceeded to fix the prepared nose to the inner edge of the right eyebrow, which, as I have said, was thick and puffy; this he did in the old Taliacotian method, by detaching the apex of the new nose, or triangular portion of thickened skin, from the arm, uniting it *in situ* with the brow, and fixing it by sutures and appropriate bandages. He told me he had many doubts as to the success of the operation; and the great advantage of this mode of operating is, that if we do at first fail in attaching the new nose to the forehead, we may commence *de novo*, at any rate we may heal the wound we have made on the brow, and again attempt to attach to it the stump which still remains upon the arm. Again, it is preferable to the common Taliacotian operation, where, even if successful, the patient's face is deluged with the results of suppuration, as is not the case in that performed by Dieffenbach. But to return to the case before us: contrary to expectation, the stump did unite to the brow; in a few days all ligatures were removed; the patient bore the distressing position of her arm with the greatest fortitude, and could with difficulty be persuaded at the end of a fortnight to allow the base of the triangle to be cut away, and the arm released from the face. But I will, in this place, no longer follow the case: it was perfectly successful; and sufficient to say, that by transplantations, frequent and repeated small incisions, and parings and graftings, and by the introduction of tubes and needles, and by compresses, a respectable nose was at length formed, by appropriate operations the ectropium of both eyes was relieved, the many and hard cicatrices were removed from the face, and at the end of eighteen months the patient was presented to the Klinik, a very different being to what she was when first there; and she quitted Berlin with the consciousness that, by her steadfast and enduring perseverance, she had compelled the professor to an operation he had deemed impossible, and even by the success of which he had been amply rewarded. I am, &c. &c.,

J. STEVENSON BUSHNAN, M.D.,
Fellow of the Royal College of Physicians of Edinburgh.

Wiesbaden, Duchy of Nassau.

(To be continued.)

REMARKS ON THE CLIMATE OF LOWER EGYPT, PARTICULARLY ALEXANDRIA, AND THE PLAGUE THAT APPEARED THERE IN 1835, 1840, AND 1841. ILLUSTRATED BY OFFICIAL RETURNS FOR TEN YEARS.

By WILLIAM THOMPSON KAY, Esq., Assistant-Surgeon of the Plymouth Division of Royal Marines.

EXTENT.—The portion of the north-eastern part of Africa embraced in this paper extends from 31°. 14′ to 29°. 50′ north latitude, and from 23°. 56′ to 34° east longitude.

PHYSICAL CHARACTERS.—Lower Egypt is an extensive and fertile plain, well supplied with water by the numerous subdivided branches of the Nile, and by the countless canals that intersect it. The cultivated soil of this district consists exclusively of the rich alluvium (a) deposited by the Nile after its annual inundation. The Nile, being swollen by the rains of Abyssinia and interior Africa, commences at the summer solstice to rise, until it attains its greatest height (b) about, or soon after, the autumnal equinox; and, after remaining at its maximum for about the space of four days, it gradually falls. The alluvial deposit takes places during the period the waters remain stationary; this earth is brought down by the river in its course through Nubia and Upper Egypt, superimposed upon the substratum of the primeval sands, annually increasing, and spontaneously diffusing, by means of filtration, its fertilizing powers to a considerable depth in the soil.

Lower Egypt possesses the largest number of equatorial plants, which must be attributed to the waters of the Nile bringing from the south many seeds which here propagate themselves. The most common are the carob-tree, the olive, myrtle, lentisk, tamarisk, caper-plant, pomegranate, citron, banana, sycamore, fig, several species of mimosa, and the cactus opuntia. At Cairo may be seen in some of the gardens the weeping willow, cypress, white and black poplars, cassia fistula, tamarind, and our common elm, which here only attains the height of a shrub. At Memphis I observed the doum (crucifera Thebaica), and the date; and on the banks of the Nile is still to be found the cyperus papyrus of Linnaeus, or παπυρὸς of the Greeks, from which, in former times, the Egyptians formed their paper, afterwards rubbing it with the oil of the cedar, to preserve incorruptible the archives of the kingdom. The famed lotus (blue and white), Egyptian arum, carthamus tinctorius, the sacred onion, the bean, the oleander, and acacia Nilotica, are to be found in most of the cultivated soil of this district, many of them forming important articles of commerce.

Alexandria, once the splendid capital of Egypt, and one of the most celebrated cities in the world when governed by the Ptolemies, lies in latitude 31°. 13′. 5″ north, and in 29°. 55′. 15″ east longitude from Greenwich. It is situated on the shores of the Mediterranean, between the Lake Marcotis and the harbour formed by the Isle of Pharos, about twelve miles west of the canopic branch of the Nile.

The *climate* of Alexandria, so extolled by the ancients for its salubrity, and particularly by Strabo and Josephus, has now become extremely unhealthy. The constant exhalations from the damp salt soil, and the presence of sulphuretted hydrogen gas in the atmosphere during the winter months, develop many diseases, particularly catarrh, malignant fevers, rheumatism, dysentery, and ophthalmia. The atmosphere is literally saturated with saline moisture, which is evinced by the clothes, boots, woollen articles, &c., of those who reside there: the hygrometer also affords direct evidence of it (a), and the walls of the houses are covered with saline particles. The Lake Marcotis, which is nearly fifty miles long and twenty in its extreme breadth, has been converted into a salt marsh since the 13th of April, 1801, when the English army made a canal, by which the sea was admitted from the Lake of Aboo-Keer, and the evaporation from it materially contributes towards keeping up this moist state of the atmosphere and generating malaria. The constant humidity which prevails in Lower Egypt arises, no doubt, from its

(a) This was analysed by Regnault, and found to contain in 100 parts—

Water	11
Alumine	48
Carbon	9
Carbonate of lime	18
Carbonate of magnesia	4
Oxide of iron	6
Silex	4

(b) The height to which it rises varies: at Thebes it is about 36 feet; at the cataracts, 40 feet; and at Rosetta only 3½ feet. In 1843 it rose at Cairo to the height of 26½ feet; a good Nile being considered to be 25 feet. From time immemorial the first day of the rise of the Nile has ensued soon after the summer solstice, and at Cairo the phenomenon has usually taken place some time between the 1st and 10th of July; in 1843, however, there was a rise of the river on the night of the 5th of May, which continued four days (destroying in the gardens of Ibrahim Pacha, at Rhodda, 30,000 trees, plants, and shrubs), after which the water fell, and continued doing so until the period of the summer solstice. History affords no example of so early a rise of the river, and only a few instances are recorded of a second rise taking place shortly after the first: one of these occurred in the reign of Cleopatra, and the other in the year 1737.

(a) Ali Bey, who resided here between the 12th of May and the 30th of October, 1806, says, "During my residence the sea breezes reigned continually; the air was nearly always full of moisture, and the hygrometer marked a very high degree of moisture on the days when the greatest heat ought to have been felt."—Vol. i., p. 331. See also table given at the end of this paper.

vicinity to the sea, and the low nature of the soil, which, as in the above case, is swampy. Iron speedily becomes oxidized when exposed to its influence, and polished steel, firearms, and surgical instruments, soon get rusty, and silver tarnished. This state of the atmosphere decreases, however, as we advance towards the tropic. It acquires its maximum intensity during the overflow of the Nile, and dews.

The plague was unknown in ancient Egypt during a long series of centuries; but since the sixth century of the Christian era, the practice of embalming the dead has been discontinued, chiefly on account of St. Anthony, who died 356, preaching against this ancient custom. The embalming was discontinued, and in the year 543 Egypt was ravaged by the first plague, which, spreading over Europe, devastated it for half a century.

Before the month of July, 1834, Egypt had been exempted from the plague for many years. Between 1831 and July, 1834, the plague appeared several times at the lazaretto of Alexandria, and its appearance in July, 1834, has been attributed to various causes; but it is generally believed to have been imported by prohibited articles being disembarked after vessels had brought them from places infected with it. This was the origin of the epidemic of 1835, which continued with unabated violence until the 22nd of September, 1837, and from this date to the 6th of April, 1838, *i. e.*, about six months and a half (the longest interval without plague in the town of Alexandria during the decennial period, given in Table II.), it was not seen at all. It returned, however, with increased force during the six hot months of 1838, and again very slightly, about the same time in 1839, after a new interruption. The reoccurrence of it in 1840 continued with greater force in 1841.

The institution of an administration of the public health took place at Alexandria at the termination of 1831, after the invasion of the cholera; and I here subjoin two tables formed from their registration books.

TABLE I.

A Statistical Return of the Mortality (not including Plague) in Alexandria, Egypt, during the years 1835 to 1843, inclusive.

Months.	1835.	1836.	1837.	1838.	1839.	1840.	1841.	1842.	1843	Total.
January	281	273	228	319	507	487	402	416	331	3,340
February	490	172	213	218	314	342	334	253	280	2,616
March	(1) ..	163	216	232	366	214	124	245	293	2,183
April	..	180	289	235	329	182	381	243	352	2,192
May	93	218	330	313	379	218	441	252	301	2,537
June	..	243	412	380	491	266	323	351	284	2,780
July	..	280	378	119	500	312	312	431	317	2,979
August	(2) 13	251	335	450	472	343	467	515	402	3,248
September	15	260	387	540	517	380	554	471	373	3,497
October	51	293	(5) 713	710	637	413	772	590	454	4,693
November	(3) 334	319	(6) 465	711	683	472	772	613	428	4,797
December	(4) 262	251	319	669	601	480	657	506	418	4,232
Total	1,511	2,903	4,365	5,227	5,826	4,148	5,839	4,936	4,359	39,124

TABLE II.

A Statistical Return of the Plague in Alexandria, Egypt, during the years 1831 to 1843, inclusive showing the number attacked who escaped, and the number that died, in addition.

Months.	1831. Attacked.	1831. Died.	1835. Attacked.	1835. Died.	1836. Attacked.	1836. Died.	1837. Attacked.	1837. Died.	1838. Attacked.	1838. Died.	1839. Attacked.	1839. Died.	1840. Attacked.	1840. Died.	1841. Attacked.	1841. Died.	1842. Attacked.	1842. Died.	1843. Attacked.	1843. Died.	Total.
January	..	..	81	161	18	2	8	9	..	..	..	..	2	11	19	13	4	1	..	..	339
February	..	..	[illegible]	718	26	9	3	..	..	..	..	..	17	20	40	26	11	5	..	1	1,112
March	..	..	298	4,251	11	9	12	8	..	..	..	..	62	117	133	113	16	10	..	2	4,932
April	..	..	90	1,9[illegible]5	3	5	23	8	20	16	..	..	209	191	177	230	28	20	..	2	2,936
May	..	..	298	29[illegible]	32	17	24	6	45	26	14	13	205	191	278	237	45	37	16	17	1,799
June	..	..	7	41	11	8	10	..	52	22	15	5	74	106	92	120	32	30	14	8	547
July	..	1	..	..	12	3	5	1	30	9	..	1	31	37	38	29	4	6	..	6	216
August	..	48	..	1	8	9	2	1	2	2	..	..	5	1	12	5	1	2	..	1	100
September	..	..	..	3	3	1	2	1	2	..	..	..	1	..	2	..	..	..	..	..	15
October	..	..	..	3	8	3	..	..	..	..	..	..	..	..	3	1	..	..	..	..	18
November	..	38	7	2	8	4	..	..	2	..	..	..	..	..	..	1	..	1	..	..	63
December	..	150	16	3	9	5	..	..	1	..	..	—	5	5	1	..	..	..	..	..	195
	..	237	918	7,425	119	75	93	34	154	75	29	19	614	679	795	775	142	112	30	67	
Total	237		8 333		194		127		229		48		1,293		1,570		251		67		12,282

(1) The mortality during these two months is mixed with that of the plague, which was epidemic at that period.

(2) The registration of the mortality was suspended during the months of June and July, those of August and October comprise only cases of cholera.

(3) Includes 40 cases of cholera.

(4) Includes 1 case of cholera.

(5) Includes 126 cases of cholera.

(6) Includes 28 cases of cholera.

The year 1836 did not present such a great difference from the mortality of those following, because they succeeded the epidemic of the plague of 1835. The months where the mortality is considerably less are those of March and June. The minimum of the eight years for March is 272¼; that of April 274; that of May for nine years is 281 8-9th; and that of June for eight year is 317 1-8th.

The most unhealthy months are those of September to December; the minimum of eight years for September is 434; that of October is 580 2-8ths.; that of November for nine years is 533; and that of December for the same is 470 2-9ths. The minimum of October is considerably more than double that of March.

The months of March and October form the extremes of the ascending and descending scale of periodicity of the mortality at Alexandria.

The Epidemic of 1835.—The month of May of the eight following years is shown to be the most favourable for the development of the plague; September, October, November, December, and January, are the months in which the fewest number of cases occurred. The minimum of cases for those months, since 1837, was 13¼.

It is worthy of remark, that in the months of September to January, where the plague decreases and terminates altogether, there is a corresponding and considerable augmentation in the mortality of those not attacked with this disease, as seen in Table I.

The *population* of Alexandria, before the plague of 1835, was 60,000, and consisted of:—

Arabs .... 20,000 Armenians, Cops, Turks .... 6,000 and Jews 4,000
Negroes and Europeans 5,000
Moors ...... 4,000 Workmen in the Arsenal 6,000
Seamen .. 12,000
Soldiers 3,000

During the French expedition in 1798, it was only 6,000; while at present it is estimated at upwards of 60,000.

The *houses* are generally built of white calcareous stone, covered with plaster made of lime, chopped straw, sand, and salt earth, and have all flat roofs, covered with cement; some of them have the foundation walls of stone, and the superstructure of bricks taken almost entirely from the ruins of the ancient city. The *huts*, which are on an average eight feet square, are of the most miserable description, being composed of mud, the floors lower than the ground outside, seldom having even an apology for a window, and the door a mere hole, sufficient to allow the owners to pass in and out.

The *streets* are narrow, irregularly built, dirty, and dark, from the projecting windows of wooden lattice-work, which overhang and almost cover them in, in many parts of the city.

Drainage is not thought of, and it is a very common thing to observe pools of stagnant water filled with decomposed vegetable matter and the putrid carcases of animals.

The *food* of the poor people consists chiefly of beans, peas (boiled in brackish water), olives, water-melons, and a coarse black bread. The meat sold in the markets is unfit for food, sometimes half putrid.

The *water* "was formerly conveyed to Alexandria by means of a canal, that was filled by the overflowing of the Nile, which river it joins at a short distance from Rahmanieh, and is fourteen leagues in length, in a straight line: but the canal was cut through by order of Elfi Bey, near Dumanhour; and the city has now no other than the briny water of some wells, or that which is brought by sea in boats.(a) This was written by Ali Bey in 1806, and still continues the same.

Temperature.—There is one remarkable character in the temperature of Egypt, which is, the transition from day to night. The thermometer, which was high at sunset, generally falls eight or twelve degrees during the night, so that the nights are seldom, if ever, oppressive. The mean temperature in the shade (b) throughout the year, in the afternoon, is as follows:—

January	57°	May	88°	September	84°
February	63	June	92	October ..	76
March	66	July......	95	November	68
April	72	August ..	90	December	65

The *prevailing winds* are the hot southerly winds, which occasionally last for three days together, and extend over a period of somewhat more or less than fifty days, commencing in April, and lasting throughout May; they are dreadfully oppressive, even to the natives. It is these winds that bring the malaria from the Mareotic district, and cause the plague, which is always most severe during the period of their visitation. The scorching "semoom,(c)" and the oppres-

(a) Travels of Ali Bey, vol. i., page 314.

(b) The mean temperature during the summer in the shade in Lower Egypt is from 90° to 100°.
" Upper Egypt " 100 — 110
" Nubia " 110 — 120
... or even 130

The mean temperature at Cairo in the
Winter, is .... 58°.46
Spring 73. 58
Summer 86. 10
Autumn 71. 42

(c) "*The Semoom.*—At its appearance, the sky assumes a roseate hue, the atmosphere is one enormous cloud of fine dust; the heat is excessive, drying up the perspiration; the thermometer (Réaumer) is elevated to 40°; respiration is painful; a general sickness prevails; complete

sive "khamaseen" seldom last more than a quarter of an hour or twenty minutes, and proceed from the S.E. and S.S.E., bringing with them clouds of impalpable dust and sand, and swarms of musquitos, fleas, &c. They occur in the spring and greater part of the summer. During June it blows from the N. and N.E., and continues in July to blow from the N., varying from the N.W. to N.E. Towards the end of July and part of September, it blows from the N. strong in the day and calm at night, and towards the end of September the wind comes from the E.

Fogs occur sometimes in winter, and are so dense that it is scarcely possible to distinguish objects at a short distance. They only last a short time.

Dew.—The dew is rare in winter, but very abundant in summer, in Lower Egypt, during the west and north winds which brings the evaporation of the waters of the Mediterranean. They disappear with the south winds.

Rain.—It is generally believed in England that it never rains in Egypt, and the error has probably arisen from modern travellers who have visited the country during the dry season. It rains little in Lower Egypt, but at times, severe storms of thunder, lightning, and rain occur. The number of days on which rain falls is from twelve to sixteen days throughout the year, being the average of upwards of forty years. The rains commence generally in October, and continue in November and December, terminating in March; during this time there is often a week without any rain, and at others it lasts much longer than a week. In 1824 it rained so violently for eight days that it caused many houses to fall in, and ruin of all kinds; rain is extremely rare in Upper Egypt, and appears at long intervals.

Hail is rare in Lower but more common in Upper Egypt; during eight years there was an abundant fall of hail, some of the hailstones being the size of a large hazel-nut. In the different falls which succeeded to this long interval, and in 1828 at Abouzabel, the hailstones were very large, resembling small nuts. To this may be attributed in a great measure the ruin of the campaign, as they hurt several individuals and killed many animals.

Snow is very rare in Lower Egypt. When in 1833 snow fell at Alexandria, at Rosetta, and extended to Atfeh, the old people of the country, on being asked, declared they never recollected such an occurrence before.

The *atmosphere generally* is characterized by an excessive clearness and transparency, giving a beauty to the sun as it rises and sets that render it easy to imagine the poetical enthusiasm of the Arab effusions respecting them; and the nights are most beautifully serene.

Dust.—When the moisture produced by the inundation and dews cease, the soil is dried rapidly, and the surface becomes covered with impalpable dust, which is so fine that it penetrates everywhere, giving rise to an Egyptian proverb, that it will penetrate the shell of an egg. This obstructs the pores of the skin, is inspired, and lodges in the bronchii, giving rise to a series of distressing maladies.

Alexandrian Districts.—The most unhealthy quarter is the Ras-el-tin. The soil here is calcareous, barren, and covered with filth of every description—vegetable and animal—in a putrid state, exhaling a fetid odour that is speedily detected on approaching the village. Covering an area of nearly four furlongs and a half, are between 700 and 800 mud huts, which contain upwards of 10,000 inhabitants. Adjoining this spot is a cemetery, where the bodies, half exposed to the sun, produce the vile fetor that is observed on approach.

The market district, which is situated between the Custom-house and the Frank portion of the city, is also a hotbed for malaria, the streets being very narrow, dirty in the extreme, dark, and fetid.

The Turkish district is the most healthy; but even here filth is allowed to accumulate, and would, were it not for the dogs—the scavengers of the city—be productive of much mischief.

It is not surprising, then, that in certain seasons and years, malaria should be generated in the town, and cause such serious epidemics as those of 1835, 1840, and 1841, for, although measures are taken to prevent the introduction of the plague, yet no means are adopted by which the city may be purified, or to render the most populous parts less susceptible of the generation of aerial poison.

Causes of the Plague.—The causes of the plague of 1835, 1840, and 1841, may be ascribed, I think, without any doubt:—1st, to the filthy state of the villages, more especially that of Ras-el-tin; 2nd, to the decomposition of vegetable and animal substances during the hot weather; 3rd, to the badly constructed huts, the floors being lower than the ground outside, no windows, the door insufficient for free ventilation, and the atmosphere within *warm* and *moist*, 4th, to crowding many individuals on too small a space; 5th, to the use of brackish water, insufficient and bad food, and physical and moral misery; 6th, to the want of proper drainage, and free ventilation in the streets, which is prevented by the huge projecting windows, and awnings spread across from house to house; 7th, to the evaporation from the salt marsh of Lake Mareotis; and lastly, to the mode of burial adopted by the modern Egyptians.

prostration, ophthalmia, cephalalgia, apoplexy, and dysentery occur."—Clot Bey's "Egypt," vol. i., p. 17.

TABLE III.

A Table of Meteorological Observations for Five Years, made in Lower Egypt, by M. Clot Bey, President of the Egyptian Council of Health.

Years.	Thermometer.	Hygrometer.	Prevailing Winds. N.	E.	W.	S.	N.E.	N.W.	S.E.	S.W.	Khamaseen.	Rain given in French measure.	Weather. Stormy.	Hail.	Rain.	Misty.	Shady.	Cloudy.	Clear.	Earthquakes.
												Mètre.								
1835	71·10	57	446	55	116	58	181	124	14	101	5	0·0599	5	1	16	16	118	185	732	..
1836	71·6	58	501	27	131	76	125	161	2	75	18	0·0251	4	..	5	31	119	227	716	..
1837	73.4	53	535	27	147	23	156	110	1	66	13	0.0501	1	..	19	39	79	287	660	2
1838	71·10	56	545	34	150	17	147	141	1	71	15	0·0271	2	..	11	25	66	276	731	..
1839	71.8	56	560	24	144	51	95	155	10	58	7	0 0079	3	..	8	15	93	259	720	..
Mean of 5 years	71·10	56	517	33	138	45	141	144	6	74	11	0·0340	3	..	12	25	95	245	720	..

ON SOME POINTS CONNECTED WITH DIABETES.

By M. BOUCHARDAT.

Translated for the MEDICAL TIMES by ALFRED MARKWICK, Esq., Surgeon to the Western German Dispensary, and formerly Externe to the Venereal Hospital, Paris, &c.

(Continued from Vol. XV., p. 343.)

EXAMINATION OF THE MATTERS CONTAINED IN THE DIGESTIVE APPARATUS, AND OF THE BLOOD AND URINE OF PATIENTS WHO HAVE DIED WHILE LABOURING UNDER DIABETES.

The prognosis of diabetes is always very unfavourable. The fatal terminations may be divided into two categories: in the first the patients die exhausted; in the second, death takes place suddenly, without there being anything in the general condition of the patient to indicate the fatal issue.

When diabetics die slowly their end is always characterized by the development of tubercles in their lungs. This is a very remarkable circumstance, and one which I hope will throw some light on the etiology of tubercular disease. In these cases, that is, where death takes place slowly, no trace of sugar can be found, either in the matters contained in the digestive tube, the blood, or the urine collected from the bladder after death. I had noticed this fact before the publication of my last memoir, in which I thus explained it:—"These patients are on low diet for some days previous to the fatal result, as they take nothing but broth. It is easily understood, therefore, that the absence of glucose corresponds to the abstinence from feculents." This explanation may probably not be founded; and the fresh observations I am going to relate appear to prove so.

I said just now that patients affected with diabetes sometimes died suddenly. The cases in which I observed these sudden deaths to take place were only in persons who were strongly diabetic, and who eat a considerable quantity of feculents. Those who are submitted to a proper diet are not threatened with these sad results. One can easily imagine, and this fact is not peculiar to diabetes, that in patients whose constitution is undermined by a serious error in nutrition, and whose blood is modified, either by the presence of some foreign body, or by some permanent alteration, very slight accidents may prove fatal. These patients generally die suddenly, either from a serous effusion into the ventricles of the brain, or from pulmonary apoplexy. Owing to an obstruction of the perspiration, or to some other cause, a sanguineous congestion takes place towards the lungs, reaction is insufficient, and the patient dies asphyxiated in the space of a few hours. The two diabetics whose histories I am about to relate have died in this way.

Robert Emmanuel, aged seventeen, has entered and left the Hotel Dieu a great number of times. When he first came under our notice he had an ardent thirst and a considerable appetite, and voided from six to eight quarts of urine containing about 100 grammes of saccharine matter. After a month or two on a good regimen, his flesh and strength returned, the glucose disappeared from the urine, and he quitted the Hotel Dieu. But, from want of care, and the habitual and immoderate use of feculents, he returned very quickly to his former condition, and, of course, was glad to seek a readmission after he had exhausted the strength he had gained, and spent the trifle he had amassed in the hospital by selling to the other patients (notwithstanding the most attentive watching) a portion of the chosen food that was given him.

Fifteen days after his last exit from the Hotel Dieu he spent the remainder of his earnings in drinking and feasting, paying no regard to feculents. He became suddenly chilled, and was immediately afterwards seized with shivering, fever, and difficulty of breathing. He was brought to the Hotel Dieu, but he died five hours after his admission.

Post-mortem examination proved that he died from the effects of pulmonary apoplexy. His lungs, shrunken and gorged with black blood, had lost all their permeability. At the summit of the left lung a few crude tubercles were observed. The kidneys were of the natural shape, colour, and consistence, but were slightly increased in size; the other organs presented nothing abnormal.

I now come to the important question, viz.:—whether starch-sugar exists in the food contained in the stomach, or in the fluids, of diabetic patients who have died suddenly?

The stomach was large, and contained more than a kilogramme of a thick pappy matter, of a weak acid reaction, in which the remains of bread and other food were detected. This paste was diluted with twice its weight of water, and the filtered liquid examined with the polarizing apparatus, but there was no sign of any rotation observable; neither did the addition of yeast to the mixture occasion any alcoholic fermentation. The matters contained in the remainder of the intestines were likewise free from glucose.

I collected some blood from the heart and great vessels, and found, on a very careful analysis, that it yielded no trace of glucose. The bladder contained about 200 grammes of a light amber-coloured urine, of specific gravity 10·18, which, on being examined with the polarizing apparatus, in a tube of 303 millimètres, gave no indication of any rotation; and yeast occasioned no fermentation; in a word, it contained no glucose. I extracted from it, however, a very considerable proportion of urea and alkaline phosphate.

The next case I have to mention is, perhaps, still more remarkable. It is also that of a young man, less than twenty years of age, and of the most limited intelligence. The disease in all probability was of long standing, but it had only been lately detected. He lived in the country, where he was noted for his extreme voracity. Not only did he devour the ordinary pittance of the family, but he, moreover, lost no opportunity of begging or pilfering food; and he had even been frequently detected in the fields plucking up potatoes and eating them raw. He likewise stole beans, which he swallowed raw, and without condiments. His friends at last decided on sending him to Paris, where he became placed under the care of Professor Chomel, who, before submitting him to any treatment, desired that the urine of twenty-four hours should be collected and analysed, and that his ordinary diet might not be changed.

He took in the twenty-four hours—

Bread	720	grammes.
Boiled beef	250	„
Potatoes . . .	250	„
Wine	40	centilitres.
Broth	75	„
Common tisane . .	.	litres.

He voided in the same space of time six litres and a quarter of urine, which contained 135·17 grammes of glucose per litre. This is the largest quantity I have ever met with.

The next day, at the visit, he slipped away and stole a loaf that was in the pantry, and immediately afterwards eat it, and also the remains of a poultice, in a cold damp place. After the visit he was seized with violent shivering, complained of pain in the side, and a difficulty of breathing, and eight hours afterwards he died suffocated.

Sectio cadaveris proved that death took place from the same cause as in the preceding case. The lungs, free from tubercles, were shrunken and gorged with black blood; the kidneys were hypertrophied, and their tissue rather paler than natural. The size of the stomach was enormous, and contained more than two quarts of a thick, pappy, acid matter, in which the remains of bread were recognised. This pappy matter was diluted with twice its weight of water, the liquid was then filtered and examined in a tube of 303 millimètres. It showed no sign of any rotation, and yeast occasioned no alcoholic fermentation.

The blood yielded no trace of glucose; the bladder contained about 120 grammes of a light-coloured urine, which was removed by means of a catheter; its density was 1·022 at 15°. Examined after being filtered in a tube of 303 millimètres, it was found to occasion no deviation, and yeast produced no disengagement of carbonic acid; neither did Frommherz's test show the presence of any glucose.

These are two very remarkable cases. They relate to two very strongly diabetic patients. The urine of one of them contained as much as 135·7 grammes of glucose per litre the eve before his death; and, although he was carried off by a disease of eight hours' duration, the urine present in the bladder at the time of death contained no trace of it; his stomach was full of food, the digestion of which had been suddenly interrupted, while the secretion of the diabetic diastase (and this ought to be carefully noted) was found to have been suppressed, together with that of the gastric juice, which serves to accomplish digestion.

Does it not appear to follow from these cases that the secretion of diabetic diastase, like that of the gastric juice, is intimately connected with the state of health? In fact, we know that the secretion of the gastric juice, possessing all the energy of its solvent properties, is in intimate relation with the healthy condition of the stomach and the remainder of the digestive apparatus. If the animal which is to supply the gastric juice is indisposed, instead of the normal liquid of digestion, we obtain a ropy mucus, perfectly unfit for dissolving the food, or the solvent action of which is very considerably diminished. In persons labouring under diabetes, the secretion of diabetic diastase appears to me intimately connected with that of the gastric juice. It might be imagined from this, that this secretion is only the perversion of a physiological function.

ON THE NATURE OF DIABETES.

The thirst of patients affected with diabetes is in a direct ratio with the proportion of feculent food they take.

The quantity of water necessary for a diabetic, to enable him to digest fecula, is exactly equal to that which requires to be added to diastase to convert fecula into glucose.

The gastric juice of a dog, obtained according to M. Blondlot's process, does not dissolve bread or feculents any better than pure water.

The matters first vomited by a healthy individual, while fasting, have but a very weak solvent action on bread.

The matters vomited by diabetics, on the contrary, have a very powerful solvent action, and glucose may be easily detected in these solutions.

If the matters vomited by a healthy person, who two or three hours previously had taken a feculent repast, be collected, they will be found to contain but a very small amount of glucose; if, on the contrary, a diabetic is made to vomit two hours after a feculent repast, the presence of a considerable proportion of glucose may be very readily demonstrated in the vomited matters.

From these facts I conclude that diabetic patients digest feculents differently to healthy persons. I might also add, that, in health, man does not digest raw fecula; while, on the other hand, I have met with two diabetics in whom the grains of fecula were as easily attacked as in granivorous animals.

Why is it that the urine of diabetic patients who eat feculents contains glucose, while that of persons in health, who also eat feculents, does not?

This can only be ascertained by experiment. If an aqueous solution of half a gramme of glucose be injected into the veins of a dog, and the urine be removed from the bladder by a catheter two hours afterwards, it will be found to contain no trace of glucose. But if five grammes be injected, the urine will then contain a considerable portion. It may even be detected where two grammes are injected. If a dog is fed on soup containing one-tenth of glucose, traces of it may be found in his urine.

To the facts and experiments just mentioned, I may add the following:—

The solution of feculents takes place chiefly in the intestines, and particularly in the small intestines, but with very great slowness.

When animals are fed on feculent matters, the blood of the venæ portæ contains a large quantity of both dextrine and glucose. These principles are also found in the bile.

From all these results we may draw the following legitimate conclusions:—

We find glucose in the urine of patients affected with diabetes, where they have ingested feculent matters, owing to these matters having been converted, under the influence of the diastase secreted in their stomachs, and the intervention of the water they have been compelled to take to allay an ardent thirst, into a solution of glucose; this solution becomes immediately absorbed by the numerous venous ramifications, the orifices of which terminate in the stomach, and is directly transmitted to the spleen by the *vasa breviora*, and from thence poured into the torrent of the circulation. The necessary results of this rapid solution, this immediate absorption, and this direct entrance into the greater circulation, are, that the mass of blood contains a much larger proportion of glucose than five grammes; and that, as this principle cannot be destroyed in the blood, it is therefore eliminated by the kidneys. In consequence of the feculent food being so quickly dissolved and absorbed, the patients experience a sensation of emptiness and a desire to take fresh food, which, if they are still chosen among feculents, serve only to employ the active powers of the digestive apparatus uselessly for nutrition.

In healthy persons the solution of cooked feculents commences in the stomach; but it is slow and limited, and an extremely small quantity of dextrine or glucose is absorbed at a time. The greater portion of the feculent food not dissolved passes into the small intestines, where its solution and absorption are more rapid; but nature has provided an admirable apparatus, so as to allow of only a slow and gradual introduction of these alimentary matters into the torrent of the circulation. It is not, as has been hitherto imagined, by the orifices of the lacteals, that feculents converted into dextrine and glucose are absorbed: taken up in the intestines by the capillaries which empty themselves into the branches of the venæ portæ, they thus become carried to the liver; a portion may be poured into the circulation of the hepatic vein, but the surplus is separated from the blood by the glandular apparatus of the liver, and secreted with the bile, with which it passes into the gall-bladder, and from thence into the intestines, to be be again absorbed, and to follow the same course. Nature has thus restricted the consumption of these combustible materials, which should be but slowly mixed with the blood.

Thus, to resume in a few words the comparison between diabetics and persons in health, it may be said, that in the first the solution of feculents is rapid; and in the second, slow; in the first it takes place in the stomach, and the glucose which results is immediately, and in great part, carried into the blood; in the second it takes place chiefly in the intestines, and does not enter the greater circulation until after it has passed through the liver, and been usefully retarded by the small hepatic circulation. Moreover, if it be recollected that, when the quantity of glucose in the blood at one time is greater than two grammes, its presence may be detected in the urine, it will be readily understood why the urine of diabetic patients ought to contain saccharine matter, and why that of persons in health does not.

There are, perhaps, several other circumstances which render the destruction of the glucose in the blood of diabetics more difficult. One might imagine that a decrease of temperature, of one or two degrees at least, the existence of which, in the average, I have ascertained, in these patients, is not foreign to this effect. This decrease of temperature may be easily explained: 1st, by a larger proportion of cold fluids being ingested by these patients; and, 2ndly, by the useless expenditure of heat in effecting the conversion of feculents into glucose.

The *treatment* recommended by M. Bouchardat consists in forbidding feculent and saccharine food of every description; in preventing, if possible, all sudden chills, by warm clothing, particularly flannel, which has, moreover, the effect of restoring the functions of the skin, by keeping up a gentle moisture on its surface (a); in taking gentle exercise where the strength of the patient will permit, and in having recourse to warm baths, sea-bathing, &c.

The diet may consist of all kinds of meat, cooked in any way, and rendered palatable by condiments; of salt and fresh water fish; of eggs and milk, or, what is better, cream; of cheese, and of vegetables of various descriptions: taken, however, in moderation, and with a plentiful supply of butter or oil, the flour in the sauces being replaced by the yokes of eggs and cream. The vegetables that may be permitted are spinage, endive, lettuce, sorrel, asparagus, French beans, Brussels sprouts, and greens, which latter may be usefully combined with salted pork and fat bacon, &c.

Watercresses, endive, dandelion, lettuce, corn salad, &c., may be eaten for salad; but they should be plentifully mixed with oil, and the addition of hard eggs is not unfrequently necessary.

A very tempting dish, and one well suited for

(a) ["The impermeable pilline," the uses of which I described in this journal for Dec. 5, will, I have no doubt, be found extremely useful for this purpose in these cases.]—TRANS.

diabetic patients, may be prepared with fresh gluten, perfectly freed from starch, grated Gruyère and Parmesan cheese, and butter.

For dessert the oleaginous fruits, such as olives, almonds, nuts, and walnuts, may be permitted; and occasionally, but only in very small quantities, apples, pears, cherries, currants, raspberries, strawberries, raisins, and pineapples.

All farinaceous food is to be replaced by gluten bread.

For drink, besides wine, already alluded to, broth will be found very useful. Coffee may be allowed, but it should be drunk without sugar, or, at least, a very small quantity only. Beer, and all sweet fluids, must be prohibited.

For quenching the thirst of diabetic patients M. Bouchardat gives the preference to the Seltzer spa or Vichy waters, either alone or in combination with an equal portion of wine. Weak wine and water is better than any kind of tisane. Infusion of hops, or of some other bitter, is sometimes beneficial.

All acid drinks are prejudicial: they saturate the free alkali of the blood, which prevents, as M. Chevreul has long since proved, the prompt destruction of the alimentary combustible matters incessantly introduced into the circulation through the medium of the digestive apparatus.

The therapeutic agents by which the hygienic means are best assisted are the carbonate of ammonia, already alluded to (a), and the preparations of opium, the preference being given by M. Bouchardat to the old electuary known by the names of mithridate and thereica (theriague).

ON THE MEANS OF DETECTING THE PRESENCE OF STARCH SUGAR IN URINE, AND ASCERTAINING ITS QUANTITY.

[Among the various tests for sugar in urine that have been recommended, M. Bouchardat gives the preference to the milk of lime test; to Frommherz's test; and, for the precise determination of the quantity contained in a quart of urine, to M. Biot's apparatus.

1. *Milk of Lime Test.*—It is well known that when starch sugar of commerce, or diabetic sugar (which is the same thing), is boiled with a solution of potash or soda, or with milk of lime, the mixture becomes brown, and assumes a darker colour in proportion as it contains a greater quantity of starch sugar (glucose); cane sugar does not produce this effect. I was one of the first to point out this difference, and this character which is so easy of detection. The presence of a decigramme of glucose in a quart of urine may thus be ascertained by an examination which is terminated in a few minutes and without any trouble; it being merely necessary to place in a matrass equal parts of milk of lime and the urine to be examined. Then, if the latter contain sugar, the mixture will turn brown, and, when we have a little experience in these examinations, we may judge, according to the darkness of the hue, of the approximate proportion of starch sugar contained in the urine examined.

I prefer milk of lime to a solution of potash, for two reasons—first, because practitioners in the country may procure lime anywhere: all they have then to do being to reduce about 50 grammes of quick limestone to powder by means of a little water, and afterwards to well mix it with about a quart of that liquid; it must be well corked and shook before it is poured into the matrass; and secondly, because several of the extractive matters of the urine are coloured by potash, which is not the case with milk of lime.

Nearly all my diabetic patients who live in the country examine their urine every day by this process; they can thus follow the progress of their treatment, particularly when they take care to measure the quantity of urine they pass in the twenty-four hours.

I cannot too strongly recommend this very simple method of examining the urinary secretion.

2. *Frommherz's Test.*—This is an extremely sensitive one, and is thus prepared. Equal parts of sulphate of copper, and tartrate of potash, are separately dissolved in water; the two solutions then mixed, and caustic potash added in sufficient quantity to dissolve in a great measure the precipitate. A liquor of a beautiful blue colour is the result. In examining the urine, a sufficient quantity of this test should be added to it to give it a slightly alkaline reaction, and the mixture then boiled, when, if the urine contain no starch sugar, the liquor remains blue; but if it does, the salt of copper becomes reduced, the liquor changed to a reddish-yellow colour, and a deposit of red oxide of copper soon formed. It sometimes happens that urine which contains no glucose becomes changed in colour by boiling; this is owing to the presence of other organic matters in the urine, and which have also a reducing power. Therefore, I have not confined myself to Frommherz's test, although I have frequently had recourse to it; but it is only in doubtful cases that there can be any difficulty; where there is a considerable quantity of glucose in the urine, the reduction of the salt of copper and the deposit of the oxide are to such an extent as to leave no doubt on the matter.

3. *M. Biot's Polarizing Apparatus.*—Formula for finding the absolute weight of pure diabetic sugar contained in a quart of suspected urine.—It appears from the experiments of M. Biot, on pure diabetic sugar, that if diabetic urine be examined in a tube, the total length of which in millimètres is L, and that the deviation measured with the naked eye for the extraordinary violet-blue tint, which immediately precedes the yellowish-red, is a, the absolute weight of sugar contained in a quart of this urine will be, in grammes,

$$\frac{2353 \cdot 6 . a}{L}$$

If the length of the tube is less than 350 millimètres, and the blue and yellow colours are very apparent, in consequence of the slight coloration of the liquid, this estimate will be too large rather than too small; if, on the contrary, L is greater than 350 millimètres, or the urine is sufficiently dark coloured for the colours to differ but little from one another, both before and after the point of passage, the estimate will be too small rather than too large. In any case the uncertainty will be of little consequence, particularly for the diagnosis. It depends on the difference occasioned by the more or less deep colour in determining the point of passage, where the deviation is measured when observed with the naked eye; this, however, may be obviated by always examining it through a red glass, which renders the deviations exactly similar; but, in this case, this made the examinations much more difficult, and without any actual advantage.

The two following examples show the applications of this formula:—

1. Diabetic urine was examined in a tube, of which the total length L was 500 millimètres, and a deviation a, equal to 15°, was observed. By multiplying 2353·6 by 15 we obtain 35304, which being divided by 500 leaves 70,608 gr., which is the weight of sugar contained in each quart of urine examined; this estimate, however, is too small rather than too large.

2. The tube was 347 millimètres in length, the deviation a 10°. 967, and the urine very dark coloured through this thickness. By multiplying 2353·6 by 10,967 we obtain 24870·5, by neglecting after the multiplication the decimals, beyond the tens; then, by dividing this by 347, the quotient will be 71,673, which is the weight of diabetic sugar contained in each quart of the urine; although this estimate is, perhaps, less than the actual amount, owing to the urine appearing very dark coloured in the tube.(a)

19, Langham-place.

(To be continued.)

Erratum.—At page 342, column 1, line 19, for "are effects," read "an effect."

(a) See page 31.

(a) According to my calculation the product would be 25811·9, and the quotient 74,385.

PROGRESS OF MEDICAL SCIENCE.

France.

ACADEMY OF SCIENCES.

Meeting of Feb. 22; M. BRONGNIART in the Chair.

INHALATION OF ETHER.

M. Flourens read a short account of some experiments made on the spinal chord of animals, placed under the influence of ethereal ebriety. Muriatic ether had yielded in the author's hands as decisive and more prompt effects than sulphuric ether.

Several communications of secondary interest were made on the same subject, by Messrs. Amussat, Laugier, and Gerdy.

A NEW METHOD OF DISTINGUISHING REAL FROM APPARENT DEATH, BY DR. MANDL.—The author asserts that cauterization will invariably permit the distinction: on dead tissues, a blister is never raised by the application of heat; but this effect is always produced on the skin so long as life persists. It remains to be proved how far the assertion is correct—in those cases where vitality is so latent and obscure that death may be supposed to have occurred.

ACADEMY OF MEDICINE.

Meeting of Feb. 23; M. BEGIN in the Chair.

ETHEREAL INHALATION.

A letter was read from Dr. H. Wells, Connecticut, U.S.A., claiming the merit of the first application of the system to surgical operations. The protoxide of azote Mr. Wells now prefers to ether.

M. Orfila stated that Vauquelin and himself had unsuccessfully endeavoured to inspire the nitrous oxide gas; Davy had asserted that it produced considerable exhilaration; M. Orfila experienced nothing of the kind.

M. Gérardin said that fifteen or eighteen years since, a letter had been received from an English physician, who asserted that, by inhalation of laughing-gas, he could render patients insensible to pain during surgical operations. This letter caused a certain sensation in the academy; some members treated it with contempt, but Baron Larrey defended it, and offered to try the experiment. M. Gérardin would look in the archives of the academy for the letter.

Professor Dubois remarked, that although the subject had already occupied on several occasions the attention of the academy, still the special application of the new method to the purposes of midwifery would doubtless give his present communication a certain share of interest and importance. M. Bouvin and Professor Velpeau had both expressed the opinion that the obstetric art would find in ethereal inhalations a useful assistant: it is probable that these two gentlemen had only inferred the supposition from what they had repeatedly observed of the effects of ether in surgical operations. M. Velpeau had also hinted that the inhalation might possess the power of preventing certain muscular actions, from which arises the chief difficulty in the execution of some obstinate operations—that of turning the child, for instance. It had been elsewhere supposed that the new method would prevent the pain which would attend the natural labour; and this hope was, in some measure, realized. The object of the present communication was twofold: in the first place, to discover if the inhalation of ether could render obstetrical operations painless; and in the second, to ascertain its effects upon the pains of natural labour? Both these questions were intimately connected with others which the author thought it necessary to examine.

When the learned professor began his researches, he had experienced a considerable degree of embarrassment, not unmixed with scruple, from the absence of any guide, or precedent, from which he might gather some degree of security in the application of the new method to parturient women. The first questions to be ascertained were the following:—Would inhalation of ether be injurious to

the mother? would it be prejudicial to the child? would it exert its noxious influence in a primary manner? or, by its stupefying action on the spinal chord, might it not paralyse the contractions of the muscular structures of the womb? Further—supposing it demonstrated that its primary action was injurious to neither of the two beings concerned—might it not prove consecutively hurtful to their constitution?

With regard to the child, the penetration of ether into its system was in itself a circumstance which might doubtless explain a certain amount of anxiety, and facts have proved this anxiety to have been founded upon proper grounds.

As to the safety of the mother, the question contained more special elements. The ethereal ebriety was at its beginning characterized by convulsive movements, and often tetanic agitation of the voluntary muscles. The intoxication was also sometimes followed by a semi-epileptic condition: now, the frequent occurrence of convulsions during the puerperal state, and their too frequently fatal termination, were circumstances which naturally obliged Professor Dubois to pause before exhibiting ether during parturition. This hesitation was further justified by the recollection of the cases of hysteria, related by Professor Piorry, in which that gentleman observed that the inhalation of ether aggravated the symptoms, instead of amending them. Professor Dubois thought he was not mistaken when he said that a physician had exhibited the ether in cases of epilepsy, and was obliged to abandon the system on account of the increased severity of the fits: in an English medical paper, a case of tetanus was related, which had been unsuccessfully treated by ethereal vapour. In his own cases, Professor Dubois had been so fortunate as not to have any confirmation of his fears on this point.

In order to prove that ethereal inhalations prevent pain during obstetrical operations, the learned professor related two cases, of which the following is a brief abstract:—

CASE 1.—A young woman, aged eighteen, primipara, entered the Hospital of La Maternité on the 5th of January, after thirty-eight hours' labour. Perforation of the membranes, and the ergot of rye, not having produced any acceleration, the application of the forceps was resolved upon, ethereal insensibility having previously been induced by six minutes' inhalation. Some movements being observed, which gave doubts as to the state of insensibility of the patient, the inhalation was resumed during five minutes, when the instrument was introduced, the head extracted, and delivery completed without any pain; expansion of the vulva and perineal dilatation were accomplished more rapidly than usual. The child was alive; the chord presented at first 160 pulsations per minute, and they fell, in the space of ten minutes, to their natural standard, viz., 136.

CASE 2.—A woman, aged nineteen, at the last period of utero-gestation, had been thirty-six hours in labour. The inhalation was continued for ten minutes, when insensibility was in appearance induced; but, to ensure unconsciousness, the ether was again exhibited during five minutes, when the patient fell into a state of stertorous sopor. The forceps was introduced, and the delivery completed without pain; the woman, however, appeared conscious of the operation.

Professor Dubois stated that analogous results had been obtained by others, namely, Dr. Fournier Deschamps, in a case of application of forceps; Dr. Simpson, of Edinburgh, in a case of turning; and Mr. Skey, of Bartholomew's Hospital, London, in a patient who bore without pains the Cesarean section.

Professor Dubois next examined the influence of the ethereal inhalations on uterine contraction, and on synergetic action of the abdominal walls. At the present period the question of the origin of the uterine nerves was still pendent: from the fact, however, that the womb cannot regulate or in any way modify its own contractions, M. Dubois was of opinion that its nerves were, if not exclusively, at least almost all, derived from the sympathetic system; and if any nervous twigs were sent to the uterus from the cerebro-spinal axis, their connection with the latter was most probably indirect: hence the professor would feel inclined to conclude, *à priori* that ether, acting exclusively upon the organs of animal life, ought not to suspend contractions placed in the immediate dependence of organic vitality. M. Brachet, of Lyons, held a contrary opinion: from experiments on animals, and divisions of the spinal cord in various regions, he concluded that the contractions of the uterus were under the influence of that nervous centre; he also derived his conviction on this subject from a case of paraplegia, which he observed during pregnancy. The physiological experiments of M. Brachet, Pofessor Dubois was not prepared to call into question; but the case of parturition in a paralytic woman did not present the signification allotted to it by M. Brachet, for in this instance the forceps was applied after *complete* and *spontaneous* dilatation of the osuteri - a circumstance which necessarily implied *contraction* of the walls of that viscus. The following cases would tend to throw some further light upon these obscure points.

CASE 3.—On the 5th of February, at the Hospital of La Maternité, M. Dubois applied the method of inhalation in the case of a woman who had been already eight hours in labour-pains. The dilatation of the os uteri was equal to a crown-piece, and the uterine contractions were powerful and frequent; the membranes, however, had not yet yielded. After twenty-five minutes' inhalation, unconsciousness was established (the ethereal inspiration had been frequently interrupted). At that moment congestion of blood suddenly took place towards the head, the face becoming flushed, the conjunctiva injected to that degree that M. Dubois imagined that blood might spring from its surface; the tongue was turgid, the lower lip pendent, and a spumous saliva was expelled from the mouth. During this state, which lasted three minutes, the uterine contractions distinctly continued, and without pain. The fœtal heart was auscultated, and 160 pulsations were counted in a minute. The woman soon after recovered consciousness, when the fœtal heart came down to 130; and she declared she had experienced no pain whatever.

CASE 4.—A woman, arrived at the termination of her second pregnancy, was in pains for several hours, when Professor Dubois was called to her. The pains were extremely violent, and the screams of the patient loud and incessant. After inhaling ether during three minutes, she became insensible, and the uterine contractions continuing with energy, and the membranes protruding vigorously against the finger introduced into the vagina, from the time unconsciousness was established, the perfect quietude of the patient contrasted powerfully with the energetic action which was rapidly proceedin in the womb, and formed one of the most strikin and unusual phenomena ever observed in the practice of midwifery. The membranes were ruptured, and delivery speedily followed. On recovering consciousness, the patient declared she had not suffered, but had dreamed. The nature of her dream she at first refused to explain, but afterwards related to one of the nurses that she fancied herself lying by the side of her husband, and that they had been simultaneously engaged in those preliminaries, the result of which had been the condition in which she then was.

With regard to the effects of the inhalation upon the contraction of the abdominal muscles, Dr. Dubois related a fifth case, in which their contraction had been specially examined, and had been perfectly complete and satisfactory, notwithstanding the complete insensibility of the subject. In all these cases Professor Dubois had been struck with the facility with which perineal distention was accomplished; in none did the patients experience any bad results from the inhalation of ether. The two cases in which the application of the forceps was necessary terminated fatally from puerperal peritonitis; but, at the same time, several other cases of puerperal peritonitis were extant in the wards; some of the latter died, and the anatomical appearances after death were exactly and precisely the same as in the two cases in which ether had been employed. The inhalation cannot, therefore, be looked upon as having been the cause of death in these two cases; besides, in one, labour had lasted forty hours, in the other, thirty-nine, before the application of the instruments. The conclusions which Professor Dubois adopted, and which he laid before the academy, were the following:—Ethereal inhalations can prevent pain in obstetrical operations; and they suspend provisionally the natural pains of labour, without interfering with the uterine or abdominal contractions. Their influence tends to weaken the natural resistance of the perineum to dilatation, and does not seem to be injurious to the child.

With regard to the practical application of the method to obstetrics, M. Dubois thought it would seldom be used, on account of the difficulty of procuring a fit apparatus in sudden emergencies; and that the greater facility which Professor Velpeau supposed the inhalations would give, for turning the child, did not in reality exist, as the uterine contractions were proved to continue during insensibility, with undiminished energy.

After a short debate, in which Professor Velpeau and M. Malgaigne expressed their surprise, that after proving that ethereal inhalations were innoxious to child and mother, prevented pain, and facilitated perineal distention, without interfering with uterine or abdominal contraction, Professor Dubois had shown so much reserve in speaking of their practical application to the art of obstetrics.—The meeting adjourned at half-past five.

PARISIAN MEDICAL SOCIETY.

Meeting of Feb. 24; Dr. SHRIMPTON in the Chair.

ETHEREAL INHALATION—PRIORITY OF INVENTION.

Dr. Wells, a visitor, requested and obtained permission to make the following communication:—

It was in November, 1844, that this idea of performing painless operations had first occurred to Dr. Wells; and the observations arose from the frequent absence of pain in wounds inflicted upon persons labouring under strong excitement. In November, 1844, Dr. Wells had already inhaled nitrous oxide gas, and ether, but the vapours of ether he did not bear so well as those of the nitrous oxide; and at that time Dr. Wells had a tooth extracted during the insensibility induced by the inhalations; twelve or fifteen operations of the same kind, and quite free from pain, had been performed by him at that remote period. Shortly afterwards, Dr. Wells came to the city of Boston, and communicated the discovery to Dr. Warren, who permitted him to deliver on the subject a lecture to his (Dr. Warren's) class. One operation was then performed, and, the insensibility of the subject not having been perfect, pain was experienced, and Dr. Wells denounced as an impostor. The discovery had been communicated to Dr. Mott and Dr. Jackson. Mr. Morton, a pupil of Dr. Wells, had also been initiated. Under these circumstances Dr. Wells came to Europe, and to his utter amazement, when, unprovided with the printed proofs of the facts he stated, the discovery was published and claimed by Dr. Jackson and Mr. Morton. One American periodical, of Dec. 18, 1845, Dr. Wells had found in Paris, and that paper contained a letter from a Mr. Ellsworth, in which the discovery was claimed in favour of Dr. Wells, and reference made to an article published on the subject in the same paper twelve months previously.

FACULTY OF MEDICINE.

LECTURES ON GENERAL PATHOLOGY, BY PROFESSOR ANDRAL.

Plasticity is another vital property, exclusively belonging to organized beings; it includes the

phenomena of assimilation, and of healthy or pathological nutrition.

That power by which is produced animal heat, and the resistance which living matter opposes to the establishment of equality of temperature in all bodies placed in the vicinity of each other, is also a vital property, towards which we must direct your attention. The physical and chemical phenomena, which succeed each other uninterruptedly in our system, are doubtless the agents of the production of heat; but life is the indispensable condition of the maintenance of that heat at its average standard. Man has a temperature proper to himself; he can rid himself of a superabundant amount of heat, or regain the losses of caloric caused by the vicinity of cold substances; this power has certain limits, beyond which it ceases to exist. The increase of heat is the principal characteristic of one great morbid entity, viz.—fever; its diminution is also observed in disease. It may be laid down as a general principle, that the temperature of all beings is in proportion with the quantity of oxygen which they absorb from the atmosphere. Thus mammalia and birds, particularly the latter, consume a large quantity of oxygen, and are endowed with very energetic caloricity. The average temperature of the human body, in health, oscillates between +36°, and + 38° Cent. (96°·8—100°·4 F.) Man can continue to live, and even permanently, in a medium far inferior in temperature to the heat of his own body; life can still be preserved at the freezing point of mercury. Heat is not so well supported, for life cannot continue when the body is placed in an atmosphere heated to + 55° Cent. (131° F.): that heat can be borne only in a transitory manner.

The human body does not rise in temperature when placed in a medium somewhat above its own; perspiration breaks out, and the heat is subdued. If, however, from any reason, perspiration does not occur, the heat of the body rises slowly: it has been known to gain 2, 3, 4, and even 5 degrees C. (3·6—5·6—7·2—9 F.); but an augmentation of four and five degrees has only been observed when the temperature of surrounding bodies had been raised to 70° to 90° C. (158° to 194° F.) Dr. Robert Latour, in some researches on the hydropathic treatment, asserts that, in the packing process, the heat of the body never rises more than 3° above its natural standard.

Mr. John Davy, in some interesting remarks on this subject, observes that the average degree of heat proper to the human body seems to increase gradually from the poles to the equator. Captain Parry noted the temperature of the body of the men under his command, in the polar regions, and found that, although the thermometer had fallen somewhat below the freezing point of mercury, the temperature of the body in the axilla, and at the orifices of mucous membranes, was not evidently modified. It must be added that the men were extremely well fed, and in excellent spirits.

When, however, the cold is more intense, the heat of the body gradually yields—in the surface at first, and afterwards in the more central parts.

Temperature in man varies slightly with the constitution peculiar to each individual: thus, after cold ablutions, reaction is, in some persons, so very slow as to render them in some degree perilous. On this point an interesting publication of Dr. Currie may be consulted with advantage. The production of heat is less perfect immediately after birth, and its insufficiency is in proportion to the backward state of development of the being observed. In this respect, Mr. Edwards divides animals into two classes: those who are born with, and those who are born without, a pupillary membrane; in the former, caloricity is not by any means so energetic as in the latter. The same observation applies to the human species: when the child is fully developed, its average heat is 34° or 35°; when the accouchement has been premature, the body of the infant presents only 33° or 34°. Dr. Roget, in a valuable paper relating to this question, states that on the instant of expulsion from the womb the axilla of the child presents a heat of 37° (98·6), and falls after some minutes to 35° (95); thus proving that a portion of the heat of the infant's body is derived from the medium which he has so recently abandoned. In the space of twenty-four or thirty hours after birth, the temperature of the infant increases, and equals that of the adult—37°, although the maximum of the physiological heat of the latter, 38°, is never observed in the newborn. No rigorous observations have hitherto been made for the purpose of ascertaining the temperature proper to the aged. In disease, old persons appear to cool faster than younger individuals, but thermometric investigations are wanting to demonstrate the fact. The aged consume less carbon—a remark which certainly implies the production of less heat.

The state of the nervous system, the composition of the blood, doubtless exercise some influence upon the production of animal heat. With regard to nervous influence, no definitive result has yet been obtained. Numerous experiments have been instituted, wherefrom the induction has been made, that diminution of nervous influence causes a decrease of temperature; but the problem appears to us to present so many elements which have not been taken into account, that the inference does not appear to be perfectly justifiable; thus the destruction of motion in muscular textures would in itself account for diminution of temperature. The influence of narcotics on caloricity has not been studied. With regard to mental emotions, it is true they often produce a sensation of intense cold in the skin; but thermometric research is absent, and, until demonstration has been obtained, we must consider the chill and cold which attend emotions as the result of a new and vicious repartition of animal heat. Sleep has been said to cause a diminution in the temperature of the body; but it is accompanied with repose from muscular exertion—a circumstance sufficient in itself to explain loss of heat. Becquerel and Breschet have shown that a thermometer placed in a muscle in a state of contraction rises half a degree; consequently paralysis will cause diminution of the heat of the diseased part.

The arterial is usually warmer by one degree Cent. (1·8 Fahrenheit) than the venous blood: diminution of the globules, or of the fibrine naturally contained in the circulating fluid, makes no change in its temperature. As to the rapidity of the circulation, it certainly does in general coincide with increased heat of the body; but these two phenomena do not seem to be in absolute dependency of each other; the pulse may be very frequent, and the skin not very hot, and, reciprocally, the skin be hot and the pulse slow; but suspension of the circulation may be said to coincide always with a diminution of the heat of the body: thus, when an artery has been tied, the temperature of the part which it is distributed to, falls, but only after fifteen or twenty minutes—a fact which Becquerel and Breschet have satisfactorily demonstrated. When blood is accumulated in any organ without disease, the heat of that organ may be slightly increased, but it never rises higher than the temperature of the axillary region

It is of great importance in disease to distinguish the real diminution of the temperature of the body from an apparent decrease due to unequal repartition of animal heat. In the latter case the temperature of the axilla remains always at its healthy standard. This is observed in violent pain, in colica nephritica, in peritonitis; and remark, also, that in the cold which is observed when corrosive poisons are introduced into the stomach, or in syncope, or, again, in certain affections of the heart, which interfere much with respiration, the temperature of the axilla remains at its healthy standard, although the heat of the remainder of the body has notably decreased. The same remarks apply to cholera, a disease remarkable by the refrigeration of the surfaces, and the œdematous swellings of the body.

Having thus clearly established the meaning of those words—"unequal repartitions of heat"—let us examine the local or general modifications of animal heat in disease.

We have said that in health the temperature of the human body oscillates between 36° and 38°—37° being its average amount. The maximum of heat which the body has ever attained under morbid influences is 42°, and in the infant 42°.5 (Roget); but this increase is very exceptional, and from 38°, the maximum during health, we may say that in general the increase of heat brought on by disease varies from 1° to 3° Cent. This increase of temperature constitutes fever: whether it be idiopathic or symptomatic—produced by an acute affection like pneumonia, or accompanying a chronic alteration like tubercle; whether inflammatory or adynamic, continuous or intermittent—fever is always attended with increased heat of the body: in ague we find it during the three periods of fever, and the chemical condition of the blood does not influence this indispensable element of febrile excitement, the intensity of which will be always in proportion with the degree of heat. At a period when the exploration of the pulse was not in use, Galen recommends the application of the hand on the thoracic walls, in the vicinity of the axilla, in order to judge of the existence of fever, from the presence of unusual heat. The very word perplexia (πυρ) implies the admission in former days of the opinion which we have just laid before you.

We must very clearly establish the fact that all the causes which have the power of producing fever act in producing in the organs a modification by which heat is evolved. This modification, these new conditions, are most probably connected intimately with the phenomena of nutrition, and with a more abundant combustion of hydrogen and carbon. It would be a curious and valuable experiment to ascertain it during fever—more carbonic acid is evolved from the body than during pyrexia: indeed it is highly probable that such is the case. Let us, however, say that plausible such a theory may appear, powerful objections can be raised against it; thus, many accelerations of circulation, brought on by weakness, abundant hemorrhage, insufficiency of aortic valves, &c., are not attended with increased heat: in the newborn infant the pulse is quick, the respiration frequent, and still the temperature of the body is not above the average amount observed during health. Let us now examine the influence of various diseases upon the elevation of heat. In 366 cases of numerous maladies, all attended with fever, we found at the axilla—

In 64 cases	38° Cent.	100°.4 Fah.
156 „	39	102. 2
116 „	40	104. 0
18 „	41	105. 8
1 „	41. 8	107.24
1 „	42	107. 0

In ninety cases of typhoid fever the following results were obtained:—

In 12 cases	38°
26 „	39
43 „	40
8 „	41
1 „	41.8

In this malady we have often observed the pulse slow—at 70, for instance, whilst the temperature of the axillary region remained above the average of health: this is peculiar to the adynamic form. On the contrary, we have noticed cases in which the pulse remained frequent, although the thermometer in the axilla did not show any increase of heat; in these instances the fever had left, and the quickness of the pulse was evidently due only to weakness—a practical distinction, towards which we cannot sufficiently call your attention.

In fifteen cases of variola the temperature varied from 38° to 40°.

In eleven cases of measles it oscillated between 37°.5 and 40°.

Scarlatina is attended with great development of heat; we have examined seven patients with the intention of ascertaining the fact: in two we

found, 39°; in five, the thermometer rose to 40° and 40°.5.

One case of acute farcy came under our observation: the heat of the body was equal to 42°.

The elevation of temperature during the paroxysms of ague, and particularly during the rigor, had been formerly noticed by Martin (quoted by Haller), and lately by Professor Gavarret. Whilst the extremities are cold, the axilla, on the contrary, presents a heat of 40°.5, which continues to rise during the stage of calor, and it has been observed to attain 41 [illegible] During a pyrexia the heat is natural.

Turning to investigations of the same nature in febrile excitement resulting from phlegmasia, we find seventy-three cases of pneumonia thus divided—

In 2 cases	38°
28 "	39
[illegible]	40
[illegible] "	41

In capillary bronchitis, in acute pleurisy, in peritonitis, we also [illegible]rved an oscillation of the thermometer from [illegible] to 40°.

Erysipelas and articular rheumatism were accompanied with the same increase of heat; in thirty-eight cases of rheumatism we found—

38°	9 times
39	20 "
40	9 "

In the hectic fever of chronic disease we have always observed elevation of temperature: twenty-one cases of the sort were submitted to thermometric observation, and were examined in the morning; we found—

In 11 cases	38°
[illegible]	[illegible]
[illegible]	40

The same results we ha[illegible] also obtained in carcinoma uteri, and other organic affections, their last period.

D. M'C[illegible]RTHY, D.M.P

Great Britain and Ireland.

Law of the Metamorphosis of the Textures of the Human Body.—Physiologists are agreed that this metamorphosis in the human structure occurs in the following order—viz., "from soft, semi-fluid, incoherent corpuscular textures, to the coherent cellular, from these to fibrous, fibro-cellular, and cartilaginous; and, lastly, to bone." This is observable from the earliest embryo to the adult. The analogous fact is recognised in vegetable structures—viz., "cells containing a viscous, colourless mass, mixed with granules everywhere," as Mohl observes, "preceding the first solid formations" Dr. Addison gives the following remarks on *the structure of the lungs*:—

"The air-cells of the lungs are not indiscriminately thrown together in the interior of the organ; on the contrary, they are symmetrical with the branches of the air-tube, and, collected or associated in numerous small communities or groups, each group forming what is termed a lobule: many lobules grouped together form a lobe, and five lobes form the two organs called the lungs. A pulmonary lobule is a perfect respiratory organ in itself, the whole lung being but a series of reduplications of the same structure—an aggregate of lobules. At one of the corners or angles of a lobule a division of the air-tube and an arterial blood-vessel enter into its interior, and at the same place a vein comes out, and by these three cylindrical structures the lobule is connected with its fellows. The membrane which forms the walls of the air-cells constitutes the *parenchyma* or proper texture of the lungs, and the capillary vessels so densely distributed upon it have no other coats or boundaries than those furnished by this parenchymatous texture. The practical point to be insisted on, with a view to the correct understanding of the pathology and diseases of the lungs is that involving the relation of the walls of the air-cells to the extremities of the air-tube on the one hand, and to the blood-vessels on the other.

"The air-tubes and bloodvessels, before entering into the interior of the lobules, run into the spaces between them, and here, cushioned, as it were, upon an areolar texture, they have severally their own distinctive elements and structures; but within the lobules, after sundry subdivisions, they all terminate in, and their textures become continuous with, the walls of the air-cells—that is to say, with the parenchymatous texture; and here it is impossible, even with the microscope, to discriminate between the elements continuous with, or prolonged from, the coats of the blood-vessels, and those continuous with, or prolonged from, the air-tubes—that is to say, in other words, the outer surface of this transparent wall of every air-cell is in close relation with the interior of the blood-vessels, and its inner surface is as closely related to the air-tubes.

"The parenchyma of the lung is usually described by anatomical writers as a mucous texture—that is, a secreting texture; but it has none of the anatomical characters of a mucous texture; its perfect transparency and elasticity resemble much more the characters of a fibrous or serous texture; moreover, it is well known that its capillaries have a special function, and no analogy whatever exists between them and the capillaries of a secreting texture. In the adult lung the parenchyma is *coherent-cellular*, the areolar texture interposed between the lobules is *fibrous* and *fibro-cellular*, the pleura which covers the whole lung, and lines the interior of the cavity of the chest, is both *cellular* and *fibrous*—cellular on its smooth free surface, and fibrous beneath. The mucous texture of the interior of the air-tube is *fibro-corpuscular*—that is, composed of fibres intermingled with incoherent cells; and the blood is a *corpuscular fluid*, flowing in streams over the walls of the coherent cellular parenchyma. But in the embryo all pulmonary textures are composed of soft and but slightly cohering cells: in the fœtus they are partly corpuscular, and partly coherent-cellular; and during infancy and youth the walls of all the nutrient vessels, even of those which have become fibrous, are largely charged with incoherent corpuscles or cells. Hence, then, the morphology of the textures of the lung is *corpuscular*, *cellular*, and *fibrous*; and there is nothing, except in the larger branches of the air-tube, of a cartilaginous or osseous texture.

"PHYSIOLOGICAL ANALYSIS OF THE CORPUSCULAR, CELLULAR, AND FIBROUS TEXTURES.

"Keeping in view the distinctions insisted on between the *corpuscular* and the *cellular* textures, it is evident that the corpuscular are the secreting textures, and the cellular the non-secreting ones,—that is to say, the cells or corpuscles of the secreting textures, with their thin walls and elaborated contents, are temporary and evanescent elements; while the cells of the coherent-cellular textures, with their strong elastic and transparent walls, are comparatively durable and permanent; and as the rapidity of the changes and displacements which the elements of a structure undergo is in a direct ratio with their importance in the functions of nutrition, secretion, and life, so therefore the cells or corpuscles of the corpuscular textures are more active or energetic than the cells of the cellular.

"Again, contrasting the corpuscular with the fibrous textures, the latter perform the comparatively mechanical offices of separating, investing, and limiting in bulk, the different groups of the various corpuscular and cellular textures, engaged in the more active functions of life, transmitting the larger columns of blood to and from them. These functional distinctions are indicated by the anatomical fibrous element, and by the species of [illegible]ularity observable in the texture. The corpuscular or secreting textures are everywhere traversed by multitudes of nutrient vessels, specially disposed in different organs; whereas the fibrous non-secreting ones, although in some instances extremely vascular, in consequence of having to transmit [illegible] multitude of small [illegible]ssels, have yet comparatively few nutrient capillaries, and these variable and irregular in their disposition. The dura mater and pia mater are both fibrous membranes, surrounding, supporting, and protecting, in bulk, the whole brain or central organ of the nervous system. The dura mater, as its name I suppose implies, is an exceedingly strong and coherent texture, transmitting immense columns or streams of blood to and from the brain, yet is itself scantily supplied with nutrient capillaries. But the arterial currents traversing the dura mater, and those still larger ones arising from other quarters, before they can be admitted into the soft corpuscular texture of the brain, must be divided and subdivided many times into the smallest possible streams, and the force of the heart's action subdued by sinuous turns and windings. For these ministerial purposes the much more fine and delicate fibrous texture of the pia mater is interposed, which not only affords space and area for the subdivisions of the blood-current, thereby becoming extremely vascular, but, slipping down between all the lobular subdivisions of the organ (here termed convolutions), it enters into the recesses, supporting and limiting and conveying vessels, through which the blood reaches and returns from all parts of the soft and tender parenchyma of the great organ of life and being. Lastly, the cellular parenchyma of the lung is not tender, opaque, and brittle, like the corpuscular parenchyma of the liver, but is, on the contrary, exceedingly coherent, elastic, and transparent; and these anatomical characters indicating, as before observed, that the parenchyma of the lung is not a place of active nutrition or cell-elaboration,—not a secreting texture; and although eminently vascular, more so, perhaps, than any other texture of the body, still the vascularity is analogous to that of the pia mater—a ministerial and not a nutritive vascularity, the analogies of the texture being altogether with the fibrous non-secreting, and not with the corpuscular and secreting, textures. This corresponds with facts; the only outlet and inlet to the lungs is by the windpipe; and if the air-cells, which have been computed to number 1,744,000,000 in each lung, or if an expanse of membrane equal in area to 1,500 square feet, were a secreting membrane in the ordinary and proper acceptation of the term, persons would be always swallowing, or spitting, or coughing, which we know in health is not the case. The fine transparent cellular texture of the pulmonary parenchyma allows the finer and vaporous elements of the blood to transude its wall, but it does not, I conceive, in the proper sense of the word, give rise to a secretion."

The Part where Fecundation takes place in the Human Species and in the Mammalia.—M. Coste has demonstrated that at the period of sexual desire, the graafian vesicles become constantly the seat of tumefaction—the precursor of their approaching rupture and the spontaneous escape of the ovum. By experiments practised on fecundated rabbits, M. Coste has demonstrated the presence of ova in the superior half of the ovarian tubes, covered with spermatozoides. This, therefore, from numerous observations, is the situation where fecundation usually takes place; and further, he believes that fecundation occurs in the uterus, or in the uterine extremity of the tubes, *only* when the female having been kept apart from the male, receives the embraces of the latter, *after* the rupture of the graafian vesicles and the escape of the ovum. To recapitulate, fecundation takes place *sometimes* in the ovary, usually in the superior half of the tubes, rarely at their inferior extremity, and still less frequently in the uterus itself.

New Remedy against Strangury.—The poison which serves as a defence to the bee is supposed to be the agent in relieving strangury in the following recipe. From 50 to 60 bees are thrown into a vessel of water. They are then transferred to a cup of tea, and boiling water is poured over them; cover the cup and strain the infusion, which is to be administered in one draught. The strangury ceases in a short time, varying from two to fifteen minutes.

Obituary.—At Carlisle, in the Crescent, on Saturday, Railton Atkinson, Esq., M.D.—On the 6th instant, sincerely regretted by his numerous friends, aged 42, Mr. Fell, surgeon, Paddington.—On the 5th instant, at Paris, in his 74th year, Baron Pasquier, first surgeon of the King, inspecting surgeon and member of the Board of Health of the Army, and commander of the Legion of Honour.

REVIEWS.

A Manual on the Principles and Practice of Ophthalmic Medicine and Surgery. By T. WHARTON JONES, F.R.S.; Lecturer on Anatomy, Physiology, and Pathology at the Charing-cross Hospital; Foreign Member of the Royal Medical Society of Copenhagen; Corresponding Member of the Imperial Royal Medical Society of Vienna, &c. &c. London: John Churchill.

The following remark has been made by a physician: "We find in the eye more satisfactory and plain illustrations of the general facts and doctrines of pathology, than in any other single organ of the body." And further, he quotes from Dr. Latham's excellent work "On Clinical Medicine"—"From the peculiar structure of the eye, you see the morbid phenomena as through a glass, and you learn many of the little wonderful details in the nature of morbid processes which, but for the observation of them in the eye, would not have been known at all." We say, then, that the skilful ophthalmic physician must be a good pathologist, and that no man can write well on the eye without being thoroughly versed in the great general principles and practical details of medicine and surgery. Within the orbit is contained almost every variety of structure which is to be found in the anatomy of the human frame—bone, artery, vein, nerve, muscle, tendon, mucous membrane, glands, &c.—all subject to similar forms of diseased actions, and all amenable to the same general rules of treatment.

The first chapter of the work under review is devoted to "exploration" and the mode of "application of remedies": both are comprehensive and accurate. The inculcation of delicacy of touch which this manual enjoins on students ought to be read by some of our *professors* of ophthalmic surgery.

On the causes of the accumulation and stagnation of the blood-corpuscles in the relaxed and dilated vessels we have the following doctrine :—

"When, then, the nervous influence is withdrawn from the small arteries, and they have in consequence become relaxed and dilated, and when any nervous influence which may naturally be discharged on the capillaries is from the same cause withdrawn, the blood flows slowly into the capillaries as into an indifferent cavity, and in the same condition, as regards tendency of the red corpuscles to aggregate, as blood newly drawn from the body, or extravasated, as well as with the same change in appearance.

"Aggregation of the red corpuscles accordingly takes place, some at the same time adhering to the walls of the vessels. The latter a phenomenon which is to be attributed in like manner to the suspension of nervous influence.

"The other cause—besides dilatation of the paralysed vessels, referred to S. 180—of the retardation of the flow of blood now appears, from what has been above said, to be the commencing agglomeration of the red corpuscles, and the dilatation of the vessels, retardation of the flow of blood as a whole, as a fluid, is determined: the additional retardation by the commencing attraction affects the corpuscles only, hence their accumulation in increased quantity while the plasma passes on."

And on the *mode of action of the exciting cause of inflammation* we have this opinion :—

"Seeing that the essential condition of stagnation of the blood in inflammation is suspension of supply of nervous influence to the small vessels, the action of the exciting cause of inflammation must consist in producing this suspension.

"Section of some part of the sympathetic nerve appears to produce inflammation, by directly suspending the nervous influence from the walls of the vessels of the part."

Our limits will not permit us further to quote the reasonings and analogies of our author, who concurs in many of the doctrines of Henle, some of which, though not altogether demonstrable, have at least the claim of plausibility. We refer our readers especially to the sub-section of *Inflammation of non-vascular parts*, as illustrated in inflammation of the cornea, which are excellent. The whole chapter on "Inflammation" is interesting. We hasten without notice over the separate diseases of the eye, the various forms of conjunctivitis, granular conjunctiva, scrofulous ophthalmia, iritis in all its constitutional modifications, medullary fungus, staphyloma of the sclerotic coat, melanosis of the eyeball, hydatid in the anterior chamber, dislocation of the lens into the anterior chamber, and cyst in connection with the iris—all of which are correctly described, and each delineated in a beautifully-executed coloured plate.

Purulent or Egyptian ophthalmia is considered by the author to be caused by infection *in distans*. We rather believe it to be produced *per contactum*. In Egypt the flies which swarm there carry the matter from the diseased to the eyes of the healthy; and certainly we think that gonorrhœal ophthalmia is produced by accidental contact of the morbid secretion of the urethra. We think Mr. Jones is rather too fond of the lancet in the purulent ophthalmia, as well as in the arthritic and rheumatic forms of iritis. In the latter we prefer soothing narcotic applications, the local application of belladonna, and a combination of the aconite with colchicum internally, in augmented doses. The paroxysmal pains can often *only* be subdued by morphia in full doses. Excepting in very rare instances, the less of the antiphlogistic treatment the better. In rheumatic affections of the eye being often preceded by, or associated with, general rheumatic pains, we find great advantage from the hot bath.

The chapter on "Cataract" contains all the most approved methods of operating. At page 247 we notice one error. "The only special preparation of the eye, previous to the operation for cataract, is the dilatation of the pupil." Not, surely, previous to extraction? for in that case the pupillary margin of the iris is in danger of falling in contact with the edge of the knife before the puncturation has been completed. In all other modes of operating, dilatation is absolutely necessary.

We congratulate Mr. Jones on having produced us a most valuable manual—a careful accumulation of all the information contained in *almost all* the best authors, foreign and domestic, and much original observation of his own. Besides the coloured plates, there are ninety wood engravings exhibiting numerous instruments and operations. For one who has not apparently enjoyed numerous opportunities of operating on the eye himself, we are surprised at the judicious selection of the best and safest methods, although, perhaps, he might have given some better modes of operating for strabismus. The volume will prove a valuable work of reference to the ophthalmic student, and to the practitioner.

The Pathological Anatomy of the Human Body. By JULIUS VOGEL, M.D. Translated from the German, with Additions, by GEORGE S. DAY, M.D.

(Concluded from p. 387.)

On the subject of pathological epigeneses, the observations of Professor Vogel are very numerous, and in the true spirit of sound induction.

"Pathological epigeneses," he says, "naturally divide themselves into two groups—the organized and the unorganized. The distinction between these groups is a double one.

"1. *There is morphologic difference.*—Organized bodies exhibit the same perfect form and internal organization throughout as in their separate parts, and as soon as they become parts of the organism. Unorganized bodies are devoid of organization, the highest and most perfect form they can assume being that of a crystal.

"2. *There is a genetic difference.*—Unorganized formations are always produced in accordance with the laws of pure chemistry, while organized formations follow the developmental laws of organic life.

"If, in perfectly normal formations, the difficulty in defining the limit between vital organization and mere chemistry, in pathological formations it is much increased, for each may be combined with, and indeed merge into, the other, so that in individual cases it is not always easy to determine to which group a formation belongs. This does not, however, hinder us from regarding the two groups as representing opposite types. In their chemical compositions there are no essential differences, except that the organized formations consist, for the most part, of the substances known in chemistry as compound radicals; while the unorganized consist, in part, of inorganic matters, although compound radicals frequently also enter into their composition, and hence the terms *organic* and *organized* are not altogether synonymous in relation to morbid formations.

"Like everything else in nature, pathological growths require a material for their formation—a matter from which they may be produced. To this, which may be either fluid or solid, and may vary extremely in its chemical composition, we apply the general term *plasma*, or *formative matter*. It is a necessary character of this plasma to be amorphous; it must neither be crystalline, nor have a definite organic form. An already formed structure can only assume that function by throwing off its shape and becoming again structureless.

"A plasma may act as formative material either for organized or unorganized products, or for both at the same time. The plasma for unorganized formations, which is usually an aqueous solution from which deposits are produced or crystals formed in accordance with chemical laws, we shall name a *mother-liquid*, the matter giving rise to organized formations, which are chiefly produced by the formation of cells, we shall term a *cytoblastema* (κυτος, a cell; and βλαστημα, a growth), or, for brevity, a *blastema*; and lastly, a plasma, from which organized and unorganized products are developed, will be designated a *mixed plasma*." (Pp. 100, 101.)

Our author is of opinion that "the production of many unorganized formations is dependant on the development of a new secreting organ, previously created by a morbid process. In illustration, we may mention the deposition of crystallized cholesterine in encysted tumours, especially in that form termed by Cruveilhier, the laminated nacreous tumour, where the deposition is so abundant that the whole contents form a connected and often tolerably firm crystalline mass." (P. 105.) We rather doubt the reasoning, or perhaps we should say the assumption, here. The fact of any material, say cholesterine, being found in any spot remote from the liver is no proof of its having been produced *in* that particular spot, and *by* some newly-formed organism there. We are very much inclined to deny that the special product of any organ can be formed by any other than that said organ. Bile is sometimes found in the saliva, and in the tracheo-bronchial secretion: should we be justified in saying that the salivary glands in the one case, or a mucous membrane in the other, performed the peculiar function of the liver? Urea has been found in ascitic fluid, the issue of subacute peritoneal inflammation: did the peritoneum in this case secrete the urea? Cholesterine has been found abundantly in fluid accumulation in the thyroid gland: was the cholesterine formed in this spot, or only lodged therein? We opine the latter. So in the other cases, the distinguishing products of specific secernent function were rather *separated* from the blood into which they had been absorbed, than *secreted* from the elements of it. In the examples Vogel has mentioned, it is more probable that the cholesterine was *lodged* in the encysted tumours, than *formed* within them.

Concerning the development of organized pathological formations, our author observes :—

"The development of organized morbid tissues is dependent on laws differing essentially from the chemical laws already considered. The difference is obvious even in the formative material. It is not every mother-liquid that can act as a cytoblastema for organized products. The cytoblastema is usually fluid; it may, however, be solid, but in this case it must of necessity be amorphous, that is, it must not exhibit either a definite organized appearance or crystallization. The only solid cytoblastema which has yet been noticed in relation to morbid products is coagulated fibrine in its amorphous condition and permeated with water, —in the state, for instance, in which it occurs in inflammatory exudations. But even this blastema was originally fluid, and only assumed the solid form on the coagulation of the fibrine. It is pos-

sible, although it has not yet been observed, that other protein compounds—albumen, casein, or globulin—may act when coagulated as cytoblastemata. In the production of morbid formations from mother-liquids, the plasma seems never to occur in the solid state; if, in the department of unorganized nature, as in chemistry or mineralogy, a crystalline formation can take place in a partially or entirely solid amorphous substance, as for instance, in iron, sugar, silica, &c. Nothing similar has yet been observed in the human body." (Pp. 105, 106.)

"When we have once established the principle that the blastema for morbid products must always be amorphous, the old idea is obviously overturned, namely, that a normal tissue may be directly converted into a pathological formation." (P. 108.)

We are glad to find our author speaking strongly on this point, as he does in subsequent chapters, to which we have not space to refer in detail. The notion here set aside is one of the errors of the earlier pathologists, who conceived that normal substances could be transformed into abnormal ones—that muscle, nerve, or bone, could relatively liquefy into pus, or become cancer or tubercle, or that these could pass into each other. Modern pathology, however, has shown the impossibility of these things, though there is one author who stands alone amid the march of modern enlightenment, and treats pathology now and then as though it had not made a stride for the last century: we allude to Dr. C. J. B. Williams, the President of the Pathological Society. At page 166 of the last edition of his work "On Diseases of the Chest" he gravely informs us that "*Lymph, pus, and tubercle, pass by imperceptible gradations into each other*" !! The italics are the learned author's own. We have good reason to be grateful for the pathological information of our more trusty continental neighbours.

On the subject of the origin of cytoblastic formations, our author remarks:—

"In the present condition of our physical knowledge, I believe that no one will dispute with me, that we may establish the principle as a general law, that the cytoblastema of every morbid product, as also of the tissues in healthy nutrition, is obtained from the vessels, and that its source is always the blood, or, in some few cases, the chyle or lymph.

"In pathological epigeneses, it may often be directly observed that, in consequence of inflammation, the plasma exudes through the vessels and forms the cytoblastema; and in cases in which we observe no morbid secretion, it is more than probable that the ordinary nutrient fluid escapes through the vessels without inflammatory action, and thus forms a blastema for morbid products." (P. 109.)

The following observations, on a very important branch of this most important pathological subject, we have much pleasure in quoting:—

"The nature of the development of pathological epigeneses is dependent on—

"1. The cytoblastema, the quantity, quality, and mode of its production. The more rapidly and abundantly it is secreted, and in proportion as the the chemical composition (which, however, is certainly not accurately known) differs from the normal blood—plasma, so does the influence of the surrounding histological elements decrease, and the formation proportionately deviate from the normal type. Thus, small quantities of exudation easily become organized, and simple hypertrophy usually consists in small exudations repeatedly occurring after long intervals (weeks or months). We can draw no very definite limit between this process and that of healthy nutrition. Abundant and rapidly formed exudations are rarely organized, usually proceeding to suppuration. . . .

"2. The nature of the development is influenced by the histological elements of the part in the epigenesis. If the influence of these predominates, the newly-formed material [illegible]bles the pre-existing normal tissue, and thus, morbid hypertrophy, in regeneration of lost parts, &c., the process is just the same as in ordinary nutrition. . . . . . .

"The cytoblastema on the one hand, and the pre-existing tissues on the other, are each factors influencing the formation of organized morbid products, and it is on their different properties that these epigeneses are dependent both for their mode of formation, and for their general characters." (Pp. 115, 116.)

We have only, in conclusion, to express our regret that we have not further space to devote to an analysis of this excellent work. It is really an inestimable gift to those who know the value of sound pathology, and desire to cultivate it. The volume is admirably put forth in its English character, and is enriched with plates that ably illustrate some of the more important points of pathology. We commend it, most earnestly, to the notice of all scientific practitioners.

SURGICAL SOCIETY OF IRELAND.

SATURDAY EVENING, Feb. 6.—J. W. CUSACK, Esq., Vice-President, in the chair.

Professor Benson read a communication from a country member, Dr. Vickers Dunne, descriptive of a case of ascites in a female, which after having resisted, during a long period, a host of remedies from the hands of nearly as many practitioners, at length disappeared suddenly, the rapid subsidence of the abdomen being accompanied with a profuse renal secretion. The woman was at the time using no remedies, but the occurrence was marked by slight restlessness and febrile symptoms. Dr. Benson thought the case had most probably been one of encysted ovarian dropsy, which gave way suddenly, as so frequently happens in those cases; the fluid being absorbed from the peritoneal cavity, and finally disappearing through the agency of the kidneys. Dr. Benson was the more inclined to this opinion, from the resistance to treatment of all kinds known to be so generally offered by cases of encysted ovarian dropsy, and their being also often known to burst from some trivial violence into the abdominal cavity, and the fluid got rid of in this way.

DISLOCATION OF THE FEMUR INTO THE SCIATIC NOTCH.

Mr. Bannon, of Jervis-street Hospital, read the particulars of a case of dislocation as above: the subject, Lawrence Lawless, having been brought to the hospital on the night of the 6th of January, in a state intoxication. In a quarrel with another man in the Custom-house, he had fallen from a loft about fifteen feet from the ground, and while down, and in a bent position, the other man fell on him. When assistance reached him he was unable to get up; he complained of intense pain and stiffness in the right hip; and such was his condition on coming under Mr. Bannon's observation at twelve o'clock at night. The right limb, accurately measured, was half an inch shorter than the left, with the knee and foot slightly turned inwards, the knee being somewhat advanced upon the opposite one. In the erect position, the great toe of the affected limb reached the ground and corresponded with the ball of the opposite great toe, precisely as described by Sir A. Cooper. The heel did not reach the ground. The knee could be slightly moved across the sound limb and rotated inwards. All other movements were impossible, and any attempt to make them gave considerable pain. The parts about the joint were tense, the trochanter major being prominent enough, but evidently placed behind its natural position; the distance between it and the anterior superior spine of the ilium was increased, as ascertained by measurement of both sides: a means of discriminating between this dislocation and that upwards, on the dorsum ilii, which Mr. Bannon referred to as important, the distance between those two points in the latter dislocation being diminished. The limb had, of course, lost its natural roundness; and, though the patient was rather thin, the head of the bone could not be felt.

He was at once placed on the table, and extension directed across the sound thigh, kept up for some time with Mr. Lestrange's apparatus, at the same time that Mr. Bannon attempted forcibly to lift the bone over the edge of the acetabulum, by means of a sheet placed under the upper part of the patient's thigh, and over his (Mr. Bannon's) neck, and pressing down the pelvis with his hands. All efforts at reduction on this occasion failed, owing, perhaps, to the struggles of the patient in his then drunken and unmanageable condition.

At ten o'clock next morning, however, he was again placed on the table, and extension for about twenty-five minutes had the effect of partly dislodging the bone from the deep bed in which it lay; nausea having previously been produced by four grains of antim. tart. The extension was now relaxed at an instant's turning by Mr. Hughes, who had charge of Mr. Lestrange's simple and admirable apparatus for that purpose; while, at the same time, Mr. Bannon, assisted by Professor Harrison, raised the upper extremity of the femur over the posterior lip of the acetabulum, Mr. Woodroffe rotating the limb, and the bone re-entered into its socket with a loud snap. After three weeks in bed the man left the hospital free from any unpleasant symptom.

Mr. Bannon expresed some regret at not having known somewhat more of the effects of ether, at this time, not less on account of its great power in relaxing the muscles, than as a means of producing freedom from pain. He apologized for bringing forward the case, divested as it was of any new points; but yet, as the dislocation was one of rare occurrence, he thought a recital of the case might be useful to the junior members. Besides, it afforded him an opportunity of adding his mite of commendation to Mr. Lestrange's admirable apparatus.

DISSECTION OF THE PROBOSCIS OF THE ELEPHANT.

Professor Harrison exhibited a dissection of this structure, made with much care and trouble, and felt great pleasure in laying it before the society, as opportunities of examining the anatomy of the elephant must necessarily occur very rarely in this country. It was only by the French academicians that any very accurate description of this curious and most useful structure had been published in the "Encyclopédie Méthodique"; Cuvier's description of it also has not been excelled by any more modern writer. Most persons were aware of the advantages of this structure as an organ of prehension, constituting, in fact, a sort of additional limb, by means of which this animal is enabled to seize and raise up food and drink to his mouth. Its importance for such a purpose is obvious, on looking at the position of the head, which, on account of its enormous weight, is tied up by a most powerful and unyielding ligament that prevents its being brought to the ground for the purposes of feeding, as in other animals. In strictly anatomical language, Professor Harrison observed, this organ is nothing more than a highly-developed nose, rudimentary traces of which exist in the pig and other animals.

In the elephant the upper portion, or true nose, is attached to the nasal bones and root of the frontal, whence it descends and is prolonged into the trunk or proboscis, which, like the nose, consists of two canals with a central septum, lined throughout by a strong membrane, of a whitish colour, and possessing but little sensibility; while in the true nose the membrane is highly sensitive and organized. The central septum runs the entire way, and is composed of a thick elastic substance; the proboscis ends in a thick lip-like projection, with a groove in the middle line below, and a nob-like projection above, capable of being moved about with as much facility as the finger in the hand of man. The trunk is composed of a thick rough skin, transversely wrinkled on its convex surface, with a prominent rugged ridge bounding each side of its inferior and flat surface. Beneath this is an amazing mass of muscular structure, commencing at the root of the forehead, or top of the nose, and running down the trunk in a longitudinal direction, being in fact, Mr. Harrison observed, a continuation of the occipito frontalis, or, as some call it, the pyramidalis nasi muscles. The fibres of these longitudinal muscular fasciculi are ex-

tremely red and strong, the fasciculi themselves consisting of several layers, and forming a mass of great thickness. A second mass of muscles lies beneath this, but very differently arranged, consisting of a great number of short digastric muscles, beautifully and curiously disposed, forming tendinous sheaths for the various nerves, while the fleshy fibres run in a radiated manner to be inserted into the central tubes.

The nerves of this organ and their branches, consisting of the portio dura of the seventh, issuing from the stylo-mastoid hole, and the infra orbital branch of the fifth, escaping from the foramen of that name, are of immense size and number, constituting, he remarked, a greater mass than those of the whole human body would amount to. They interlace with each other very remarkably, much more so than the corresponding nerves of the human face, so that almost each fasciculus might be said to possess motor and sensitive filaments. Some of the latter, however, Mr. Harrison was enabled to isolate, and trace distinctly to their passages out from the head, without any interlacement as far as the tip. The tendinous canals formed, as described above, by the small digastric muscles, would appear designed to secure the former from compression during the action of the latter.

As before stated, the top of the trunk communicates with the true nose, the openings admitting of being closed, not by a perfect valve, as described by some, but the communication can be intercepted partly by the approximation of the lateral highly elastic cartilages, and completely by a lamina of muscular fibres which covers the membranous portion of each ala, which also contains a small cartilage.

The sensibility of touch of the tip of the trunk is of so delicate a nature that the animal can pick up the smallest bodies, such as even a grain of corn; at the same time that it is entirely destitute of the sense of smell, the olfactory nerves, which are of amazing size, being wholly distributed to the true nose.

A large flat pad of fibro-cellular and muscular substance is observed at the front of the head, a rudiment of which runs down the nose, and by means of which, and of his trunk, the animal performs those feats of physical strength that render him so useful in warfare and on other occasions. He can push with his forehead the largest of guns up steep eminences, or with his trunk lift them out of deep morasses, when they happen to become imbedded therein; by the same means he tears down large branches of trees for his food, or with his tusks uproots them from the earth. In drinking, the animal is observed to take the fluid, not directly into his mouth, but sucks it up into the tubes of the trunk, which, being closed above, he turns the trunk like the large spout of a jug into his mouth; the lower jaw and lip being shaped in such a form as accurately to receive the fluid. It has been thought that the young animal sucks the mother by similar means, and, from the difficulty of observing these animals with their young (as they seldom, if ever, breed in a state of captivity), this point was for a long time undecided. It has, however, he observed, been ascertained that the young animal presses close into the body of the mother, turns up the proboscis to one side, and holds the teat between the lower lip and margin of the trunk, and then sucks, occasionally compressing the udder with the proboscis, thereby assisting the flow of fluid into the mouth.

Reviewing the several characters of this appendix, viz.,—its conical form, great thickness, immense quantity of muscular tissue, its numerous nerves and vessels, the delicate sensibility and motor power residing in its tip, together with the central tubes,—all concur to render the proboscis of the elephant a very interesting object in anatomical and zoological science. It is a powerful weapon for offence and defence; an indispensable organ for the prehension of food; a refined instrument of feeling or of touch; while its thumb-like extremity is a delicate and dexterous motor agent. Its communication with the nose and respiratory passages enables it to raise up fluids and pour them into the mouth, and at the same time modifies its voice into the most varied tones, producing those well-known trumpet sounds, harsh and discordant, indicative of pleasure or of anger, so loud as to be heard at a surprising distance.

In conclusion, Professor Harrison promised, on a future occasion, to exhibit dissections which he had made of the ear and other parts of this animal.

TO CORRESPONDENTS.

A Surgeon, Brixton, *thinks the spongio-piline is much too expensive ever to come into general use—21s. per yard; and suggests as a good substitute flannel, four or five or more folds in thickness, dipped into hot water, gently squeezed, and placed upon the part; over this, to prevent evaporation and consequently the heat escaping, a piece of Macintosh cloth, oil-skin (oiled silk), or, what is quite as good and can be got anywhere, a bullock's or pig's bladder, slit open and bound over all. Thus we have the two great requisites of a poultice, viz., heat and moisture, and at a much cheaper rate than spongio-piline.*

An Old Subscriber *(an army surgeon) having practised before* 1815, *cannot be molested in general practice.*

A Student *seeks to throw on us the responsibility of an advice, which we feel it our duty to decline. The Schools in their programmes tell their own tales with sufficient definiteness.*

The philippic of Cato, *being political and wholly unprofessional, would hardly bear publication in our columns. It would, too, rather serve than injure its object—who seems to be one of those persons to whom everything, short of the "extreme penalty" is luck. With regard to other parts of our correspondent's note, we refer for answers to our last number.*

W. S. P. (Chester) *will obtain, free by post, the* Pharmaceutical Times *and the* Medical Times, *for the ensuing four volumes, for £2.*

M. D.—*All the numbers of the last volume may be had*

H. S., *on Mr. Cronin's case, is premature. This is not the moment when the relative blame of the different parties can be properly discussed.*

Mr. Sebright's *appeal to medical men, and to the members of the Army and Navy Clubs, should be published through some other channel. We may agree with Mr. Sebright, that our "risks and actual expenditure" achieved a public service, but still do not choose to make our journal the medium for appeals like those he proposes.*

A Pupil.—*At the College of Surgeons.*

M. D's *appeal is dictated by motives we appreciate, but we must decline its publication.*

A General Practitioner *sends us two guineas to what he calls "The Gratitude Fund"; "being two guineas for a* post mortem *examination, which, without the* Medical Times, *would have gone to Wilson." Our correspondent is informed that there is no such fund, and that his obliging contribution awaits his further orders.*

Results of the late Libel Actions.—*As an evidence of the state of feeling roused by the recent illiberal and recreant endeavour to injure the* Medical Times *by trumpery, causeless litigations, we quote the following out of many assurances which have recently reached our publisher:—"I have hitherto* (and for years) *been a subscriber to the* Lancet. *I feel so much disgust at the editor of that periodical (from the oppressive conduct shown to the* Medical Times, *and his general treatment of the Medical Association, which is headed by Mr. Pennington), that I transfer my subscription from the* Lancet *to the* Medical Times."

A. B.—*The usual purchase-money of a practice are the net profits of two years. The amount, however, rises or falls with the peculiar circumstances of the practice and its prospects.*

Mr. Blanch *is quite correct in his observations, that rheumatic inflammation of the testicle has been noticed in a book published by Dr. Murphy, of Kensington.*

The following communications are postponed to a future number:—

Mr. Smith, *House-Surgeon to King's College, on the Action of Mercury in Inflammation.*

Dr. Daunt, *Clinical Notes, No. VI.*

Dr. Cryan *on Irish Medical Poor-Law Relief.*

Dr. Willshire, *Clinical Observations on the Diseases of Children.*

Mr. Hilles *on "Sudden Death."*

Mr. Souther *on Stricture of the Urethra.*

Mr. Startin *on Ulcers and their Treatment.*

We have also to acknowledge communications from Dr. Barthrone, Crail, N.B.; Mr. M'Cormack, Glenluce; Mr. R. P. O'Reilly, Dublin; Berridge, Melton Mowbray; G. Swinton, Edinburgh; J. Walkden, Blackburn; Deveny, Kellybegs; Monday, Olveston; Botham, Chesterfield; Hodgson, Egremont; Dr. Arnold, Atherstone; Mr. Chesterman, Banbury; Price, Swansea; Robinson, Monaghan; Fisher, Bungay; Andrews, Bristol, Scholfield, Manchester; Ralfe, Much Hadham; Murphy, Ravenglass; Bramley and Stanfield, Halifax; Hett, Washenburgh; Mr. Hare, Clifton; Sir A. M. Dowrie, Germany; Emmett, Hounslow; Green, Rochford; Hatton, Colford; Manchester Medical Society, Mr. Browse, Paignton; Purdon, Belfast; R. King, Colnbrook; Christie, Seaham; Rough, Dublin; Hood, Newcastle-on-Tyne; Hooper, Kennington; Gibson, Ulverstone; Shaw, Sutton Colefield; Hutchinson, Bridlington; Lacy, Poole; Butler, Guildford; Buddell, jun., Tiverton; Dr. Lee, Northwich; Mr. Medd, Stockport; Greene, Wellington; Dr. Hamilton, Leamington; Mr. Barton, Ulverstone; Mr. Godbold; Mr. Fisher, Bawtry; Shelton, Bromyard; Maclay, Glasgow; Mr. Bourne, Radstock, Thompson, Primrose; Counsellor, Gateshead; Nolan, Wicklow; and several other correspondents, whose favours we shall notice in a future number.

Mr. B., Marylebone, *who courteously apprises us that he is already a subscriber, may possibly have a friend who is not, to whom the circular may convey a useful suggestion. Our circulation would be doubled, and the best of testimonials, secured us if those who think as favourably of us as our correspondent would make their convictions as widely contagious as possible.*

Mr. D. T's *case of ether inhalation has no peculiarities that can now make its publication useful. Our space is of no small value, and gentlemen who would use it, not to serve their brethren, but puff themselves, would do both an injury.*

A. S.—*There is no English book on infantile diseases that is really worthy of the present state of science. The clinical course our columns will owe to Dr. Willshire, physician to the Royal Infirmary for Children, will, we are in hopes, satisfactorily fill the void.*

A Reader of the "Medical Times."—*The diploma of the Glasgow Faculty will authorize medical practice in most, if not in all, our colonies. It is, we believe, the lowest-priced diploma in the Kingdom.*

Dr. Bushnan's work on the Water-cure has been received.

Spes *asks us a question, which it would be an infraction of professional etiquette to answer.*

Amicus Justitiæ.—*We are receiving, since the Hounslow inquest, so many letters detailing acts of coronatorial injustice to medical men, that we shall find it necessary in a future number to submit a scheme to our professional brethren, by which we may be enabled to teach those functionaries, that, with Lord Denman's judgment before the country, no further act of illegality and injustice shall go unpunished. The profession must be protected from what are nothing less than magisterial frauds, mischievous to the public, and oppressive to medical men.*

A Student.—*The work of Müller on Physics (perhaps the most perfect ever given on the subject) contains not 1000 engravings, but from* 500 *to* 600. *The* Pharmaceutical Times, *which this day publishes the second part of the work, gives in the present number no less than twenty-eight illustrations.*

THE MEDICAL TIMES' PRIZES FOR THE BEST REPORTS OF MEDICAL AND SURGICAL CASES.

The results of our last Prizes have been so far encouraging that we propose for Professional Competition, for the year 1847, the following Prizes:—

Twenty-five Guineas for the twelve best reports of original cases in hospital or dispensary practice.

Ten Guineas for the twelve reports of original cases, as above, second in merit.

Five Guineas for twelve reports of original cases, as above, third in merit.

In offering these prizes we repeat that our aim in this, as in other matters, is to promote the SCIENCE of our Profession. The groundwork of the best part of our *practical* science and of most of our subsequent Professional worth is laid down in our studentship; and the great and the only true teacher of the student must ever be—hospital practice. Lectures and books have their uses; but it is by the bed which holds a human being, with the joy of health or the pain of disease, the chance of life or the peril of death, depending on the aids of science, that we acquire our true knowledge. There is there for the student no listless ear, no dull eye of the lecture-room: it is not the memory alone that is appealed to, or some abstract love of a pedantic and inapplicable lore. Every power of his mind is engaged: he is forced by the sympathies of his nature to hear and see, to observe, to reason, to prognosticate, to be EXPERIENCED—each patient's case is a volume of medical science in its most practical aspect, forced on his acquaintance for life!

The authors must be students who shall not have received any medical diplomas or licenses.

Six of the cases are to be medical, and six surgical.

The cases must have occurred during the year; and the names of the gentlemen under whose treatment they may have principally come must be distinctly mentioned.

Three arbitrators will be appointed—one surgeon, one physician, and one general practitioner—whose names will be duly announced. The decision will be on the 1st of July.

The Prize Reports will be published in succession in the "Medical Times," with the names of their authors.

They are to be sent to the Editor of the "Medical Times" on or before May 1, 1847, accompanied by a certificate from a surgeon or physician to a hospital declaring that the writer is *bonâ fide* a medical student. A motto or device must be inscribed on each report, to identify the author, whose name, with a duplicate of the motto or device, must be mentioned in a private note, which will be opened when the award shall have been made.

THE MEDICAL TIMES.

SATURDAY, MARCH 6, 1847.

We last week dwelt at some length on the duties which the profession owes to the National Institute: we propose this week a few words on the duties which the Institute owes to the profession.

These duties take three aspects: one regards the profession—another, the public—a third, the Government; and all three are controlled, modified, and interpreted by the great final cause of the society itself, namely—its objects.

What are these objects? Briefly these:—to readjust medical polity by professional instrumentality. Medical agitation has taken many phases of [illegible] years: it has combined; it has separated; it has publicly protested and petitioned; memorialized by hundreds, and assembled in thousands; it has played in turns assailant and defender; now humble and apathetic, now bold and energetic; but in all our changes there has been but one leading motor principle—the deep conviction that a great and severe change in our polity is indispensable.

Here, then, is the mission of the National Institute. Hence was it created—hence supported. The tenure not only of its prosperity, but of its very existence, is its efficacy in this service. As was said of old—"If thou wilt not labour, neither shalt thou eat." The Institute exists for an end; and, that it may continue to exist, that end must be steadily, zealously, energetically kept in view.

Few, we imagine, think more highly of the Institute than ourselves. *Few* would make less unreasonable demands on its time and industry. *None* would more anxiously watch over its defence, or feel more pleasure in bearing testimony to its triumphs, and more than to these—its earnings. Still, regard no less for our duties than for its worth enforces on us the stubborn *avowal:—the council are not working hard enough.* Though their well-being be as dear to us as to themselves—were it *possible, more* so—yet truth and our very interest in that well-being extort from us the reluctant acknowledgment—that they are at this moment not up to the level of their responsibility. Like the soldiers of Hannibal, they are losing in the indolence of Capua the advantages gained by hard and steady fight at Cannæ. They are faithfully at their post, it is true—but they are not making the best or the most vigorous use of its opportunities. The important position—the great strength won in their arduous campaign—they are not turning to all the account of which it is susceptible. The generals of a victorious army, they are, in some measure at least, allowing it to disperse each man to his home—or waste its powers and energies in an inglorious and enfeebling inaction. We tell them this in time, while the mischief is neither great nor irreparable. We tell it to them publicly—that the *spur* may have a strength applied, not as by one—but by thousands. They have done good service: they are still capable and desirous of good service; and we have sufficient confidence in their honesty and good intentions to feel that they will yet thank us for enforcing on them an activity which must beget the state further good service. We desire to assure them that we are not unconscious of the value of what is often probably dinned in their ears—"prudence," "caution," and "leaving well alone"; nor are we unconvinced that there *are* times when it is wise "*not* to do to-day what can be quite as well done to-morrow"; but we tell the council bluntly, that theirs is not a to-morrow case—that theirs is not the position in which it is prudent to wait, wise to defer, or possible to leave "well alone." They do not exist to leave "well alone." Their charter to live is resistance to wrong, and the only result of inaction is to leave not right but wrong "alone." The source of their strength and virtue, as the first aim of their existence—is action. They are nothing, and must become nothing, without it. They have, for the present at least, no charter to administer; no corporate functions to fulfil, save this—to influence their brethren and the public in the active service of good government. The Institute, indeed, is not yet out of its infancy. It is not so much what it is, as what it has the power of becoming. It is a nucleus undeveloped: aggregating powers possessed, but not yet evidenced. The council have now scarce a duty save that of building up, widening, and strengthening the edifice. The profession has given them the materials to commence with; it remains with themselves to turn them to full account. They are firmly established; safely, if not handsomely, set up; it rests with them to say with what success the business shall be carried on. But, having intrusted them with our "ten talents," we shall exact some day a rigorous account of their use. It will not do then to tell us that they have been unemployed, and that thus nothing has been either gained or lost. They are put out at usury, and the profession will insist on a handsome return for the trust.

The cardinal point of policy now is for the Institute to strengthen itself. Every thought ought to have this direction. It should construct itself into the largest organization into which it is possible, by the best policy and the most active exertions, now to form the profession. To this point all its meetings, publications, doings, and disbursements should tend. How acquire this extended support? There is one easy answer—"Go through the land, and show face to face to your brethren, as you may, that you deserve it." Be as active for union and good fellowship as your enemies are, against them. Beget zeal by evidencing your own: win confidence by demonstrating it deserved: the sacrifices you require in a public cause exemplify. There should be no town in England or Scotland unvisited by your truths and principles: and, once visited, there should be no town that should be left uninterested, unwarned, unenthusiastic in your cause. Collect medical medical men in each locality into a political *fasciculus* of power—ever ready to be wielded at an opportune moment, in a good cause, in concert with thousands of other *fasciculi.* Work first for all the practitioners: first secure and organize them—the public will be easy of attainment afterwards. These aims won—who shall doubt the enlistment of the Government? These not won, who shall doubt its indifference or estrangement?

There is here a mode of action as prudent as it is facile, which should not be delayed another week. Whatever the chances of the Institute with the Government now, they will indisputably not be lessened when a larger amount of professional support and interest can be evidenced.

The quality, indeed, which alone can present the Institute to the Government, as a negotiating power of not less consequence than the opposing corporations, is the zealous partisanship of a whole profession, evidenced by enrolments and pecuniary contributions. The Minister will always bow—indeed, always must bow—to so authoritative an intervention; and the profession would have in its own hands the materials, not less of its own reorganization than of its own defence and security. Whenever a Government settlement shall come, it is easy to foresee that one characteristic cannot be wanting—that that section of our body will have made the most concessions which shall have had least power to preclude them. In legislative houses, as elsewhere, the weakest will go to the wall.

THE CASE AGAINST MR. CRONIN.

We do not feel that it would be either just or decent to comment on this case before the jury

have returned their verdict. Whatever we might say would necessarily have the tendency to inculpate; and to prosecute without the functions or responsibility of that odious but necessary office, does not consist with the duty which we owe either to ourselves or our readers. The great distinction between this case and that at Hounslow is this:—That interference there, instead of pressing on the accused, defended, protected, and vindicated men cruelly and illegally aspersed, and against whom the prejudices of an excited jury, and the passion of an inflamed public, created dangers—and against respectable medical men—neither unreal nor unimportant. An interposition there by a medical journalist, with all the force which the magnitude of the occasion so loudly called for, was, as Lord Denman declared, of considerable influence. The coroner was checked in his illegalities, the jury forced into comparative moderation, the public compelled to distrust the truth of their impressions; and hence that *considerable influence* was a public benefit—which fully justified an interposition which might, under other circumstances, have deservedly been deprecated. In Mr. Cronin's case the argument for indulging in comment is as weak, as in the Hounslow inquest it was strong. The man is on his trial for a very serious offence: his condemnation or acquittal should depend on the jury's view of the evidence adduced before them: and it ill becomes a medical journalist to take the responsibility of inciting to the inculpation of an unfortunate, if ill-doing, practitioner, by premature considerations which never ought to reach the jury but in one place, and that the court of justice—and through one channel, and that the witnesses.

We add, without one word of comment, that portion of the charge of the learned Recorder made to the grand jury, which has reference to this case:—

"There was, however, one case to which he should feel it his duty particularly to call their attention, because it was one a little out of the ordinary course, and, although the law was perfectly clear in reference to it, yet, as the evidence in such cases was ordinarily not very clear, and did not appear, indeed, to be so in the present instance, he thought it right to call the attention of the grand jury to the subject. The case in question was a charge against a medical man, of the offence of manslaughter, by the administering of improper and poisonous medicine, and thereby causing the death of the deceased. With regard to the question of medicine being administered by a medical man, or a person not licensed to act in that capacity, he must inform them that the law was clearly understood as not making any difference between persons so situated, and they were both equally amenable to a charge of manslaughter where death ensued, if the other circumstances, required by the law to prove the offence, were clearly established; and, therefore, the point whether the accused was a regular practitioner or not, would not require to be considered by them. The principal point for the consideration of the grand jury was, whether there had been gross negligence or inattention, such as amounted to a criminal disregard to the safety of life; and he must tell them that any proof of criminal inattention on the part of a medical man—there being, of course, no imputation of any deliberate intention to do injury—would amount to the crime of manslaughter, where death was the result of such inattention. In a case of some notoriety, in which a gentleman named St. John Long was charged with manslaughter, the jury, by their verdict, specially found that he had no intention to cause the result that took place, but that still the death was attributable to a criminal disregard to the safety of life; and this was clearly held to amount to the crime of manslaughter. In the present case it would appear that the accused party did not actually administer the ingredient that caused the death, but, as it appeared perfectly clear that it was administered through him by an innocent agent, no difficulty could arise upon this point, and he would be equally liable, supposing the facts that were necessary should be proved to the satisfaction of the jury. (The Recorder then proceeded to state the circumstances under which the charge was made against the accused, and which, as they have been so very recently given, it will not be necessary to report.) He said, he collected from the depositions, that the accused had once before prescribed a similar medicine for the deceased, which was prepared under his own superintendence and control, and no evil result followed. On the second occasion, however, it appeared that he wrote a prescription, stating that the medicine might be made up at any chemist's shop; and this second medicine was alleged to have occasioned the death of the deceased. The prescription given by the accused referred, among other ingredients, to prussic acid of Scheele's strength, and also a certain quantity of compound strychnine powder, and bitter-almond water, which also it would appear contained a certain quantity of prussic acid; and he apprehended there would be very little doubt that the death of the deceased was attributable to prussic acid. If a medical man thought right to make use of such dangerous and deadly materials, it was undoubtedly his duty to take care that his prescription was properly and carefully made up, and it would be for the grand jury to look upon this as one ingredient in the case before they came to a conclusion that there had been gross or criminal negligence. It appeared that one ingredient mentioned in the prescription, viz., the compound strychnine powder, was omitted, the chemist not having that article in his possession; and it would therefore be a material question for the consideration of the grand jury, what was the character or quality of this material; and he recommended them, therefore, to question the medical witnesses particularly upon this point; as if it should appear that, although in itself a dangerous ingredient, yet that it was calculated to neutralize the dangerous and deadly qualities contained in the other materials that were prescribed, undoubtedly, in that case, the defendant would not be amenable to the charge made against him. The Recorder observed that he regretted he was compelled, in order to make the matter intelligible, to allude to the circumstances of the case with more particularity than he should have otherwise felt himself justified in doing, and to take for granted that certain facts would be proved; but the grand jury would, of course, only apply the observations he made to them to the evidence that would actually be produced, and to act upon that alone. They would first inquire into the cause of death, and upon this they would probably not feel any difficulty, and then the most important question would remain, whether the death was to be attributed to the prescription, not to the draught, he begged them to recollect, but to the prescription itself; and they would then inquire whether the article that appeared to have been omitted was of such a character as to affect the quality of the draught, or to render it more dangerous than it would have been if the medicine had contained that ingredient. Being satisfied upon these points, they would then see whether the facts warranted the assumption that there had been any criminal negligence, or disregard to the safety of human life, evinced by the accused. No man, medical or other, had a right to make use of such deadly ingredients as those in question, unless under his own superintendence; and if he gave a prescription to be made up by an ordinary chemist, taking the chance of his doing so correctly, and of the fatal consequences that might result from any negligence on his part, it would be a question whether this would not amount to criminal negligence; and this observation would more particularly [illegible], when it appeared that two of the ingredients mentioned in the prescription were not mentioned in any pharmacopœia. His lordship then made some further observations in reference to the nature of the case, and said that he had gone somewhat more at length than was his wont in his observations, because it was one of great importance; for, although it would be very hard to make a medical man amenable to a charge of manslaughter, because he happened to be unsuccessful in his treatment of any particular case, yet, on the other hand, it was necessary, for the protection of the public, that persons of the medical profession should understand that, if they chose to make use of dangerous and deadly ingredients, they were bound to exercise the utmost care and caution in so doing. The interests of science required that there should occasionally be some departure from the beaten path prescribed by medical authority; and many important results had followed from such deviations, by the alleviation of diseases heretofore deemed incurable. But, if dangerous experiments were attempted, the persons adopting them must be taught to keep within proper bounds, and that they must exercise the most ample caution in carrying out these experiments.

"The grand jury then retired."

TESTIMONIAL TO MESSRS. BIRD AND ANCELL.

We are quite of the opinion of the Council of the National Institute, that some substantial token should speedily express the grateful and friendly feeling entertained by the profession to the late Secretaries of the National Association. They have worked well in critical times: devoted really high abilities and labours of no ordinary character, and accompanied by no small sacrifices, in the service of a profession, whose interests were in no small danger. Hitherto their reward has been the vituperative and vindictive animosity of men offended by their honest zeal for the well-being of their brethren. It has, however, been well felt that it was neither right nor politic that this, however laudatory in its actual influence, should be their sole remuneration. No large community can ever be safe or prosperous, which has not in its body members who will fill the gap in a moment of sudden or imminent danger: and 'twould indeed be a vain hope to expect such opportune defence if the moment of our safety should not also be that of their appreciation. To deserve defence is to know how to value and to reward it: and we should despair not a little of the profession's future, not less than of its deserts, if such toils as those of Messrs. Bird and Ancell should go unrewarded and unacknowledged.

FATAL ETHER OPERATIONS.

The case of lithotomy performed at the Suffolk and Colchester Hospital, proved fatal within twenty-fours after the operation. We understand also, that an old gentleman operated on for some disease of the foot during the last week, by Mr. Travers, died within twenty-four hours of the operation. He never recovered from the stupor caused by the ether.

MISCELLANEOUS CORRESPONDENCE.

LETTER FROM MR. CLAY.

Manchester, Feb. 17.

SIR,—The answer to my charge against you "of attempting to palm upon the world, as a discovery of your own, the treatment of varicose veins with Vienna paste," is still *unrefuted;* and your subterfuge of turning the subject to a translation of a book, which I neither mentioned nor thought of, will neither do for me nor the profession at large. I told you the facts and cases of Laugier and myself were published in the *Lancet*, and, I may further add that Laugier's remarks were copied in most of the European medical journals, where you must have seen them, although I suppose you thought the facts were forgotten, and you might now claim the discovery as yours. I challenge you to produce a single case *publicly attested* where the Vienna paste was ever used for such a purpose in England by yourself, or any other person, prior to 1839, simply because the idea was unknown to the profession before Laugier announced it. Had the governors of St. Bartholomew's Hospital elected their medical officers by *concours*, I think the name of Skey would have been omitted amongst the *assistant-surgeons*. See *Medical Times*, vol. V., p. 89:—"On small men we will be mild: they got their places, like their principles, by interest. Skey is middle-aged, &c. &c., has written on ulcers and syphilis, a critique upon which thus expresses itself—'Six or seven lectures bound together make a book.'"

Hoping a more honourable course may guide you in future is the wish of,

Yours respectfully,
CHARLES CLAY, M.D.

To T. C. Skey, Esq., Grosvenor-square, London.

A SUGGESTION.

[To the Editor of the Medical Times.]

SIR,—Experience has taught me that the most simple contrivance for the effectual and safe administration of ether by inhalation is to saturate a sponge with the following ethereal solution, and apply it to the mouth and nostrils, that the patient may breathe easily through it. The ethereal solution which I recommend, and which, from its less irritating and more sedative properties, I have found to answer better than either sulphuric or chloric ether alone, is prepared by adding two drachms of ethereal oil (ol. æthereum) to six ounces of pure rectified sulphuric ether. I have now administered the ether in more than forty cases, and have tried a variety of apparatus, but am persuaded that the above is the cheapest, safest, and best.

This morning, Mr. Tibbs, surgeon-dentist, extracted three teeth, without causing any pain, from a patient, Jane Richards, residing at No. 6, Oriel-place; and the effects were kept up for nearly three quarters of an hour, by the continual applications of the sponge, without the slightest unpleasant after-consequences. Mr. Fricker (surgeon) and Mr. Perry were present, besides Mr. Tibbs and myself, and expressed themselves highly gratified with the result.

I have the honour to be, your obedient servant,
THOMAS SMITH M.D.

Portland-house, Cheltenham Feb. 15.

[To the Editor of the Medical Times.]

SIR,—In your last number (I have not seen the previous number) you have introduced the concerns of the Edinburgh Infirmary. Permit me to tender a brief explanation.

Soon after the silly and very shameful *doquet* tomfoolery was inflicted upon the Annual Court, I attempted to check the irregularity; but the chair put me down. Then and now I was convinced that the question introduced and is no question proper or even ripe for the examination of that court, being purely a question between superior servants and one inferior servant. In railway questions, I am told, it is a common reply with Mr. Hudson, when a similar complaint is made to him, "Oh, Sir, I never meddle with these things; go to Mr. So and So; he has the entire charge of that department of the railway, and he has my thorough confidence." When the Infirmary Annual Court was applied to, in precisely similar circumstances, on a question distinctly between the managers and a servant of the infirmary, but most particularly when this servant rebels most despitefully, and glories in his rebellion, against their implied mismanagement, this Hudsonian answer should have been returned, even to the President of the Royal College of Physicians—the volunteer complainant—"Go, Sir, with your complaint and all your mental reservations, to the managers of the Royal Infirmary of Edinburgh. They have the entire charge of that department in the infirmary, and they have the thorough confidence of this court."

A few days after this *sederunt*, I found in the Edinburgh newspapers Mr. Syme's remarkable epistle, which you have also printed, addressed to "My lords, ladies, and gentlemen of the Edinburgh Infirmary Annual Court." With "the formidable rival infirmary, which had sprung up at the door of the Edinburgh Infirmary"—with his "deanship"—I have no concern whatever. With his professorship—a demon's scourge cruelly placed in his hand—with his correct or incorrect conduct as a surgeon in the Royal Infirmary of Edinburgh, and with the surgical patients located in his wards there, whom, till now, I always believed to be *his* patients—with these I have a deep concern, and hold him, even to me, responsible.

That remarkable document informs me that the deeply responsible duty of attending to the surgical treatment of *all his* infirmary patients daily occupies one hour per chronometer; and that medical students, for twenty-three hours out of the blessed twenty-four hours, are the daily surgeons of *his* infirmary patients.

For example: A patient with a fractured limb is brought into the infirmary at two o'clock P.M. It is a medical student who examines the accident at the time, and applies the bandages. This alone would be abundantly cruel—but the medical student is seldom *solus* in this cruel case:—the *corps* denominated clerks, and the legion of medical students around the sufferer, interrogate, examine, confound the victim—and inflict that second examination described by Mr. Syme in his letter as an examination "which can never be made without causing pain, which should have been carefully avoided, and tends to delay the healing process, besides exposing the patient to the risk of more serious consequences." In this deplorable condition, the wounded man lies, until Mr. Syme—his nominal surgeon—visits the infirmary *next day at noon*, when the bandages must be again opened for Mr. Syme's information, and nature's operations, at a most critical period, interrupted.

But this victim with a fractured limb is not a solitary example of Mr. Syme's surgical attention to patients in the Edinburgh Infirmary. He formally certifies to the lords, ladies, and gentlemen of this infirmary annual court, that no patient located in his wards, whatever the case may be, receives from him (the surgeon) daily more than an arithmetical fractional portion of one hour's surgical treatment; and the whole of the doquet mystery is wrapped up in this handkerchief. An infinitesimal dose out of sixty minutes gives a soft quietus to all "his various engrossing cares attendant upon an hospital visit"!

I have witnessed, while a member of this infirmary annual court, two calamities:—

1. Mr. Liston—stuck up in a corner of the court, denounced in very extravagant terms, by the President of the Court of Session, as the surgeon who cured all incurable diseases—expelled from the infirmary.

2. Mr. Syme—not indeed personally present, but through the press, and the mouth of the president of the Royal College of Physicians—attempting to evade a pledge to obey a command which all other professors obeyed, pleading that *his* infirmary patients are not HIS patients; boasting that only for one hour daily they receive an infinitesimal dose of his attendance and care; confessing that for twenty-three hours daily they are the devoted patients of medical students; threatening to resuscitate his "formidable" opposition infirmary; and, to crown all, proclaiming defiance to the authority of his employers, the managers of the Royal Infirmary of Edinburgh.

These managers he has indeed humbled, for he has demonstrated as plainly as language can express any demonstration, that the pretence of charity or benefit to the infirmary patients, from the connection of the infirmary with what is as ludicrously as mischievously denominated a medical school, is only equalled by the pretence of benefit to the youths, misnamed students, who are compelled to waste their time and money, as much to their own serious detriment and degradation, as of the hapless patients, whose peace and feelings and recovery they so cruelly and preposterously and unwarrantably and unnecessarily diminish and retard, and too often destroy.

So long as I am certain that nothing but injustice, cruelty, mischief, and confusion can result from the combination of an infirmary and a medical school, I shall, in season and out of season, stigmatize such an unholy union, and shall leave no stone unturned, as well for my profession's as for humanity's sake. I shall put forth every effort to cut the Gordian knot—to establish a pure infirmary. Language cannot express the atrocity of mounting such a Nemesis as a medical school is, upon the back of an infirmary. Men may call the noble Arabian steed, which bears the savage Tartar into the field of carnage, a lamb. Call the noble animal what you may, he is a destroyer—his hoof, indiscriminately, without regard, tramples, mangles the peasant and the prince—man, woman, and child.

The extinction of such atrocities can never be effected by poking about the circumference of the circle. It can only be effected by a bold powerful blow struck at the centre—the Royal Infirmary of Edinburgh.

I am, Sir, your obedient servant,
JOHN THOMSON, M.D.

York-place, Edinburgh, Feb. 23.

DR. HILBERS'S REPLY TO DR. ORPEN.

[To the Editor of the Medical Times.]

SIR,—As I am so directly addressed by Dr. Orpen in his letter on homœopathy, I feel constrained again to trespass on your liberality, lest my silence should be misconstrued. It is with some reluctance that I do this, because, when I wrote my former short letter, I endeavoured so to frame it, that while it answered the purpose for which it was written, I might escape the necessity of replying to any further attacks on the system proceeding from the same quarter.

I think the easiest and most direct way of pointing out wherein Dr. Orpen's experiments were faulty will be to relate the manner in which Hahnemann obtained the vast body of symptoms which he describes in his "Materia Medica Pura," as being those which the different medicines will produce on the healthy human organism. I feel the less regret at occupying the valuable columns of the *Medical Times* with this subject, because it is one of great importance; and one which is engrossing the attention of some of the most celebrated philosophers in the *allopathic* schools of medicine on the Continent: and even in our own country examples are not wanting of those high in repute in the medical world inculcating on the profession the necessity of their studying the pure physiological effects of medicines on the healthy body. In Germany the rancorous animosity once exhibited towards Hahnemann and his system is happily dying away, and the authenticity and value of his researches in this branch of medical science are now openly acknowledged by some of the most celebrated teachers of thera-

peutics, who do not hesitate to recommend to their classes the "Materia Medica Pura" as the best work extant from which they may obtain the requisite information.

A twofold source furnished Hahnemann with the recorded symptoms:—1. He diligently sought out, in the writings of his predecessors and contemporaries, for the various morbid phenomena which appeared in those cases where poisonous doses of the medicines had been taken. These he carefully collected; with his wonted accuracy, affixing to each symptom the authority from whence it was derived. His great learning, and prodigious powers of research, well qualified him for the efficient performance of such an undertaking; and thus he obtained many of the most characteristic peculiarities of the different medicines. 2. He took himself, and administered to others, daily, doses of the medicines, carefully noting down from day to day the effects produced on the different "provers." The precautions which he deemed necessary to ensure correctness in these "provings" are to be found detailed at length in the "Organon," sections 120 to 140 (fourth German edition). Space does not permit me to transcribe them at length, nor is it of material consequence, as the only point we have here to consider is the dose in which the medicines were taken, and the preparations which were used. Section 121 runs thus (American translation):—"In studying the effects of medicines upon healthy persons, it must not be forgotten that even the administration of moderate doses of the so-called heroic remedies is sufficient to produce modifications in the health of the most robust individuals. Medicines which are more gentle in their nature ought to be given in larger doses, if we would likewise prove their action. Finally, if we would prove the effects of the weakest substances, the experiment must be made upon persons only who are, it is true, free from disease, but who are at the same time possessed of a delicate, irritable, and sensitive constitution." In other words, the doses varied (as I said in my letter) according to the *commonly received opinion* as to the medicinal activity of the substance. To guard against injurious consequences, the prover began with a small dose, and daily increased it. In section 123 the mode of preparation is described. Indigenous plants are to have their juices expressed, and are to be mixed with a small quantity of alcohol. Foreign plants are to be pulverized, or prepared as spirituous tinctures, and are to be mixed with a certain quantity of water before being taken. Salts and gums are to be dissolved in water just before being taken. An infusion of dried plants is to be made with boiling water, which is to be taken whilst warm. A different mode of preparation was employed for those substances, which possessed no apparent medicinal properties in their crude state, as the metals, calcarea, sepia, vegetable carbon, &c. &c. These Hahnemann directed should have their properties developed by trituration. One grain was rubbed for many hours with five, ten, twenty, or a hundred grains of sugar of milk, and the "prover" was to keep on increasing the dose till symptoms appeared. The "provings" of such substances are to be found for the most part in the work on chronic diseases.

For many years Hahnemann contented himself with the provings thus obtained, but in his later days, after he had announced his discovery of the "theory of potencies," he began to use the infinitesimal doses in the provings of some few of the medicines, not *alone*, but in ADDITION to his former plan. If any abnormal sensations appeared when the prover was taking the infinitesimal doses, they were set down as having been occasioned by these doses; but if none such appeared, he went on to the increased dose as formerly. This theory of potencies, as well as the Psoric theory, was, both at the time of its promulgation and since, disbelieved by many of the most celebrated homœopathic practitioners. A belief in it is not in any way essential to the practice of homœopathy, and it is manifest that, even allowing that Hahnemann was in error in believing that these minute doses were capable of producing medicinal symptoms in a person in health, the authority of the *Materia Medica* would be but slightly impaired; for the symptoms obtained from this source only formed the smallest possible minority of the aggregate number of symptoms. Then, as no homœopath thinks of prescribing on one symptom alone, it is but of slight importance whether these symptoms are or are not genuine. Attempts have, however, been made to purge the work from these uncertainties.

From this statement I think it will be evident even to the meanest capacity, that Dr. Orpen's experiments with the infinitesimal doses *alone* are utterly insufficient to justify him in asserting that all Hahnemann's provings (to obtain which, be it remembered, entirely different means were used) are the mere inventions of his brain; or, as he less politely terms it, enormously lying and deliberate humbug. Before he could do this *he ought carefully to have repeated all Hahnemann's experiments, and not to have invented experiments of his own* (the italics are verily mine); and I will undertake to say that Liebig and Berzélius, and the shades of Sydenham, Lavoisier, and Co., if they could speak, would bear me out in saying, that if an author declares that a certain number of causes lead to certain effects, it is necessary, before these effects can be reasonably denied, to put all or the greater number of these causes into operation; and that it is the height of imbecility to say that, because in one single instance one single set of experiments has failed, therefore, that an immense body of facts, founded on an entirely different series of experiments, are false.

I will now endeavour, as briefly as possible, to reply to the numerous questions he has put to me in the order in which they occur; but he will observe that many will have been already answered in the preceding statement. My reply, then, to the first three questions contained in the second paragraph of his letter is, that after a most diligent search I am unable to discover any sentence, or part of a sentence, in my letter which the most perverse ingenuity can torture into a plea for putting such questions to me. If I were disposed to hazard an hypothesis in the matter, it would be that Dr. Orpen had been amusing himself by transposing my words in the same way that they do letters, to form anagrams, and that thus he had obtained the requisite materials. He will, without difficulty, I should think, be able to discover that, in my opinion, they should all be answered in the affirmative.

I am not aware that Hahnemann ever said that the effects of an infinitesimal dose of medicine, taken by a person in health, would display its effects for six weeks. Will Dr. Orpen refer us to the work where this assertion is made? It is quite true that the use of tobacco was permitted to the "provers" during the time that they were taking the medicines—the reason for this is obvious. The Germans are from childhood so habituated to its use, that it soon ceases to have any medicinal effect at all on them. Hahnemann's object would have been entirely defeated had he forbidden it, because the leaving it off would have excited as many abnormal phenomena as total abstinence from food and drink. Every smoker knows the extreme inconvenience occasioned by breaking through the habit when once formed.

Neither I myself, nor any homœopath with whom I am acquainted, has ever been so silly as to confine our experiments with the homœopathic medicines, for the purpose alluded to, to the infinitesimal doses. But societies are being formed all over the world for the purpose of re-proving the medicines, in order to correct or corroborate Hahnemann's provings. The plan generally adopted is as follows:—The secretary gives to each member a medicine prepared in accordance with the rules already specified, without telling him the name of it. At the next meeting each member appears furnished with a list of symptoms which the medicine has produced. These are then compared with the "Materia Medica," and the result in general has been to confirm, in a most wonderful manner, the accuracy of Hahnemann's observations. Did space permit I could give some striking illustrations of he truth of this assertion.

Why my "theoretic illustrations" from musk, &c., should be judged to be an absurdity on the first two counts, I cannot exactly see. I am also at a loss to imagine how Dr. Orpen can assert so *positively* that the experiment was never made. As far as my memory serves me, I read the statement in "Chambers's Edinburgh Journal" some eight or ten years since, but, as I have not the numbers by me, I am unable to refer to them. If the belief "that olfaction is in any case produced by a continuous waste of particles issuing from the odorous body and impinging on the nervous expansion for smelling" is an absurdity, I must assuredly plead guilty, for I verily believe it to be so. To alleviate the shame, however, which I might otherwise feel, I have the consolation of having for my companions in my absurdity many eminent physiologists, including Sir C. Bell, Muller, and Dr. Carpenter. Sir Charles says ("Anatomy and Physiology," vol. iii., p. 206)—"Animal and vegetable bodies, during their life, growth, putrefaction, and fermentation, and most probably all bodies whatever, are perpetually giving out effluvia of great subtility. Those volatile particles repelling each other, or diffused in the atmosphere, are inhaled by the nose, and convey to the pituitary membrane the sensation of smell." Müller says ("Elements of Physiology," p. 1312)—"The material causes of odours are, in the case of animals living in the air, substances suspended in a state of extremely fine division in the atmosphere." Dr. Carpenter says ("Manual of Physiology," p. 550)—"There are some solid bodies which possess very strong odorous properties without losing weight in any appreciable degree by the diffusion of their particles through the air. This is the case, for example, with musk, a grain of which has been kept freely exposed to the air of a room, whose doors and windows were constantly opened for a period of ten years, during which time the air thus constantly changed was completely impregnated with the odour of musk; and yet at the end of that time the particle was not found to have perceptibly diminished in weight. We can only attribute this result to the extreme minuteness of the division of the odorous particles of this substance." Will Dr. Orpen give us equal authority for a contrary opinion? If not, however heterodox my opinions in therapeutics may be considered, I must at least advance a claim to superior orthodoxy in physiology.

From the next paragraph I think we may fairly deduce what I have all along suspected, that Dr. Orpen's experiments were not undertaken with any *bonâ fide* intention of elucidating truth. Had they been, he would not have rested satisfied with attributing to fancy any abnormal sensations which he might have experienced immediately after he had taken the medicines. A true philosopher would have repeated the same experiments again and again, until he had satisfactorily ascertained whether such sensations were real or accidental.

Judging from the next paragraph, one would imagine that he had never heard of such things as persons being poisoned, and *post-mortem* examinations following on their death. If he doubts the capability of medicines to produce effusions into the cavity of the brain and its membranes, I would recommend him to study "Christison on Poisons," and the section headed, "Pathologische Anatomie," affixed to each medicine in "Noack and Trink's Handbuck."

The "pretty quotation" from Harvey was made, not because I desired to attribute any particular virtue to the name, but because I thought it was the only decent way in which a gentleman could notice the coarse abuse so lavishly bestowed on a body of men, at least Dr. Orpen's equals in probity and honour, and many of whom are immeasurably his superiors in learning and scientific attainments. He must permit me to tell him, that, however gratifying such language might be to the readers of a third-rate Sunday newspaper, it is but little suited to the refined tastes of the more enlightened members of the medical profession, for whose benefit I presume the *Medical Times* is weekly published.

If I were called on to give an illustration of my ideas of the very essence of "humbugology," I do not know that I could find a more apt one, than when one writer deliberately misstates the words of another. I must leave it to my readers to decide whether

Dr. Orpen has done this in the following paragraph.—He says, that I "argue" that medicines will cure a person diseased, because marsh miasm will produce ague. Where do I do this? My words are, "I offer these *suggestions*, not in order to prove the efficacy of the homœopathic medicines, but to show that it is not utterly impossible that these globules can have any medicinal action." And I give as my reason for doing this, that I myself was often led into careless prescribing, during my novitiate, from being strongly impressed with an opposite opinion. The next paragraph is almost as great a perversion of my meaning. What I said was, that the illustrations showed that the animal fibre was so delicately constituted that it is *capable* of being affected by particles of matter more minute than the highest homœopathic attenuations. This is a fact so notorious that I am surprised that any one in his sober senses should cavil at it. But I never said that the organism was capable of being influenced at *all* times, by *all* minute particles of matter indiscriminately. I believe that it requires a peculiar susceptibility to exist, or be excited, to peculiar particles of matter, before abnormal phenomena appear. We know, for instance, that an individual may reside for a length of time in a marshy district, without an attack of fever, and yet, if his bodily health be disarranged by mental or physical causes, he may at length fall a victim to it. So with the homœopathic medicines. A person in health may take a great number of those of high dilution with impunity, and yet if, from disease, a peculiar susceptibility is excited to any one of them, I know from experience that *that medicine will powerfully affect the organism*. As a homœopathist, I believe that this susceptibility is regulated in accordance with the law of *similia similibus curantur*.

Among the many weak and foolish arguments which are brought against homœopathy, that derived from the supposed changes in it is the weakest. Homœopathy in its essence remains unchangeable and unchanged. In its details, it is true, the disciples of Hahnemann, claiming the privilege of thinking for themselves, do not consider that they are at all bound to follow him blindly as their leader, and thus, in minor matters, they in some instances dissent from his opinions, when experience tells him that he was in error. But, so far from this being a proof that homœopathy is false, I know of no stronger argument which could be brought against the system, none that would so surely have stamped it as false and useless, than if it had been said that it remained the same in every particular, after half a century of experience, and that time had failed to detect a single error in the minor hypotheses of its founder. History might have been ransacked in vain to afford an analogous instance. It would have stood forth solitary—alone opposed to every former precedent. But I can assure Dr. Orpen, that never at any moment has the flame burnt so brightly, or diffused its vivifying rays so extensively, as at the present time. There is not a civilized country under heaven that is not illuminated by its beams, and even on the inhospitable western coasts of Africa it has extracted the sting from that fatal fever which has hitherto defied all human means which have been tried to conquer it.

I now come to the concluding paragraph of Dr Orpen's letter. Did it rest with me, every medical man in Norwich should at this moment be experimenting with the medicines, gladly would I supply one and all of them with the requisite materials, and give them the best advice in my power as to using them. But unfortunately the "go-ahead" principle is not so fully developed here as it is in Birkenhead. The inhabitants of the eastern counties have from time immemorial been slow in accepting improvements, and I therefore fear, and indeed know from experience, that it would be a more difficult matter than perhaps he imagines, to persuade any of them to undertake such experiments as he mentions.

In conclusion, I advise him to repeat his experiments in his own person, and on other healthy subjects among his friends, and to do so, not in a way of his own, but in the way Hahnemann directed these experiments should be made. Let him diet himself, or others, strictly for a week before he begins a medicine, let this be taken in the prescribed doses, not in minute or infinitesimal ones, and let him gradually bring the doses up to the heroic standard of his own school. Then let him try the effects of the infinitesimal doses on disease; let him do as I did, and resolutely determine never to rest satisfied until I had sifted the matter to the very bottom; let him, as far as possible, put all his patients for the next six months under the homœopathic treatment, continuing the experiments for twelve or twenty-four hours in acute, for a longer period in chronic, diseases, of course always excepting those who he thinks likely to suffer from any delay in applying his own remedies. Above all things, let him not allow his scepticism to lead him into the performance of inconclusive or absurd experiments, and let him be careful always to prescribe the proper homœopathic remedy, and also to keep notes of all the cases he attempts so to treat. These were nearly the same rules which I laid down for my own guidance, when I was as sceptical as Dr. Orpen. Finally, I recommend him to study the 'Introduction to the Study of Homœopathy," by the editors of the "Homœopathic Journal," and also diligently to attend the Homœopathic Dispensary, at Liverpool, where he will see 300 patients treated weekly. I will ensure him a courteous reception from the two physicians at the head of that institution, and he will find that a careful observation of their practice will materially assist his own. If, after he has done all this, he gets no results in conformity with those of Hahnemann and the homœopathists, he may fairly come before the public and denounce the master as an impostor, and the disciples as dupes or rogues. Let him meditate on the aphorism of Lord Bacon —"Believe nothing on credit, reject nothing on improbabilities." Perhaps, then, however impossible it may now appear to him, a really honest inquiry may end in Dr Orpen's enrolling himself in the ranks of the homœopathists.

I am, Sir, yours obediently,

GEO HILBERS.

REMOVAL OF THE GREAT TOE AND PART OF THE METATARSAL BONE, UNDER THE INFLUENCE OF ETHER.

By T. HERBERT BARKER, M.B., M.R.C.S.

Emma Rawlins, aged twenty-three, of Cople, near Bedford, had been labouring under intractable strumous disease of the great toe for the last five years, involving the phalanges and part of the metatarsal bone, and was anxious to have the disease removed by operation. Desirous of giving her the benefit of inhaling the vapour of ether, I procured the apparatus constructed under the directions of Dr Boott and Mr. James Robinson, and sold by Mr. Hooper, of Pall-mall, London, and yesterday removed the diseased parts in the following manner, with the kind assistance of Mr. Hurst, and in the presence of Messrs C. W. Hyne, W. Bailey, Anthony, Birch, Cox, and Ravenscroft.—

Having succeeded in about four minutes in getting her thoroughly under the influence of the vapour, a flap of good size was made with a scalpel on the inner side of the foot, the metatarsal bone being laid bare to beyond the extent of the disease. A strong bistoury was then passed through the space between the metatarsal bones of the first and second toe, in close contact with the former, and brought out anteriorly; the flexor and extensor tendons were divided, and the metatarsal bone nipped through with Liston's forceps; the exposed surfaces were sponged, and the flap secured by three points of interrupted suture.

During the operation, which lasted but a short time, the supply of vapour was cut off by means of the stopcock. *She did not in the least shrink from the knife, nor did she manifest in any way the slightest sign or expression of pain. On regaining her consciousness she inquired when the operation would commence, and, on being told that all was over, stated that she had been asleep and dreaming.*

The testimony of so many operators has already been recorded of the efficacy of the inhaled vapour in completely deadening the sensibility of the system during severe and protracted operations, that there cannot be a doubt that this is one of the *greatest* discoveries of the age, productive as that age has been of great discoveries.

I thought it desirable that my patient should be previously tutored in the process of inhaling, and for that purpose induced her to inhale the vapour the day before the operation, which she did to the entire satisfaction of both of us. This appears to be a matter of some importance, and likely to contribute to the success of the process, inasmuch as there are several precautions which are better to be thus explained beforehand, and the patient will be less likely to be harassed with unnecessary timidity at the time of the operation.

The points which appear to require particular attention are —

1. To tutor the patient beforehand in the process of inhaling, and in the great majority of cases this will be practicable.

2 To give charge of the inhaling apparatus to a trustworthy assistant, who should keep the mouth-pad in firm contact with the lips.

3 To allow two or three inspirations to be made *before* removing the small stopper and applying the nasal spring, otherwise the full volume of the vapour will be likely to excite coughing and a sense of suffocation.

4 To cut off the supply of vapour for a time by turning the stopcock and removing the nasal nipper, when deep insensibility has been produced.

The *morbid* effects of the inhalation of ether have yet to be made out, and good service will be rendered to the profession and humanity by any one who will investigate the precise effects of this powerful agent when administered in cases complicated with pulmonary, cardiac, or cerebral mischief. Some affections of the heart, and a strong predisposition to cerebral disease, will probably be found to be the morbid conditions more particularly contraindicating its employment.

Bedford, Feb 16.

ST. BARTHOLOMEW'S HOSPITAL.—TESTIMONIAL TO JOHN P. VINCENT, ESQ.

On Monday evening, the 1st instant, a public meeting of the pupils and friends of Mr Vincent took place at St Bartholomew's Hospital, for the purpose of making arrangements for offering him some testimonial of their respect and esteem upon his retirement from the surgeoncy of the hospital. The meeting was numerously attended, and Dr. Roupell, being unanimously called to the chair, very ably addressed the meeting, setting forth the claims of Mr. Vincent to their love and admiration, and pointed out the matters which it would be necessary for the meeting to consider in order to the efficient carrying out of the object they had in view.

Mr Brownless then rose to propose the first resolution—"That a testimonial be presented to J. P. Vincent, Esq., upon his retirement from the office of Surgeon to St Bartholomew's Hospital."—and spoke as follows —

Mr. Chairman and Gentlemen,—If I should content myself with simply moving the resolution which I have just read to you, without offering my humble but most sincere testimony of the high estimation in which Mr. Vincent has been and is held by the pupils past and present of this hospital, not only from his great surgical attainments, but also for his ever honourable conduct and urbanity of manner,—if I could sit down without making some acknowledgment of his uniform affability, and of the admirable lessons in practical surgery which we have all more or less received at his hands,—I should indeed be wanting in gratitude, who have witnessed for so long a period his great abilities and many virtues, who have partaken so largely of his kindness and valuable instruction. I think, too, that I should be failing in duty to many of my old friends and fellow-pupils at this hospital who are now scattered over distant parts of the globe, if I did not come forward on the present occasion to testify, on behalf of them as

well as of myself, to the universal feeling of admiration and respect which Mr Vincent has secured to himself by the manner in which he has ever discharged the arduous and responsible duties of the office from which he is now retiring. Nor are the praises of Mr. Vincent proclaimed by the pupils only of this hospital: for, whilst we have admired his singular tact—his acute perception—his most accurate diagnosis and successful treatment of disease, his poor patients have not failed to appreciate his kindness of manner and humane disposition. (Loud cheers.) Most highly is he esteemed, and deeply indeed is his retirement lamented, by every class of persons connected with St. Bartholomew's Hospital. The longer he has been known, the more has he been valued and respected: for, gentlemen, highly as you all must and do value him for his great abilities as a practical surgeon, deeply as I am sure you are all impressed with a sense of his many virtues as a man, still greater is the admiration for his talents, still more profound the respect for his worth, in those who have watched his practice and had the benefit of his kindness and advice for a longer period than has been the lot of most of you. If, indeed, his words were few, his practical remarks were many and most rich in value—a rare harvest of truth, gathered in a most extensive field of practice, after years of industrious toil, by this most excellent of surgical husbandmen. His sayings were most truly aphorisms, for he circumscribed the subject on which he spoke without burdening it with vague or useless matter, or deteriorating from the value of his remarks by pomposity or conceit. (Cheers.) His conduct has ever been marked by justice, kindness, uprightness, and humanity, but also by decision for his delicate consideration of the feelings of his patients has never given rise to vacillation in their treatment; nor has his mild, unobtrusive, and amiable nature ever led him from an independent line of conduct, or from a manly and gentlemanly bearing—in fine, his reputation as a surgeon has never been sullied by his character as a man (great cheering); and I may most truly say that, "Take him all in all, we ne'er shall look upon his like again." He has already lived a long life, respected, esteemed, and beloved; may Providence yet grant him many—many years of health and happiness; and when that sad time shall arrive at which his earthly career shall terminate, and we shall see him here no more, his memory shall yet remain, cherished with the warmest affection, in the hearts of all who knew him. (Long-continued cheering.)

Mr Tylor having seconded the resolution, and paid a high tribute of respect to the merits of Mr. Vincent, a number of resolutions necessary for the carrying the first into effect were proposed and seconded by the following gentlemen:—Messrs. M'Whinnie and Yonge, Dr. F. Farre, and Messrs. Lee, Coote, Moore, Malden, Crookes, Perry, Holden, and Rogers. A committee was appointed, and Dr. Baly and Mr. Henry were requested to act as joint-treasurers, and Mr. Ware and Mr. Crosse as secretaries. A large sum of money was at once subscribed; and, a vote of thanks to the chairman having been carried unanimously, the meeting separated.

RHEUMATISM AND ORCHITIS.

[To the Editor of the Medical Times.]

H.M.S. Victory, Feb. 16.

SIR,—Observing in the last number of the *Medical Times* that, at a meeting of the Medical Society of King's College, a case of orchitis was mentioned, in connection with rheumatism, I beg to communicate the following particulars of a case, which led me to consider rheumatism as an occasional cause of inflamed testicle.

Mr. ———, aged forty, gunner, R.N., has been subject to chronic rheumatism for several years, generally experiencing a return of it after getting wet. He now (Oct. 1, 1844) has rheumatic pains in his left arm and knee, without any appearance of redness, increased at night so soon as he gets warm in bed. There is also swelling of left testis, it being nearly as large again as the right one; very painful, pain coming on in paroxysms and extending to the groin and back. There is no gonorrhœal discharge, nor has he had any; neither has the part been hurt. Four scutal veins were opened; warm fomentations kept constantly applied; an emetic of ipecac administered: confinement to bed and low diet.

5. No improvement, and, considering it may have a rheumatic origin, gave him pil. colch. ℥ss ter die in water; to continue the fomentations.

10. It has been gradually diminishing in size since the administration of the colchicum; which has had the effect of purging him smartly. Repeat colchic. et foment.

15. Testicle nearly reduced to its natural size; no rheumatic pains. Strips of adhesive plaster to be applied, so as to surround testis.

16. Discharged to duty.

On the 25th of February, 1845, he was again put on the sick list for rheumatic pains in his left arm and knee, and a swelling of the left testicle. The same treatment was adopted, with the exception of the local depletion; and on the the 4th of March, the swelling having entirely subsided, and the rheumatic pains having left him, he was able to resume his usual occupation.

I am, Sir,
Your obedient servant,
W. M. SAUNDERS, Assist.-Surg. R.N.

Dr. Zimmermann gives the following as the results of his researches on the fibrine of the blood:—

1. The fibrine of venous blood, whether buffed or not, is always soluble in solution of nitre. The solution is effected more rapidly or slowly according to the quantity of the salt, of water, and the elevation of temperature.

2. We are not sufficiently acquainted with the solubility of the fibrine of arterial, but it appears to be less soluble than that of venous blood. The fibrine of the blood of the ox and calf, whether arterial or venous, is insoluble; the fibrine both of the arterial and venous blood of the dog is very soluble. The arterial fibrine of the horse is more soluble than the venous; the fibrine of the human capillaries is perfectly soluble.

3. Heat assists and cold prevents the solution of coagulated fibrine.

4. The dissolved fibrine resembles albumen, for it is coagulable by ether.

5. Alcohol after a time renders fibrine insoluble, but ether leaves it as soluble as before.

6. The heat of boiling water renders it insoluble.

7. The fibrine of the small vessels behaves in the same manner as that of the veins.

8. The fibrine of exudations is as soluble as that of venous blood.

9. The fibrine obtained by agitating blood is difficultly soluble; the same is the case with the buff of blood.

10. Putrefaction favours the solubility of fibrine.

11. Dried fibrine is more difficultly soluble.

12. Pressed fibrine is less soluble than when in a soft state.

13. The fibrine of the upper layers of the bufly coat is less soluble than that of the inferior layers.

GOSSIP OF THE WEEK.

WAR-OFFICE.—Assist.-Surgeon E. Macpherson, from the 53rd Foot, to be Assistant-Surgeon, vice Stewart, promoted in the 61st Foot.—53rd Foot—Gordon Kenmure Hardie, M.D., to be Assistant-Surgeon, vice Macpherson, appointed to the 9th Light Dragoons.—61st Foot—Assistant-Surgeon Archibald Stewart, from the 9th Light Dragoons, to be Surgeon, vice Smith, deceased.—75th Foot—Staff-Surgeon of Second Class Patrick Nicholson, M.D., to be Surgeon, vice Sidey, appointed to the 6th Dragoons.—Hospital Staff—Assistant-Surgeon Samuel Currie, M.D., from the 16th Light Dragoons, to be Staff-Surgeon of Second Class, vice Nicholson, appointed to the 75th Foot; Alfred Gosden, gentleman, to be Assistant-Surgeon to the Forces, vice Newton, promoted in the Ceylon Rifle Regiment; William Nettleton Boyce, gentleman, to be Assistant-Surgeon to the Forces, vice Tweddell, appointed to the Ceylon Rifle Regiment.

WAR-OFFICE, March 2.—14th Light Dragoons: Surgeon Archibald Stewart, from the 61st Foot, to be Surgeon, vice Smyth, appointed to the 87th Foot.—61st Foot: Assistant-Surgeon Patrick Gammie, from the 80th Foot, to be Surgeon, vice Stewart, appointed to the 14th Light Dragoons.—80th Foot: Henry Carr Lucas, gentleman, to be Assistant-Surgeon, vice Gammie, promoted in the 61st Foot.—87th Foot. Surgeon Robert Dunkin Smyth, from the 14th Light Dragoons, to be Surgeon, vice Richard Arthur Pearson, M.D., who retires upon half-pay.—Hospital Staff. James M'Nab, M.D., to be Assistant-Surgeon to the Forces, vice Simeon Hendy Hardy, M.D., who retires on half-pay.

NAVAL APPOINTMENTS.—Surgeons: Alexander Baxter, to Volage; Thomas Heron Keown, to the Royal Marine Detachment at Port Essington; Jason Lardner, to be Superintendent in charge of the Anne, convict-ship.—Assistant-Surgeons: Frederick Harvey, to Volage; John Gunn, confirmed to the Electra; George Binnie Hill (acting), to the Ceylon; David Osmund West, confirmed to Trafalgar.

A singular case of affiliation was recently decided in the affirmative at the Salisbury petty sessions, the mother being a servant (Elizabeth Down) of the father (Charles Dew, Esq.). Mr. Lambert, solicitor, who appeared on behalf of the complainant, rested his corroborative evidence upon two facts—first, that the defendant had within a few days after complainant left his service, visited her, and taken tea with her, at a roadside public-house; and secondly, that the child had been born with five fingers and a thumb on its right hand, the defendant himself having been born with a similar malformation on both of his hands. He contended that the hereditary transmission of the additional finger was strong evidence of parentage, and in support of his view read several cases mentioned in Lawrence's lectures.—After evidence was given of these facts, Mr. Hodding addressed the bench on behalf of the defendant, contending that the malformation of the hand was to be attributed to the mother's imagination (she constantly seeing Mr. Dew, and being bent upon affiliating the child upon him), and in support of this position cited several instances detailed in Walker "On Intermarrige," showing the effect of impressions made upon animals, in changing colour and modifying the breed.—The magistrates decided that Mr. Dew was the father, and awarded him to pay the full allowance for the support of the child, and costs.

At a meeting of the Royal Society held recently, "the following resolution was proposed—" That it is the opinion of this special general meeting of the Royal Society of London for improving Natural Knowledge, that the award of the royal medal in Physiology for 1845 was made under circumstances characterized by great irregularity, and in violation of her Majesty Queen Victoria's regulations—viz., 'That the royal medals be given for such papers only as have been presented to the Royal Society, and inserted in their Transactions;' and that therefore the said award ought to be considered as null and void." The "circumstances of great irregularity" having been explained to the satisfaction of the meeting, the following amendment was moved and carried with only three dissentient voices:—"That whereas the president of the society has already expressed, from the chair, an opinion on the irregularity which attended the award of the royal medal in 1845; and whereas the council issued new regulations with regard to the royal medals, as soon as they discovered that those

enacted in 1838 were inconsistent with the royal grant: it therefore does not seem expedient to the present meeting that any further proceedings should be taken in the matter." Thus ended the "storm in a puddle" elicited by the disappointment of Dr. Lee and the ambitious passions of one or two discontented supporters. It was the comedy of "Much Ado about Nothing" enacted gravely by FF.R.S.

From Vienna we hear that the Austrian authorities have published a law which places homœopathic practitioners under severe regulations. They must for the future purchase their drugs from the regular druggists—to register their names at the time of purchase, and to write down to what extent they afterwards authenticate the remedies so purchased.

A condemned prisoner in France has petitioned the authorities to be allowed to be under the influence of ether while being guillotined.

Mr. Paget has been elected assistant-surgeon to St. Bartholomew's Hospital.

Madame Hahnemann has been punished by fine in Paris for practising medicine illegally. She appears to have attended patients after the fashion of her late celebrated husband.

It is asserted, on hasty surmise, that etherization affects the cerebral system only—not touching the spinal or ganglionic. Recent experiments tend to throw suspicion on a supposed fact, from which Dr. Hale would draw support to his views.

The cholera has broken out along the shores of the Red Sea. The towns of Mecca, Medina, and Jedda have, by all accounts, suffered very considerably from this scourge, and it is much apprehended that it will soon visit Egypt. There are various reports of the numbers of those who have been attacked by this disease; they are all great, but necessarily incorrect. The hadjis, or Mussulman pilgrims, seem to have suffered most. A sanitary cordon has been established at Suez.

QUARANTINE.—The Lords of her Majesty's Council have given the following orders:—1. Vessels from the Black Sea, with cargoes of enumerated or non-enumerated, goods are to be released immediately from quarantine, even if they have touched at Constantinople, or any other port in Turkey from which clean bills of health are issued. 2. That vessels from Egypt and Syria are not included in the order alluded to; all vessels from Egypt and Syria to continue under the present regulations, viz., fifteen days with cargoes of enumerated goods (to be removed into a lazaret), and five days for vessels having cargoes of non-enumerated goods only, and having clean bills of health; and, in reply to the third query all vessels from ports in Turkey and islands under the dominion of Turkey are included in the order; and all vessels from ports in Egypt and Syria must, under present circumstances, be placed under the restraint of quarantine.

THE POISONING AND SUICIDE NEAR PRESTON.—The inquest was resumed on Monday evening upon the body of Fanny Leadbeater, aged nine years, who died from the effects of poison, supposed to have been administered by her mother to the deceased, and to four other children, on Friday evening last, the mother afterwards being found drowned. Thomas Moore, a surgeon, of Preston, said he knew the deceased, Mrs. Leadbeater, mother of the child who had been poisoned; he had known her ever since she was born. She was confined in an asylum about six years ago. He had seen her several times since, and considered her insane. When in a convalescent state on one occasion, walking in the neighbourhood of the asylum in the charge of keepers, she jumped off one of the bridges into the canal. When told she had drowned herself he was not surprised, and would not have been had she done so twelve months ago. The jury returned a verdict of "Insanity."

A letter from Frieswalden, Austria, of the 8th, states that the celebrated hydropathist Preisnitz has just received a stroke of apoplexy, and that his life was in great danger.

We notice amongst the obituaries of late several who have attained to very great ages. Recently Jane Culliford, of Yeovil, died aged 107 years. She was buried at Mudford, at her own request, and in the same grave which received her first husband's remains in 1785. Last week died Mr. Edward Dudley, of Dudley, aged eighty-five, leaving behind him the almost incredible number of 158 grand and great-grand children. On Saturday fortnight a large crowd collected at Kensal-green Cemetery to witness the interment of George Robinson, aged 103, one of the principal horsedealers in this country: His son, eighty-three years, was among the mourners. But all these ages are much exceeded by that of an old woman now living in Moscow. She is now 168 years of age, and at the age of 122 she married for the *fifth* time!

We fear the march of intellect is tardy in some parts of England. A young woman at Bradford, troubled with epileptic fits, has, we are told, swallowed, on the prescription of a quack, a human skull powdered, and mixed with treacle, in occasional doses, as a remedy!

A fossil skeleton of an elephant has just been discovered in quarries near Macon, France.

Having on many occasions raised our voice against the disgusting system of intramural interment, we are glad to see that the Oxford city council have decided to petition Parliament for an act to enable corporate bodies in cities and boroughs to establish general cemeteries.

Mr. Ormsby Gore has given notice of his intention, in the course of a few days, to bring before Parliament the subject of Smithfield market, to move for leave to introduce a bill for its abolition, and to remove the market to some more appropriate site, comprising an area of not less than twelve acres, also to establish abbattoirs or slaughter-houses in the vicinity of London. The average number of animals brought to Smithfield market is pretty well known, and it is stated that there are here sold annually 156,000 bullocks or other cattle, 21,000 calves, 1,500,000 sheep, and 20,000 pigs—the value of the whole being calculated at £8,250,000. Including the butcher meat, both fresh and salted, otherwise introduced into the metropolis, the total value yearly is presumed to be from ten to twelve millions of pounds sterling! The yearly revenue which the Corporation are understood to derive from a small toll on cattle brought to market is nearly £4,000. The Common Council, a few months since, voted the sum of £20,000 to be expended in enlarging the market.

Mr. Charles Hooton, formerly editor of the *Leeds Times*, and author of "Bilberry Thurland," "Colin Clink," &c., died last week at Nottingham from taking an overdose of morphia. He had been irregular in his habits, and was subject to ague and shivering fits caught during his residence in Texas and New Orleans.

The sugar countries, it has been satisfactorily proved, are enabled to supply us with 100,000 tons of sugar beyond the 260,000 tons which are our regular supply. A large cargo of sugar has recently arrived in London from Siam.

M. Soyer, of the Reform Club, has received instructions from the Government to proceed immediately to the Lord Lieutenant of Ireland, and to submit his plan of a model kitchen for the preparation of soup for the poor on a large scale, which, if approved of, will at once be carried into effect. Good soup unquestionably is (in its way) a very good thing; but if M. Soyer entertains the notion that a savoury wash of potherbs will altogether obviate the necessity of eating solid food he is egregiously wrong. The stomach is a most expert chemical analyst, possessed of very fine reasoning powers, and will soon find out the difference between nutritious meat gravy and M. Soyer's potherb juice:—yes! though he plies the pepper-box ever so strong, and uses a world of curry powder. *A propos* of soup, the Total Abstinence Society of Liverpool lately adopted a new plan of obtaining an audience for their lectures, having offered soup tickets to those who should attend. 483 of these tickets were distributed, and the attendance was goodly. We have not heard, but would lay a wager, that this soup was made of something better than potherbs.

The King of Prussia has nominated Sir D Brewster to be a Chevalier of the Order of Merit, in the room of Admiral Krusenstein, the celebrated navigator; and the King of Denmark has conferred the honour of Knight Commander of the Royal Danish Order of Dannebrog on Sir R. I. Murchison, in acknowledgment of his geological services in the north of Europe.

OBITUARY.—At Wellington, Somerset, on the 15th inst, Albert Langley, Esq., Surgeon, aged 36. Jan. 31, aged 78, Lynch Conway Gent, Esq., Surgeon, Fenny Stratford, Bucks, in which town he had practised upwards of fifty years. Lately, M. Ranque, M.D., Chief Physician to the Hospital and Prisons, and Dean of the Faculty of Medicine, of Orleans. Lately, at Plymouth, aged 90, James Watt, Esq., Senior Surgeon of the Navy; Mr. Watt served as Assistant-Surgeon and Surgeon on board the Ramilles and other ships, in several naval engagements, under Keppel, Rodney, Saumarez, and Sir Richard Strachan. At 14, Heriot-row, Edinburgh, on the 20th inst., John Pitcairn, M.D.

ROYAL COLLEGE OF CHEMISTRY.

ON Friday week his Royal Highness Prince Albert, attended by Major-General Bowater and suite, honoured the laboratory of the Royal College of Chemistry with his presence. His Royal Highness, as our readers are probably aware, passed his collegiate life at Bonn, an university long celebrated for the learning of its professors, and the assiduity of its students. From Bonn, too, came Dr. Hoffmann, the professor of chemistry at the college.

During the visit of his Royal Highness to the institution in Hanover-square, he witnessed, with much apparent gratification, some experiments on the combustibility of metals when exposed to the action of voltaic electricity, developed from Bunsen's charcoal battery. His Royal Highness, after expressing gratification at the good order in which he found the laboratory appointments, questioned the professor, with the true animus of a practical chemist, as to many new discoveries in the science.

MORTALITY TABLE.

For the Week ending Saturday, Feb. 27, 1847.

Causes of Death.	Total.	Average of 5 Winters.
ALL CAUSES........	1044	1068
SPECIFIED CAUSES...	1040	1061
Zymotic (or Epidemic, Endemic, and Contagious) Diseases...........	152	183
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat..........	98	112
Diseases of the Brain, Spinal Marrow, Nerves, and Senses................	172	170
Diseases of the Lungs, and of the other Organs of Respiration	384	354
Diseases of the Heart and Blood-vessels..........	38	32
Diseases of the Stomach, Liver, and other organs of Digestion	69	70
Diseases of the Kidneys, &c.	12	8
Childbirth, Diseases of the Uterus, &c.	12	12
Rheumatism, Diseases of the Bones, Joints, &c. ...	14	7
Diseases of the Skin, Cellular Tissue, &c.	4	2
Old Age..................	62	81
Violence, Privation, Cold, and Intemperance........	23	30

LECTURES ON SELECT POINTS OF SURGERY.

By WILLIAM FERGUSSON, Esq., F.R.S.E.,

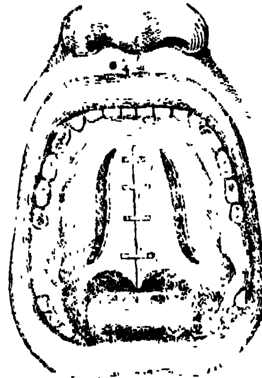
Professor of Surgery in King's College, London; Surgeon to King's College Hospital, &c.

ON CLEFT PALATE, AND ON STAPHYLORAPHY.

Author's experience increased since the reading of his paper on these subjects in 1844, before the Medical and Chirurgical Society of London; nature of cleft palate; different forms and kinds of, its complication with harelip, effects of malformation on deglutition and on voice and speech; method of obviating defects before modern operation of staphyloraphy, advantages and disadvantages of latter proceeding, indifferent success of the operation, although performed by most of the leading surgeons in Europe and America, success of Roux, Mütter, and Dr. J. M. Warren, apathy of British surgeons on the subject; author's investigations, anatomy and physiology of cleft palate first described by him; new operation proposed and performed by author, and its success in various instances, reviews of different proposals, by Roux, Bushe, Dieffenbach, Pancoast, Liston, Mettauer, and J. M. Warren; fit cases for operation, age proper for its performance; author's operation described; ligatures and knots, new knot; after treatment; causes of failure of operation; examples of success of author's plan; effects of operation on voice and speech, &c.

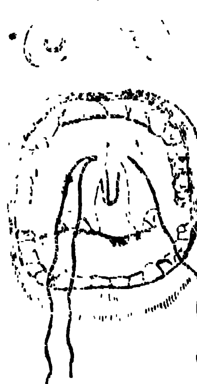
(Continued from p. 26)

Surgeons have long been familiar with the difficulty of keeping the parts quiet during, but especially after, an operation, and many ingenious proposals have been made to obviate this. The most simple and, perhaps most reasonable was the plan of after-treatment pursued by Roux. The patient was enjoined to silence, and to abstain from any effort at deglutition; he was not permitted to swallow his saliva even. But this did not appear sufficient in all cases, and the distinguished author of the operation proposed to separate the soft palate from the hard by a transverse incision, and the plan was afterwards recommended by Mr. Bushe, of New York (a). This method was advised in examples where the gap was large and involved the hard palate, and it would certainly permit the anterior parts of the soft palate to be more readily brought into contact. Dieffenbach and Pancoast (b) have split the flaps in the way represented in this diagram (fig. 1).



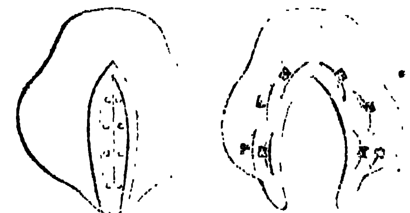
The latter gentleman has described the process thus: "When the knots were prepared for tying, but before they were finally secured, Wenzel's cataract knife was passed from before backwards, through the attached side of the palate, to enable the two halves of the velum to come together in the middle line, as well as to divide the insertion of the palate muscles, so as to prevent them straining the outward edges of the palate asunder." Mr. Liston (a) has advised that, "before the ligatures are finally secured, the parts being put on the stretch, an incision should be made on each side towards the alveolar ridge, through the anterior surface of the velum, by which method the edges come together more easily, and the strain is taken off the threads, so that there is less risk of them making their way out by ulceration." The accompanying diagram (fig. 2) is a copy of that given by Mr. Liston himself.

Fig. 2.



Dr. Mettauer, of Virginia (b), has proposed to increase the breadth of the two flaps, by making various incisions in the palate. One plan is, to make a series of lunated wounds through the flaps, each about half an inch in length, along the margins of the fissure, which are permitted to heal by granulation, and thereafter the ordinary operation is performed. Another plan of Dr. Mettauer's is, to make a long incision on the lower surface of the palate on each side of the fissure, at the time of doing the operation. Both of these methods may be understood from this diagram (fig. 3).

Fig. 3.



Dr. J. M. Warren has stated (a) that he had found the following course to be invariably followed by success:—"The soft parts being forcibly stretched, a pair of long powerful French scissors, curved on the flat side, are carried behind the anterior pillar of the palate; its attachments to the tonsil and to the posterior pillar are now to be carefully cut away, on which the anterior soft parts will at once be found to expand, and an ample flap be provided for all desirable purposes."

From the variety of plans here alluded to, it will be observed, that the difficulty of bringing the edges of the gap together, of preventing dragging on the stitches, or subsequent separation of the newly-united parts, had not been overlooked. It is singular enough, however, that none of them have had reference to the correct anatomy of the parts; indeed, scarcely an allusion has been made to this subject. Dr. Pancoast is perhaps the only party who has alluded in apparently precise terms to the muscles of the parts, for his incisions are intended, to use his own language, "to divide the insertion of the palate muscles." It so happens, however, that no palate muscle is inserted exactly in this direction. The line marked out (fig. 1.) runs parallel with the fibres of the palato-pharygeus; and were the levator palati divided in the incision, it would only be by chance; indeed, it would be next to impossible to divide it in such a way; the knife would, in all probability, pass through the palate either on the inside or outside of the lower end of the muscle. In the quotation already given from Mr. Liston's work no allusion is made to the anatomy of the parts, and it does not appear that more was intended than to permit that relaxation which a gap on each side might be supposed to produce as regards approximation in the

(a) "An Essay on the Operations for Cleft Palate," by G. Bushe. New York, 1836.

(b) "American Journal of Medical Science," vol. xxxii., p. 71.

(a) "Operative Surgery."

(b) "American Journal of Medical Science," vol. xxi., p. 309.

(a) "New England Quarterly Journal of Medicine and Surgery," April, 1843.

mesial line. In the last edition of the excellent volume alluded to, which has come out since the appearance of my paper on cleft palate, and after the author inspected my dissection, it is advised that the incision "through the anterior surface of the velum" should be made "well down by the sides of the uvula." (fig 2.) It is stated, too, after allusion is made to my proposal, that "if the fleshy belly of the circumflexus palati could safely be reached and cut, this would, so far as I can understand, put the parts in a still more favourable condition to come together. Its tendon is certainly divided by the incision above directed, properly and effectually carried out." Doubtless it had escaped Mr. Liston's memory that my preparation proves that the circumflexus muscle has scarcely any influence on the palate—a circumstance which I have alluded to in my paper. The "fleshy belly" of this muscle may be reached with nearly as much safety and facility as that of the levator, but it seemed to me that so little good would result from its division, that I was content with the statement as to its comparatively unimportant action. An incision "through the anterior surface of the velum" would not include any portion of the circumflexus, and one "well down by the sides of the uvula" could not possibly reach the tendon of that muscle. Mr. Liston(a) justly observes that "the union is apt to fail under any circumstances," and, moreover, adds, in reference to my own views, "and I think that this was found to take place in the hands of the above-named professor, even after the division of the muscles as he has recommended"—a thought the accuracy of which I cannot impugn, although the reflections on this subject do not seem to me to have been either so extensive or founded on such accurate data as one might have expected, in an authority so unquestionable and so impartial: for it does not appear that Mr. Liston had remembered the two successful cases which were detailed in my paper presented to the Medico-Chirurgical Society, nor the statement(b) which I had subsequently placed in his hands, that I had been successful with the practice in six instances out of eight wherein I had performed the operation in the manner alluded to.

In Mettauer's plans (fig. 3) no allusion is made to the anatomy of the parts; some of the little wounds through the palate must implicate a few fibres of the palato-pharyngeus, but the long incision on the lower surface of the palate cannot touch any muscular fibres. In Dr. J. M. Warren's incision with the scissors, a portion of the palato-pharyngeus might possibly have been divided; but this plan, like all the others above alluded to, while intended to produce mechanical relaxation, had no special reference to the anatomy or physiology of the parts.

There are cases of cleft palate with which it would be unreasonable to meddle: the gap being so large and the soft tissues so narrow, that union could not possibly be anticipated. It has been supposed that when the two portions of the uvula are observed to touch each other during deglutition, the operation may invariably be undertaken; but the fact is, that in almost all instances these two parts touch at this particular time, however large the fissure may be, and it is better to be guided in deciding upon the propriety of an operation by the condition of the parts otherwise. In most cases where the osseous palate is open, there will be less certainty of a favourable result than if the soft velum alone were implicated. If it seems that only a small portion of the fissure in the soft parts can be closed, it will perhaps be best to leave the parts alone, and to trust for improvement entirely to an obturator or false palate, for it has sometimes been found that when there has been union only to a small extent, the condition has interfered with the proper adaptation of the apparatus.

(a) "Operative Surgery," 4th ed., p. 572.
(b) "System of Practical Surgery," 2nd ed., p. 532.

The operation should seldom be undertaken until the patient has reached puberty. Much steadiness and self-command is required on his part, both during the operation and afterwards; and it is hardly to be expected that one under this age will have the fortitude to do what the surgeon expects of him. I have, in one instance, seen a youth of eleven years of age comport himself admirably during the operation; but any time between sixteen and four-and-twenty is that which should be preferred.

The mode of proceeding which I generally follow may be thus described:—The patient should be seated on a firm chair with his face to the light; the surgeon should stand a little in front, on the right side, and occasionally behind the patient. In this latter position he may see into the mouth by leaning over the face, and use his fingers with more satisfaction and facility than if he were always in front, for here he is apt to obstruct the light, and possibly fatigue his hands by holding them so long in an elevated position towards the roof of the mouth. With a knife such as that which I here show you (fig. 4) I make an incision, about half an inch

Fig. 4.



in length, a little above the free margin on each side of the cleft, whereby the levator palati muscle is divided. The knife is sharp at the point, and also at each side, so that it may be readily passed through the mucous membrane and carried backward and forwards to enlarge the wound to the requisite extent. The point of the blade is entered above the middle part of each soft flap, where there is the greatest thickness of tissues, and, whilst it is carried deep against the levator muscle, it is moved as just directed, and not withdrawn until the power of elevating the part seems to be done away with. If, when the knife is withdrawn, there should still appear strong muscular action in an upward direction, as may be ascertained by irritating the parts, it may be used again, as possibly the whole of the muscle may not have been cut across. All this can be best done while standing at the patient's side. The edges of the fissure should now be pared; the mucous membrane on the middle part of each margin should be seized with hookbeaked forceps (fig. 5), and transfixed with a narrow, sharp-pointed blade (fig. 6), which should then be run backwards and forwards so as to remove a slip of the membrane throughout the whole line of the gap. I have found it most convenient at this stage of the proceeding to stand before the patient whilst paring the left side, and behind him while cutting on the right side; but if the surgeon can hold the different instruments in each hand with equal facility he may stand as he chooses. During the time, and more especially after, these incisions are made, small pieces of sponge wrung out of iced water should be applied to clean the parts from blood and mucus; and the patient may also gargle the throat with cold water. The stitches should next be introduced thus:—A needle, such as is here shown (fig. 7), set in a handle, armed with a portion of stout silk

(Fig. 5.)

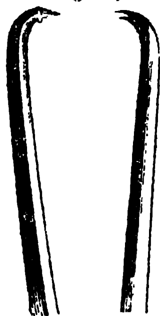


Fig. 6.

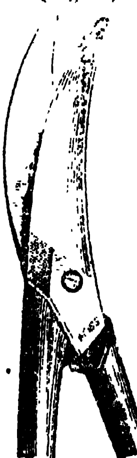


(Fig. 7.)



thread, three quarters of a yard long, should be passed through the soft flap about a quarter of an inch from the free margin, half an inch or less from the posterior edge of the osseous palate, from below upwards, and when the eye appears above or in the gap, the thread should be seized and drawn into the mouth with forceps; while the needle is withdrawn the end of the ligature (as yet double) should be brought out from the mouth to facilitate future steps, and also to prevent slipping. The same needle, or another like it, armed with a thread of a similar length but much thinner, should be passed in like manner through the other side of the left palate, exactly opposite the first puncture, and similar manœuvres should be repeated. By fixing this second thread to the bent end of the first, where it is hanging out of the mouth, and then withdrawing it in the course through which it has already passed, the thread intended to form the stitch will thus be brought through the opposite side of the palate, when one end of it (for it has as yet been double) can be drawn out so as to leave both ready for knotting. Two, three, or four more threads, as may seem requisite, can be introduced in a similar manner; and now all that remains to be done is to draw the edges together and fasten the thread. The foremost thread should be first tied in accordance with the ordinary mode of making the interrupted suture; and the others should then be treated in the same order in which they have been introduced. Should an additional suture seem requisite in any part of the fissure, it may now be introduced by pushing the same needle from one side to the other—for now, when the parts are more fixed by the sutures, this may readily be accomplished. Before fastening the two knots furthest back, the pared edges should be brought together to ascertain the influence of the palato-pharyngeus in dragging them asunder. If this action seems strong, or if there be difficulty in drawing the parts together, the threads should be pulled forwards, whereby the posterior pillars of the fauces will be put upon the stretch, when each should be cut about half an inch behind the uvula, in an outward direction, to the extent of a quarter of an inch, and then there will be greater relaxation. Long curved scissors, with blunt points, like these (fig. 8), are such as I use for this part of the operation, and the same are good for cutting off the ends of the ligatures, which is the last step in the operation.

(Fig. 8.)



In some instances it may appear best to effect the division of the palato-pharyngeus before passing the stitches. If this be desired, the fibres can be put on the stretch by drawing the uvula forwards with the beaked forceps. It will rarely seem requisite to meddle with the palato-glossus, but if its division is thought advisable, the scissors just described will be the best instrument to use. A small horizontal wound in front of the tonsil, and about midway between the tongue and palate, as represented in fig. 9 (c), will suffice.

The hookbeaked forceps, and also those for seizing the threads, should be a little longer than those in common use; and the curved needle is similar to that often employed for the strangulation of hemorrhoids, nævi, and such like growths.

This figure (fig. 9) will probably, in some de-

Fig. 9.



gree, elucidate the above description. It gives a view of the posterior nares, with a cleft implicating the whole of the soft palate, and a small portion of the hard. On the left side the mucous membrane has been dissected from the muscles. *a*. The levator palati, on which is marked the line where it should be cut across. *b*. The inner bundle of fibres of the palato-pharyngeus, which forms the posterior pillar of the fauces, with the black line indicating where the scissors should be applied. *c*. The palato-glossus, with the mark for division, if that should seem necessary. The tonsil lies between these two muscles. *ee*. The posterior extremity of the inferior turbinated bone. *f*. The septum. *gg*. The uvula on each side stretched apart

I have named a stout silk ligature, as I think it preferable to any other kind. Sometimes I have used a hempen thread, but it is difficult to get the material sufficiently small and strong at the same time. I have never used the lead ligature, as recommended by Dieffenbach and others, and, from my experience of the operation, should not feel inclined to try it. The threads to be used should be well rubbed with wax, and it is highly advantageous to have them of different colours, whereby they can be more readily recognised during the proceedings.

In the ordinary operation, it has been found, on attempting to cast the common knot for the interrupted suture, that the first turn of the thread is apt to slip ere the second can be drawn. To prevent this, the points of the common forceps have been closed upon the first until the other has been brought upon it; or the surgeon's knot has been used (a) in expectation that, the first twist of it being double, there should be less risk of slipping. Instead of a knot, Sir Philip Crampton(b) has passed the two ends of the thread through an aperture in a bead of soft metal, which he has squeezed close upon them at the proper distance. Mr. Brooke has, with an ingenious method, by means of glass beads, proposed to improve the style of suture here. The common knot and the surgeon's I have used most frequently, for I have always supposed that the beads might increase the after irritation. Besides, I feel satisfied that, in the operation which I perform, there is far less dragging on the threads than under ordinary circumstances, and that there is consequently less tendency to slip. But the slightest elasticity in the lateral flaps, unless indeed they be very broad, will be apt to produce a slip; and, to obviate this, I imagine that a knot of this kind will be found very serviceable. On one portion of the thread I cast a loose loop, with a single turn; the other end being then passed through it, the loop is drawn tight, and the fingers are then pushed towards the roof of the mouth and margins of the fissure, as with an ordinary knot. If the loop is drawn tight there is no risk of slipping; it should hold, in fact, as if a metal bead were squeezed somewhat tightly upon the end within it. When sufficient tightness is secured, as regards the wound, a knot should be cast on the two ends of the thread, as in the common mode of fastening an interrupted suture. This diagram (fig. 10) will best explain the verbal description just given. Professor Pancoast has advised that the knots should not be left in the mesial line, where they would be exactly over the wound, but that they should rather be kept to a side, as represented in one of the preceding diagrams (fig. 1). It will be found easier to do this with the knot I have just recommended than with the common one, or more especially the surgeon's; and, as I believe it is rather an advantage to keep them off the wound (for the the ends are apt to lodge in it, thereby preventing union to a certain extent, and causing irritation on the raw surfaces), I advise you to think of this plan, which seems to me to embody the advantages of the beads, while the knots will, from their size, be less annoying to the patient than the materials alluded to.

Fig. 10.



When the operation for cleft palate is performed in the ordinary manner there is generally so much muscular spasm as to cause great difficulty in paring the edges, introducing the needles, as well as bringing and holding the cut edges together. By the plans recommended by me these difficulties are entirely done away with, or greatly modified. The first incision is intended to take off the influence of the levator palati: if it be successful the palate seems to drop a little, and it is not so forcibly dragged upwards and outwards as under ordinary circumstances. Some movement of this kind may possibly still be present, and it may depend upon some of the fibres of the muscle having escaped the knife. The palato-pharyngeus, being still entire, will draw the margins of the fissure outwards; but when this muscle is divided there will then be no longer any action of the kind. This muscle, however, has so little influence compared with the levator that it seems to me advisable not to divide it on all occasions until the probable amount of dragging upon the stitches has been ascertained. Even when its fibres are cut there will be some convulsive movement in the lateral flaps, for the part between the section and the attachment in front will be in some degree under the influence of muscular contraction; a shortening may take place when the parts are irritated, and this movement will be aided by the azygos uvulæ, which throughout the whole proceedings remains untouched unless when paring the edges or passing the stitches. Whatever irritability there may be, however great the spasm, there will certainly be less difficulty in passing the needles, and less opposition to the closure of the fissure, than under ordinary circumstances. After the sutures are fastened, the parts are more quiescent than with the muscles entire; indeed, in the course of a few hours (if not immediately after the operation), the roof of the mouth may be touched or tickled as you choose, and there will scarcely be any movement observed. There is one advantage in the incision which I make on the upper surface of the flaps, which is probably not the least that I claim for my own mode o operating. The wound is in the course of a few hours filled with lymph, which so thickens and stiffens the palate that any twitching of muscular fibres that may have been observable before are no longer apparent.

However efficiently the incisions which I recommend may be executed, the operation may, nevertheless, fail. The ordinary operation for harelip, when performed even under the most favourable circumstances, will sometimes fail, and occasionally a simple incised wound in the skin will not unite. Such results are still more likely to happen in the operation for cleft palate. The causes of failure may be as obscure as they often are in other wounds, but sometimes we may see reason why it has not taken place, and it may be well to refer to some of the circumstances likely to lead to an unfavourable issue.

The grand immediate object of the operation is to obtain union by the first intention, and this may be thwarted in various ways by the surgeon himself.

Hitherto, the principal cause of failure has probably been the dragging on the stitches from the action of the muscles, and the consequent disposition for the parts to be drawn asunder; and this cause, I would fain hope, may now be in a great measure obviated by the proceedings which I recommend. There may be a deficiency of adhesive action, or there may be an excess of inflammation. In one case the gap may fly open almost as soon as the stitches are removed, in another the process of ulceration may produce the like effect after the lapse of days. Sloughing may actually occur, and there may be defects in the performance of the operation to account for this as well as otherwise to cause failure. I believe that extensive incisions, whether on the plans recommended by Roux, Dieffenbach, Mettauer, Liston, Warren, or myself, may possibly induce defective circulation or excess of inflammation, and from either of these conditions sloughing is likely to happen. The stitches may be so numerous as to do harm, especially if drawn so tight as to impede circulation, or possibly there may be so few that the surfaces are not properly held together. The needles may be introduced too far from the margins, or not far enough, or perhaps the margins themselves may not be sufficiently pared. I imagine, too, that evil may arise from awkwardness in effecting the whole proceedings: for, if there be much manipulation, much squeezing, pinching, or poking with knives, needles, and fingers, the chances of adhesion are thereby diminished.

After the operation is finished, every care must be taken that nothing be allowed to interfere with the process of union. It is very certain that, if the patient were permitted to use the parts in the ordinary way, such as in eating, drinking, or even swallowing the saliva, they would be greatly disturbed, and adhesion might not occur. If all the muscles of the palate be left entire, as is the case in Roux's operation, the least effort at deglutition will cause considerable spasm and dragging on the stitches, and in examples where the gap is large it is easy to perceive that much harm might result on such an occasion. Even in the proceeding which I follow, perfect quietude cannot be obtained, for the tongue below, and the constrictors behind and above, will still, during the act of swallowing, have such influence upon the palate, as greatly to disturb the healing action. It is requisite, then, to restrain the patient from such evil chances until adhesion has become so firm that it cannot be readily severed. Roux used to prohibit the use of food for eight-and-forty hours or more, and to prevent the party swallowing even his saliva. But danger may arise from too strict an adherence to this practice: patients have been known to take food at all risks, and so break up the adhesions; others have become temporarily deranged; and the sudden deprivation from food has caused considerable shock to the system in many instances. Sir Philip Crampton(a) has not acted rigidly upon this rule, and has permitted some of his patients "boiled bread and milk, custards, soups, and jelly, twice or three times a day." In most of my cases I have given the patient gruel, soup, and wine frequently during the day,

(a) Professor Smith and Dr. J. Mason Warren.
(b) "Dublin Journal of Medical Science," July 1, 1843.

(a) "Dublin Journal of Medical Science," July 1, 1843, vol. xxii.

and have invariably noticed that those thus treated have recovered more rapidly than the others who have been refused all food and drink. The custom of permitting a hearty meal one hour before the operation should not be neglected: but there is great chance of its being ejected from the stomach during the proceedings, for there are few patients who do not get squeamish during the doings with the palate. Indeed, I have remarked the chances to be greater in those who have partaken most largely of food beforehand.

A tickling cough almost invariably comes on a few hours after the operation, especially if the uvula swells much, as it often does so that it actually drops on the root of the tongue and epiglottis, and I have found a draught containing sixty minims of the compound tincture of camphor, at bedtime, to be of great service in such cases. The bowels are usually constipated for the first two or three days, and I generally add a drop of croton oil to such a draught, with good effect. The patient may keep in bed, or sit up during the day, as he may incline; and, as a matter of course, when he is swallowing what you permit, he ought to do so with caution. On the second or third day after the operation, one, two, or more of the stitches should be removed; on the third or fourth day, if they have not already all been taken away, this should be done; they are more likely to do harm than good, if permitted to remain beyond this time. But the surgeon must use his discretion on this point, as indeed is necessary as regards all the after treatment, for I do not think it reasonable to give out rules which shall answer all cases. The mucus which accumulates about the roof of the mouth, particularly in those cases where there is an aperture left in the hard palate, must be taken carefully away, once or twice a day, with forceps, and it answers well to dry the parts with a bit of soft sponge, which has been previously wrung out of a weak solution of nitric acid. In the course of eight or ten days the patient is usually so far well that he may eat and drink what he pleases, in moderation, and also take exercise in the open air. In a few days more his recovery is complete.

Among the cases to which I have alluded in this lecture, several possessed peculiar interest, in so far as regards the views which I have now endeavoured to explain. One of the unsuccessful examples, according to Roux's plan, occurred to our esteemed friend, Mr. Bowman. I saw the operation performed; it was admirably executed, and everything as regarded the favourable condition of the parts justified a sanguine hope of success. Yet in eight-and-forty hours all the stitches had given way, and the gap was as open as ever. Some years afterwards Mr. Bowman repeated the operation, with the addition of the incisions recommended by me, and a few weeks afterwards I saw the patient with a palate as entire as if it had been so from birth. One of my own cases was still more remarkable. J. T. had been operated on by Mr. Tuson, of the Middlesex Hospital, three different times, according to the method of Roux, and the opening was left in all probability larger than it was at first. There had been a small point of union about the middle of the gap, which by the traction on the flaps had been stretched out into a narrow band, not thicker than a bit of twine. Mr. Tuson was polite enough to send this patient to me: I operated, and had the satisfaction of securing union throughout the greater portion of the soft palate. When it is considered that the edges of the fissure had been three times pared before I myself touched them, it must be admitted that the parts were in a far less satisfactory condition for an operation than at first.

Besides the instance above referred to, as occurring to Mr. Bowman, Mr. Partridge has had a successful one, and so has M. Simon; in both of these, however, some secondary proceedings were requisite. One of the most successful examples of my own proceeding occurred to Mr. Storks. Union took place throughout, and in the course of a fortnight, it would have been difficult to discover what had been the state of the palate before, or what had been done by the surgeon.

Even under the most favourable circumstances, a portion of the gap may not unite, or may open again in the course of a day or two, and it is then requisite to repeat part of the operation: the edges must be pared afresh, and one or more stitches passed, as may be necessary. This should not be done till after the lapse of weeks or months. An opening left after the first operation, though of such a size as to permit the air to pass readily through it for ten or twenty days, may, after some little further time, so close as to cause little more annoyance.

In infancy, the principal evil from cleft palate is, that the food is apt to escape upwards into the nostrils, but as the child grows older he acquires such use of the parts that such an occurrence rarely happens. The voice now appears as the principal defect, and it is not difficult for one familiar with such cases to foretell the state of the part as soon as he hears the person speak. If there be harelip, or the cicatrix resulting from an operation, for this defect suspicion may be so much the stronger, but of course no one can say with accuracy, what is the state of the palate until it is thoroughly inspected. As the chief cause of annoyance is from the voice, the principal object of the operation is to effect a favourable change upon it. There has, perhaps, been less said or written on this subject than it demands. The surgeon has usually been content with giving an account of the condition of the palate after an operation, but it is as interesting to know something of the voice. On this subject a variety of statements have been made in accordance with the experience derived from isolated cases. Sometimes the effect seems almost beyond belief, so great is the improvement; but in other instances there is no perceptible amendment. This latter result often arises from an aperture in the hard palate, with which the surgeon may not have meddled, and, until it is closed with some sort of obturator, the air escapes so freely through it that the benefit from closing the gap in the soft parts cannot be appreciated to its full extent. Even in such a case, however, the tone of the voice will probably have been greatly altered for the better; and if the opening alluded to be filled up, it may sound almost natural. It would yet be foolish to imagine that speech should be perfect, for how could this be with a person who had never articulated distinctly at any period of life? Some have been so sanguine as to expect this, and have been greatly disappointed. The fact is, that the party, however successful the operation may have been, has still to learn both how to modulate the voice, and to articulate. Some make great progress, and in the course of a few weeks or months the result is such as to please the most fastidious. In others the changes are more slow, for a year or more may elapse before much improvement can be noticed; and there are some who from want of ear, of power, disposition, or perseverance, never make any satisfactory progress. In some of my own cases there has been all the improvement that could reasonably have been anticipated, but in others there has been very little. This I have attributed in some to the remaining imperfections in the palate, and in others to the want of care on the part of the patient to improve the pronunciation. I believe that all persons with this malformation have it in their power to speak more distinctly than they generally do. In one of the worst cases of cleft palate which I have ever seen, the party could articulate with considerable accuracy, and this was attributable to the care which she had bestowed in improving her voice. If, after an operation is successfully performed, the individual sets earnestly and methodically about modulating the voice and articulating distinctly, there seems nothing to prevent both being brought to a natural and average perfection. One of my patients was so zealous in his after studies that he soon spoke with more distinctness and accuracy than is generally observed in persons in whom the palate has been originally well formed. I have known some, however, so stupid, obstinate, or careless, that they could not, or would not, pronounce the word "yes," excepting in the old way. A person with cleft palate seldom sounds the "s" at the end of the word, because the air in expiration passes mostly through the fissure and nostrils. Even after the operation, the air is likely to pass by the nostrils, unless the person be careful to open the lips properly. If he does this, and pushes the tongue forward with its tip against the lower front teeth, the "s" will then become distinct; and if this little lesson be readily undertaken and ably performed, there may be good hopes of speedy and great future improvement.

A COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the Theatre of Queen's College, Birmingham.
By SAMUEL WRIGHT, M.D.,
Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Sequelæ of the bowel complaint of 1846, *as they appeared amongst adults, not observed in old people, comments upon the subject, illustrations: animal life, why pathological actions are never strongly marked in old age, intestinal irritation a sequela of the bowel complaint, symptoms of it, pathological appearances, treatment, value of liquor potassæ, hydriodate of potash, observations upon, amenorrhœa cured by the bowel complaint, in other cases caused by it, gastro-intestinal flatulence, observations upon it; origin of the flatus, treatment; ulceration of the intestines, case of, and comment; vital depression, case of, resulting from bowel complaint, peculiar features of it, treatment.*

GENTLEMEN,—Our last lecture treated of the *sequelæ* of the bowel complaint of 1846, as they appeared amongst children: the present one will continue the subject in its relations to adults.

In elderly or aged people, it was seldom that the *consequences* of cholera presented any features of pathological interest. When the disease was severe with them, they rapidly sunk before it, without exhibiting any signs or symptoms of rallying or reaction; when it was milder, and they recovered, there were left no traces of its visitation, beyond simple debility.

Ailments, pathologically the same, are apt to vary in their manifestations, according to the age, health, and strength, of their subjects. Inflammation, for instance, puts on one appearance in infancy, another in adult life, and another in old age; in these several seasons, also, do its tendencies and products vary. Pneumonia, in childhood, rarely extends to pleuritis; but it has the worse liability to implicate the tracheo-laryngeal membrane in inflammation: this is the more dangerous, because lymph, coagulable or prone to organization, is the chief result of inflammatory action at this age—pus is a less common produce. In the adult, pneumonia, if not very circumscribed and deep-seated, rarely fails to involve the serous covering of the lung, and the product is generally both lymph and pus. In old age, pneumonia is a rare affection, and rarer still is pleuritis accompanying it. Bronchitis, with congestion of the pulmonary vessels, is the chief ailment of the respiratory organs at this season of life; and a profusion of mucus, with a thin watery pus deficient in globules, is almost the only secretion or exudation it affords.

The life of the body is not a separate immortal something, like *mind* or *soul*; we know nothing of it except through the organs which manifest it, nor can we conceive it to have, *like our eternal entity*, an existence apart from the organism which exhibits it. Bodily or physical

life is made up of the functions of the several organs that enter into the constitution of the living frame. Its manifestations, therefore, vary with the number and degree of structural perfection of these. Hence it is that its *irregularities*, which we call *disorders*, vary with the subjects of them. They have one aspect in childhood, because the organs are not fully developed and constituted; another in meridian life, because the organs have then reached their maximum strength and stability; and another in senility, when these organs have lost their vigour, and are preparing to pass back again into the elements from which they sprung. Pathological actions are nothing more than *physiological ones out of order*: their number, and variety, and degree, will, therefore, vary with the organs and the strength of their action. Thus it is that morbid functions, and the produce of them, are nothing so remarkable in advanced as in middle and earlier life. There is not in old age enough of the *vis vitæ* for the display of pathological phenomena. The powers are either prostrated at once by being perverted; or this perversion, if lasting, is not intense enough to invest itself with any marked character.

Hence you see why the bowel complaint I have spoken of had no particular *sequelæ* amongst old people. With adults, however, whose organic processes were not only capable of derangement, but capable also of exhibiting this immoderately, the converse happened.

Troublesome and continued intestinal irritation was a common *sequela*. It was not accompanied by purging, properly so called, but there was an inclination of the bowels to laxity, and to an immediate expulsion of their contents. This was particularly the case after the ingestion of diluents, whether warm or cold; the patients expressively observed, that they had no sooner swallowed any liquid, than it "ran through them like water." They ejected solid food less quickly, but even this was not long retained. There was a sense of soreness or smarting of the bowels, generally increased by sustained pressure: occasionally sharp pains, of variable situation, were complained of in the abdomen. There was more or less fever, a quick irritable pulse, and redness of the tongue at its edges and tip, with elevated papillæ. The saliva was almost constantly acid, often strongly so, and not unfrequently there was nausea or vomiting.

In these cases the muciparous glands of the intestines appeared to be chiefly affected. The symptoms were not strongly enough marked for subacute gastro-enteritis, nor did I see any *post-mortem* proof of this in the cases which I examined. The glands of Peyer and Brunner, as well as the solitary ones of the intestinal membrane, were considerably enlarged, and often vividly red; the blush, however, was confined to these particular structures. This morbid state was doubtless the result of the long-continued irritation from which the bowels had suffered. You sometimes remark similar appearances in people who have habituated themselves to purgatives, especially of the hydragogue kind.

The treatment which I found most effective, consisted in maintaining steady counter-irritation over the entire abdomen, by means of turpentine, or a warm liniment, and in exhibiting medicinals calculated to allay excitement and give tone to the bowels. A favourite mixture, the good effects of which you have often witnessed of late, composed of infusion of buchu, having in every half-pint a drachm each of *liquor potassæ* and laudanum, and two or three drachms of tincture of henbane, did excellent service in the dose of an ounce three or four times a day. Alkalis are of great value in irritation of the intestines, and, if their glands be chiefly implicated, perhaps there is none preferable to liquid potash. It may sometimes be advantageously given without any other medicinal, and then its taste, which is often complained of, may be completely covered by administering it in milk.

After the subsidence of the more urgent symptoms, I ventured to exchange the effusion of buchu for that of calumba, as being a more direct tonic; and gave additionally in the mixture, hydriodate of potash, commencing with one grain, and gradually increasing it to four grains, for a dose. This formula likewise answered very well; but the iodine salt rather increased the irritation of the bowels if exhibited at first. You will find that the preparations of iodine are much more available in chronic than in acute disorders of glandular apparatus. I have generally remarked that, in the latter states, they do more harm than good. They are inestimable remedies, but they are not things to be trifled with or given at random: according to the discretion with which they are exhibited, they will prove either useful or injurious. The hydriodate of potash is the best of them: it should be given in solution, and always in conjunction with an alkali. In some cases which did not completely recover under this plan of treatment, but in which there was evidence rather of debility than of irritation of the bowels —for there was no abdominal pain, no fever, no redness or elevation of papillæ of the tongue, but a white fur upon it—the sesquichloride of iron produced admirable effects. In atonic conditions of mucous membranes, it is sometimes invaluable. You may give it in water, or in infusion of quassia: this is almost the only tonic vehicle with which the salts of iron do not strike a black colour.

There were a few cases in which the occurrence of the bowel complaint proved curative of amenorrhœa: the uterine function, in some of them, was restored before the subsidence of the purging; in others, after it. Here we must suppose the uterus to have become excited sympathetically with the irritated intestines, as we occasionally observe in giving cathartics to promote menstruation.

Sometimes the purging caused a troublesome leucorrhœa or a coloured vaginal discharge, acrid and offensive. I have known these to follow the use of strong purgative medicines in women of irritable, sanguineous temperament, and in others suffering from debility or cachexia.

A suspension of the catamenia, again, was more than once observed to be successive of the cholera of 1846. There is no accounting for these anomalies: what cures an ailment in one person will cause it in another. Drastic purgatives are called emmenagogues, and yet the history of their action is not without proofs of the menstrual secretion having been arrested by them. Perhaps, however, in the instances wherein amenorrhœa occurred as a *sequela* of bowel complaint, it was not so much from the local irritation of this as from the debility it induced. Whatever directly or indirectly depresses the vital powers has a tendency to interfere with the menstrual function. It is thus that we so often see it suspended by moral emotions, such as sudden fright, fear, grief, anxiety, by insufficient or innutritious food, by over exertion, debilitating ailments, mercurialization, bleeding, &c. In some cases the excessive action of the bowels, especially when this was dysenteric, was attended or followed by hemorrhoids. This was an annoying as well as a painful *sequela* to such as suffered from its visitation for the first time. Dyspepsia, with distressing gastro-intestinal flatulence, was another and a very common consequence of the cholera. You sometimes observe this to be the result of certain debilitating causes. Sexual excesses will produce it; so will drunkenness: so will tobacco-smoking amongst subjects not fully initiated in that filthy habit. I have known it follow the abuse of mercury; it is often successive of large bleedings and of hemorrhages. I saw the other day, in consultation with Mr. Amphlett, a lady who has long suffered from flatulence of the most distressing kind; her bowels are sometimes so distended as to make the girth of her abdomen equal to that of a woman at the close of utero-gestation. Beyond this trouble she has few symptoms, and those not marked, of dyspepsia. Her last confinement was attended by frightful hemorrhage, from which she rallied with difficulty, and which left her in a state of extreme prostration that continued some months. In this state of debility, she became the subject of flatulent distention of the stomach and bowels; and, excepting occasional intermissions, it has continued ever since, and resisted all plans of treatment.

Some of the cases in which this flatulence was sequent of bowel complaint were very severe. Distressing feelings of suffocation, and often agonizing spasms, were produced by it. Its origin is not easily accounted for. The quantity was sometimes so profuse, and the accession so sudden, as almost to lead to the belief that it had actually been *secreted*. With the exception of the swimming-bladder of fishes, we know of no organ in its normal state secreting gaseous fluids: still, there is no saying what the products may be of organs in morbid states. To myself, there is nothing contrary to probability in the opinion expressed by some physiologists (Magendie and Girardin), that gases may occasionally be the result of secretion; and we know that pathologists have cited some cases which do not appear to admit of any other explanation. I do not wish to aver it as my positive belief, that the intestinal gases, in the instances I allude to, were the produce of secretion; but in some of them any other mode of accounting for the anomaly was far from conclusive. As I have said, it not unfrequently happened that the distention occurred suddenly—in the space of a few minutes. Now, the only two likely sources of the gaseous fluid, other than secretion, would be the swallowing of atmospheric air, and the fermentation or decomposition of alimentary materials. To either of these, however, the sudden occurrence of the distention applies objectionably. There are some people who are very expert at air-swallowing: conjurors and ventriloquists practise it in certain of their arts. But to do it adroitly requires some experience, and even its adepts cannot fill their stomachs very quickly; certainly in nothing like the time that the distention often occurred, to my own knowledge, amongst the dyspeptics I speak of. Some people suffer from flatulence, clearly from the ingestion of atmospheric air; but they are generally conscious of swallowing it, and moreover, the gaseous accumulation in this manner is slow. Further, I was not able, in certain of the cases which I investigated, to discover any proof whatever of air having been swallowed; the proofs rather were against such a thing. One of the strongest of them was the fact that the distention *commenced in the bowels*, and extended to the stomach, instead of conversely, as happens when air is swallowed. This also is an objection against the gaseous fluids having been the produce of fermentation of food just eaten; and a farther one is, that the distention was more common when the stomach was empty, than after a recent meal. Food, again, made little difference; meat, milk, and old bread, were the chief sustenance in some cases, and in others, vegetables were freely eaten, but the symptoms remained pretty similar.

The decomposition of feculent matter in the intestines might possibly have caused the evolution of the gases, but this is to be objected against in the following surmises:—1, there was usually so much action of the bowels as to render it improbable that much fecal matter could be detained in them; 2, the evolution of gas in ordinary decomposition is very slow compared with that in the instances I speak of; 3, the sudden occurrence, suspension, and recurrence of the evolution of gaseous matter are inconsistent with the continued presence of decomposable materials in the intestines, and the constancy of circumstances favourable to the process of decomposition; 4, there was nothing whatever to prove that, at the time the gaseous distention of the bowels occurred, there was more fecal accumulation in the intestines, or greater facilities for its decomposition, than under other, the opposite, circumstances.

Whatever the cause of the distention, the cure

of it was often somewhat difficult. As I told you, in a previous lecture, ammonia is an excellent remedy in flatulence of the stomach, and assafœtida equally so in flatulence of the intestines. Infusions of cusparia or cascarilla, which are valuable carminative tonics, I was in the habit of employing, with from thirty to fifty grains of carbonate of ammonia, in eight ounces of either: of this mixture two table-spoonfuls were given every three or four hours, or less often, as the case required, with very good effect. When there was evidence of gastric or intestinal irritability, beyond what may be occasioned by the accumulated flatus, tincture of opium or of henbane formed a useful addition to the mixture. Five grains each, of compound rhubarb pill and assafœtida, were advantageously given at bedtime, when the bowels were torpid; and when in the reverse state, the aperient was well substituted by soap-and-opium pill, extract of henbane or of poppies. Occasional friction of the abdomen, or counter-irritation, generally contributed to assist the distended intestines to contract upon their troublesome contents.

In some cases this form of treatment was all that was necessary; in others, though the carminatives and stimulants sufficed to dissipate any flatulence, they did not prevent the renewal of it. In these latter, chalybeate tonics, quinine, and strychnine, were of more avail. (The tonic services of strychnine I have often shown you of late. I cannot now further speak of it than to promise a separate lecture upon it on a future occasion.) Generous living, with abstinence from the coarser vegetables, cold bathing, or sponging the body in cold salt water, and free exercise in the fresh air, constituted most serviceable auxiliary treatment.

I never met with a case of ulceration of the intestines *during* the attack of bowel complaint; and with only one which could be considered a *sequela* of it. The following are the condensed particulars:—

Fanny Whitehouse, aged thirty, was attended by Mr. Carter, of the Dispensary, for simple fever, from which she recovered. She was subsequently seized with bowel complaint, the consequence of cold, as she thought; this was relieved, and she became nearly convalescent: again, however, it returned, and was again arrested by remedies. She then remained free from all active symptoms, except occasional bearing-down pain, for several days, when, about two o'clock one afternoon, she was suddenly seized with intense pain in the bowels, accompanied by severe retching; these lasted unremittingly until six o'clock. Leeches were ordered to the abdomen, and opiates were administered, without abating the pain. The symptoms continued without change for a certain time, then ceased suddenly, and the patient began to sink. She died the next day. The peritoneum was injected, in some places intensely; the omentum was remarkably vascular, and its vessels very dark. The intestines, as first exposed, were covered with a blush of the brightest crimson I almost ever saw; in places they were more pale, and in others they were covered with fluid lymph; this floated occasionally amongst the convolutions of the intestines. About six inches beyond the ileo-cæcal valve, the bowel was found perforated on a spot of ulceration the size of a sixpence. This is the specimen which I exhibit to you. You see an areola of inflammatory hue; more centrally, a dark spot marking the destruction of the mucous tissue, and within this, where I direct the probe, an orifice. Hence issued the fluid contents of the intestines, which we found in the lower abdominal and pelvic cavity, to the extent of a pint. There is only one point of perforation, but there are several places, as I show you, where ulcerative absorption has occurred; in some of them only the mucous tissue is destroyed; in others, the muco-muscular tissue is gone, leaving only the peritoneal covering intact.

In this case there was nothing to induce suspicion of ulceration of the intestines; but the suddenness of the pain, and the absence of certain of the usual symptoms of peritoneal inflammation, led us to surmise the nature of the mischief, and left us the choice of only few remedies. The treatment was rather palliative than other, for we saw no justification of active measures; and this opinion was confirmed in the *post-mortem*.

Vital prostration, of variable degree, was another common *sequela* of the cholera of 1846. I met with several cases of it, but one in particular may be worth recording. Though the most severe of any I saw, its modifications may be taken as a type of the generality. It occurred in the person of a man named Armstong, whom I treated in consultation with Mr. Heeley, of this town. On my first visit, early in the evening, I found him sitting in a chair, with his wife standing by his side; he held her by the apron, and most imploringly begged her not to leave him. His face was excessively pale, and quite cold, as was his head; pupil contracted to a point, eye glaring, and anxious looking; respiration hurried and irregular; frequent nausea; tongue pale, sodden, and covered with a thick white fur; hands and feet quite cold; pulse 146, and very feeble. The poor fellow was in a state of constant apprehension lest somebody should carry him off or kill him. I learnt that he had suffered from distressing bowel complaint for nearly a fortnight previously, and that it had left him in the state described. For several days he had partaken of no solid food; and for as many nights he had had no sleep. It seemed to me that he was the subject of the irritability of exhaustion: in this opinion Mr. Heeley concurred, and we forthwith gave him two drachms of *sal volatile* in half a teacupful of water. In a few minutes his pulse fell nearly twenty beats per minute, and became stronger: his pupil dilated slightly, and he said he felt warm. We then gave him other two drachms of *sal volatile*, which produced still further improvement. We then left him, ordering his feet to be put into hot mustard and water, and subsequently a mustard cataplasm to be applied to the epigastrium. He was to take a breakfast-cup of gruel for his supper, with a table-spoonful of brandy, and twenty drops of laudanum. On calling the next morning, we found him more free from ailment than he had been for several days past. We ordered him stimulating medicines, brandy and water occasionally, and nourishing diet: the former we were several times obliged to increase in potency, from the state of collapse into which he frequently fell. More than once he became so prostrate and foolish that I was afraid of his sinking into imbecility. Perseverance, first in stimulating and subsequently in tonic and nutritive treatment, effected his restoration.

The cholera of 1846 had no other *sequelæ*, that I know of, worthy of comment.

LECTURES ON THEORY AND PRACTICE OF MEDICINE.

By Dr. CORRIGAN.

Delivered at the Richmond Hospital School of Medicine, Dublin.

Lecture II.—Inflammation.

(Continued from p. 3.)

At our former meeting, gentlemen, I drew your attention to the principles essentially necessary to the proper understanding of that compound phenomenon to which the term inflammation is given. I explained to you that under its most ordinary form it consists of lesions of three functions. Firstly, a lesion of the circulating function, or the carrying of the blood through the capillary vessels; secondly, a lesion of the nutritive function; and thirdly, a lesion of the function of innervation. I also showed that a definition of the compound lesion—inflammation, as applied to any one organ of the body, is inapplicable to any other, inasmuch as there are no two organs in which these three elementary functions are related to each other in the same proportion.

In cellular tissue, for instance, and in serous membranes, which are but modifications of cellular tissues, the function of nutrition is the only function active in the healthy state; at least there is no perceptible trace of red vessels, and innervation is dull.

Then turn to the lung, and you find the greater portion of the function of the organ being occupied by circulation, and pass again to some other organs or parts which are endowed with exquisite sensibility, and you find innervation the most prominent function; hence arises the insurmountable difficulty of constructing a definition of inflammation. Did the whole body consist of a mass of cellular tissue, then the proportion which these functions bear to each other in any one portion of it would exist equally in any other portion, but, as in different tissues they are in different proportions to one another, there can, therefore, be no definition which will have a general application. Besides, another great difficulty attending such an attempt is, the fact that the relative proportion of these functional derangements in any organ attacked is not always necessarily the same.

You will now understand why the appearances denominated inflammation vary in one organ as compared with another, or in one individual as compared with another, owing, in some instances, to peculiarity of constitution; in others, to the peculiar character of the inflammation, technically called its type.

We now come to investigate this compound lesion, termed inflammation, and we shall devote our attention to the consideration of each lesion separately. Let us examine the capillaries of a part in a state of inflammation, as shown in the diagram before us; here let us understand what is strictly meant by the capillary system. It consists of a mesh-work of vessels carrying red blood, permitting the passage of the blood backwards or forwards, as the case may be, between the arteries on the one hand, and the veins on the other. If we observe what takes place on the application of a stimulant to these vessels, selecting for the experiment the web of a frog's foot, or, still better, the tail of a fish, we find the following features present themselves:—The arteries on its application at first diminish in size, and the circulation of the globules through the capillaries becomes excessively rapid; whether this rapidity is, strictly speaking, the consequence of the contraction, or the rapid motion of the globules the cause of contraction, is a theoretical point which we need not trouble ourselves with. Keeping the eye on the part, the circulation will be observed after a little time to become much slower, and the coloured globules which occupied the centre of the vessels are now seen to approach its sides, and gradually to become attached to them; they become more and more fixed, the vessels more and more dilated, the part becomes darker and darker, the circulation at length ceases altogether, and the part has now died. This is mortification in its simplest form, such as we see it in gangrena senilis, or after frostbite, where the vessels have been killed. There is here no combination of lesions. But let us digress for a moment, and suppose there be added to the lesion of circulation a lesion of nutrition in the part giving rise to an effusion of the liquor sanguineus—the granules of lymph, together with some serous fluid from the capillaries, causing swelling of the tissue engaged—we then have what is called moist gangrene, that of most frequent occurrence.

Having thus followed the vessels through these phases up to their actual cessation of action, involving the death of the part, the question now suggests itself as regards the practical bearing of the subject before us, for it is in that sense only that we take up these matters; this question suggests itself:—What is the state of those vessels when the part affected is redder or darker than natural—that is, when the local lesion is in its second stage? We call that the first stage in which a stimulant is either locally applied which has made the vessels contract,

or in the case of an internal organ where a similar diseased action has taken place. This first stage lasts a very short time—so short as hardly to come under the notice of the physician at all. It is the second stage, when the part has become redder or darker than natural, that he has to deal with. Now, as to the state of the vessels in this stage: for upon our views on that subject does our treatment depend. Are they in a state of increased power, or in a state of debility? On the two sides of this question are ranged opponents; but, instead of putting the question in this way, let us put it thus:—What is the condition of the vessels as regards the contained quantity of blood? The quantity of the blood in the dilated vessels will be at once admitted to be greater than natural; but we are not hence to infer the existence of increased power in those vessels.

It is argued in favour of debility, that as the first effect of the application of a stimulant has been to diminish the calibre of the vessels—and as, upon a continuance of that stimulation, dilatation has followed, until at length the vessels have altogether lost their tone—the vessels in this second stage have given way in their fibres, or have yielded just as the muscular fibres of an intestine or bladder will at length yield, after repeated contractile efforts. Some curious microscopical observations have been made upon the fibres of the capillary vessels, which seem to show an exceedingly strong resemblance in their fibres to the involuntarily muscular fibres of the intestines; and this, the advocates on the side of debility say, tends to show that the fibres of the capillaries are subject to the same changes as the muscular fibres of the intestine. For instance, in the disease called ileus, the intestine, after being distended for some time, loses the power of contracting, and death occurs as the consequence of this loss of power, without any inflammatory action whatever. Let us here digress for a moment, and turn our attention to a fact connected with the point we are discussing. Suppose we admit this to be the structure of the capillary fibres, the argument is by no means to be extended to the larger arteries which supply them with blood; it does not follow that these latter vessels are supplied with muscular fibres. The effect of a stimulant on the capillary vessels shows, I think, how entirely independent they are of the heart and larger arteries. To argue that the larger arterial tubes are muscular, because the capillaries are so, would be, I think, as erroneous as to infer that the tendon of a muscle, because continuous with the muscle, is contractile also.

The proper view to take of the heart, in reference to diseases, is to look upon it as a pump for the supply of the blood, and the larger arteries as so many supply tubes merely carrying this fluid to the capillaries, which are the more active agents in health and disease. Comparative anatomy tells us that the capillaries exist before the heart and arteries, and that these latter are not essential to the changes that occur in the capillaries, which are of themselves adequate to carry on the circulation. You have only to take a small sprat or minnow, or any of the smaller fish, and cut out the heart and arteries, or cut the animals across, and still you will find the capillary circulation going on, proving their function to be independent of the heart and larger vessels.

In support of the doctrine of debility there are also adduced the results of treatment. Where distention of the vessels has persisted for a long time, as in chronic ophthalmia for example, the best effects are derived from stimulants to enable those vessels to contract; and the same treatment is equally applicable to internal organs. Where scrofula or general debility exists, the effects of tonics and good air are not less marked. But on the side of the vessels being in a state of increased power, it is said depletion is often more necessary than stimulation. But here again is another error in reasoning. Because relief was afforded by depletion—*ergo*, the action was one of increased power.

Suppose we have to deal with a distended capillary, or capillaries, and remove a portion of the contained blood, does it follow that the state of distention was, therefore, one of increased power? As well might it be said of the distended bladder from which we have drawn off a quantity of its contained fluid that the organ, in its greatly increased state of distention, possessed a proportionate increase of power. In the same way, if we take the other side and use the same argument, we can obtain conclusions exactly opposite; we might say we draw off a quantity of blood, and thus enable the vessels to contract and acquire this lost power; therefore we might argue their previous state must have been one of debility, as in the case of the bladder that was relieved of its superabundant fluid, and thus restore its power.

Another argument adduced in favour of increased power is the fact of the blood flowing from an inflamed part in increased quantity. But in favour of debility we might say, the capillaries of the parts are distended with an unusual quantity of blood, from their debility permitting dilatation. If there were increased capillary power the vessels would contract and diminish their contents; thus, you see quite a contrary inference may be drawn from the same premises. Another argument in favour of increased power, which the student may see in the books that every-day come before him, is increased growth—namely, that inflammation and increased growth are analogous actions; that, for instance, we see hypertrophy or increased nutrition of an organ occur as the consequence of inflammation, and there is cited the circumstance of the growth of the stag's horns. This increased growth, or nutrition, describe it as we may, is, they say, increased power; and hence, accompanying inflammation, there must be increased power. Here is another mistake in reasoning: they forget that nutrition and circulation are totally independent functions, and that the former can exist where no trace of a vessel can be detected. Again, let us even admit that the increased circulation in the stag's growing horn is analogous to inflammation—*ergo*, is it to be inferred that that inflammatory action is one of increased power in the organs? The granules of the fibrine or nucleated cells are thrown out by the vessels to form the horn or new growth; and if it be even admitted that this function is one of increased power, yet it by no means follows that the capillaries carrying these nucleated cells are in a condition of increased power.

Let us turn to pathology for an explanation, and take, for instance, an exceedingly common disease, the large fibrous yellow liver, as it is called, occurring in subjects weakened by various debilitating causes; here the liver has been for a number of years subjected to a mechanical obstruction of its circulation. Its capillaries have been in a state of distention from vital or mechanical debility, while its bulk has been increased by excess of nutrition. Thus, then, whether the capillaries be distended by mechanical causes or by debility, the function of nutrition deposits the fibrinous granules or nucleated cells constituting the hypertrophy of the organ, which may attain a bulk three or four times its natural size. To admit that when the nutritive function is in excess, the capillaries of the part are, therefore, in a state of increased power, is extending an inference further than we are entitled to do in correct reasoning. Let us take the growth of the fœtus in the enlarged uterus; here there is throughout the vagina distention of the vessels, principally corresponding to the situation of the placenta; the vessels are larger, but they are also thinner, than usual, and do not possess the strength of the common arteries elsewhere, and the blood moves slower than under ordinary circumstances. It matters not, for the supply of the function of increased nutrition, how the nucleated cells or granules of fibrine are carried, whether the capillaries carrying them are dilated from strength or debility, the two functions are so far independent of each other that no argument can be drawn from one as to the state of the other. I can point out to you instances where, with general signs of positive debility, the nutritive function was yet extremely active—for example, in animals badly fed, subjected to the influences of bad air and cold to the surface of the body. You see an exuberant growth of hair, such as you might only expect to find in the full vigour of the animal, while, on the other hand, with everything that indicates a superabundance of red and highly oxygenized blood, the function of nutrition seems in many cases comparatively diminished. What conclusion, then, are we to come to? Do not join one sect or another; in medicine never attach yourself to any particular dogma, for it may be said that hardly a single view can be made generally applicable, on account of the changes and the variety of phases that may occur in the several diseases that come before you.

One day a case may present itself, with the evidences of increased power, requiring blood-letting, tartar emetic, everything, in fact, to lower the system; while the very next may be a case in which the capillaries are in a state of extreme debility, and thus you might be led into making the gravest mistakes. In the latter condition, time and stimulants must be had recourse to, with the avoidance of everything that might tend to lower the constitution.

There is the first condition of the capillaries—contraction, which, as regards practical purposes, we may exclude, because it seldom comes under treatment; distention is what we have to deal with when the case comes under our observation. What we see of acute skin diseases, of the diseases of internal organs, and what occurs in fever—all our observations teach us that, in all instances of vascular distention, there invariably comes a period which is essentially one of debility; that we have arrived at a point when nothing further can be gained by depletion; and it is equally true that there is a stage of distention of the capillaries in which, by affording them some relief, they possess of themselves the power of returning to their natural state. This leads me to a distinction of the condition of the capillaries founded on truth—a distinction made by Andral into sthenic and asthenic: in the former the vessels, on being relieved from their distended conditions, possess the power of returning to their former healthy state; in the latter, their state of debility is such as to render them incapable of recovering their contracted state by their own efforts. Here, again, pathology comes to our aid; let us look at the distended intestine, in hens, for instance, which affords a beautiful example of these principles. A period occurs in the disease when it is only necessary to relieve the intestine of its distention, and the intestine possesses the power of returning to its original condition; but, later, a period arrives when we must stimulate with wine, brandy, and small doses of opium, when we must both remove the distention and aid the intestine to contract. Thus in this disease you find an illustration of the necessity of two opposite lines of treatment, according to the stage of the disease you are dealing with. As another illustration of the physical condition of the capillary vessels we may take a common elastic tube; if in its over-distended state you afford it relief it quickly returns to its original calibre. In the same way does the capillary vessel regain its natural elasticity if relieved in time; but let the distention be continued in the capillaries from vital, or in the elastic tube from mechanical, causes, it then becomes necessary, in order to restore the vessels or the tube, to act upon them in two ways—to remove the causes of distention, and to restore the original vital or elastic contractility.

Thus, then, viewing the division of Andral, you can understand that condition of the capillaries to which he applies the term sthenic hyperemia, requiring active depletive measures, as blood-letting, tartar emetic, low diet, all those remedies which relieve the capillary system as a whole, and permit the vessels to return to their original

condition. Remove the offending cause, and the part retains power to recover its healthy state. In [illegible] treatment the most useful part often con[illegible]ot in what may be called curing the disease, but in removing the causes of diseased action, and nature will effect the rest. Your views of medicine must be very limited, if you suppose that in using such and such remedies you are doing what is called curing the disease. In acute disease, however, to give the vessels the power of returning to their original condition, it is also often necessary not alone to relieve their distention, but after a time to have recourse to external stimulants and internal tonics, in order to restore the lost tone of these vessels. This is the æsthenic hyperemia of Andral. Take a case of fever, and see what the mode of treatment is. While the local abstraction of blood by leeches is employed for the relief of the cerebral congestion of the capillaries, or in the case of the lungs for a similar purpose, the exhibition of wine and tonics internally is resorted to at the very same time to bring back lost tone to the capillaries of the system. We relieve the distended capillaries by the one means—we increase their tone by the other.

Let me again impress on you this fact, that you cannot possibly understand the compound treatment of inflammatory action, unless you keep constantly in view the divisions into sthenic and æsthenic.

ORIGINAL CONTRIBUTIONS.

THE CAUSES OF SUDDEN DEATH.

By MALCOLM HILLES, Esq.

(Continued from p. 9.)

Asthmatic affections of the lungs sometimes produce sudden death, although these diseases usually exist for a length of time before they prove fatal. Cases of this kind come so frequently under observation, that it is unnecessary to give details of such.

There is no disease of the lungs, the pathology of which is so misunderstood as that of asthma, or respecting which there is a greater variety of opinion, or in the description of which more obscure language is made use of.

This is a good deal to be attributed to the authors who have written on this subject confounding the causes, effects, and symptoms of the disease with the disease itself, and departing from the only true guide in the classification of disease, namely, pathology.

Dr. Mason Good (a) thus writes:—"Whether the suffocative tightness of the chest be the result of a spasmodic stricture of the bronchial vessels, spreading thence to the muscles of respiration, or produced by an infarction of these vessels from a superabundant effusion from their exhalants, is a question," &c.

Dr. Williams's (b) language is not much more intelligible:—"We have both spasmodic and paralytic affections of other muscular organs and canals—of the bladder and urethra, the intestines, &c.; and analogy favours the supposition that we may have similar conditions of the muscular fibres of the air-tubes."

This is the more strange, as the labours of Resseissen, Laennec, and others, have established the presence of muscular fibres, or, at least, of contractility, in the minute air-cells of the lungs, the existence of which explains the phenomena presented by the disease of asthma, this being clearly referible to a morbid or spasmodic state of the muscular or contractile fibres of the air-cells. That the bronchial tubes, as seemingly inferred by Dr. Williams, the laryngeal muscles, the muscles of respiration and respiratory nerves, should gradually participate in the spasmodic action, is reasonable, and what may be expected in parts so intimately connected both by structure and function.

(a) Vol. 1, p. 475; edited by S. Cooper.

(b) "London Medical Gazette," vol. 1837-8, p. 833.

I have, some years since, brought forward the theory that this contractility of the air cells was of use, in the natural state, by contracting these cells so as to force the air more completely into contact with the venous blood in the lungs, the oxygen of the air acting as the excitant for this purpose. This theory serves to explain some of the symptoms of asthma, more especially those produced by a highly rarefied or otherwise irritating atmosphere. I shall allude to this theory again, when we come to treat of the effects of carbonic acid and other gases on the organs of respiration.

Some cases of asthma are of course referrible to a diseased state of the nervous system, and not to any abnormal condition of the muscular or contractile fibres of the air-cells. But, whatever opinion we may form as to the pathology of asthma, the cause of sudden death, in these cases, is *an arrest* or *stoppage of the act of respiration*. This function ceasing, the nervous and circulatory systems soon participate in the morbid action, and their functions cease also. Of these three great functions, the circulatory may be reasonably supposed to be the last to die. Indeed this cannot be a matter of supposition, as the livid state of the skin generally, but more especially the lips and face, the congested state of the eyes, vessels of the brain, and the lungs, establish as a fact the continuance of the heart's action for some time after, till respiration and the nervous influence have ceased.

Some cases are recorded of persons dying *suddenly*, with asthmatic symptoms, where no disease of the lungs was observable after death, but, instead thereof, some one or more of the neighbouring viscera were found to be in a diseased condition. The heart is usually the organ at fault; but it also occurs where the liver, stomach, or other viscera, are affected. This is a form of disease which puzzles the practitioner a good deal, and leads to much variety of opinion as to its true seat and the immediate cause of the asthmatic symptoms. It is a species of *sympathetic asthma*, and is no doubt induced through the connection which exists between the principal organs of circulation, respiration, and digestion, by means of the pneumo-gastric nerves and the intimate relation of all the functions to each other.

The following case, related by Mr. Greenwood (a) at a meeting of the Physical Society, Guy's Hospital, is an interesting instance of this affection:—

"Mrs. S. has enjoyed good health, and is the mother of a large family. On the 6th of October, 1838, I was called to see her, at four A.M., and found her in a state of insensibility, &c. Her husband stated that she had awakened him, complaining of a difficulty of breathing, jumped out of bed, ran to the window, which she managed to raise, and then fell back senseless. The patient recovered this attack, and remained well until the 24th of November following, when Mr. Greenwood, being called to see her, found her on his arrival quite dead. She had awakened her husband as before, complaining of dyspnœa, and before a candle could be procured she expired. On a *post-mortem* examination, the liver was the only organ found seriously affected, which was found "enormously enlarged," so as to encroach on the thoracic cavity superiorly, and the abdominal inferiorly. In the discussion which ensued much difference of opinion as to the cause of the fatal symptoms was manifest."

Dr. Forbes (b) states, "In a case of asthma, related by Ferrus, a large ossification was found in the centre of the pulmonic flexus, which compressed some of the nerves. ('Dict. de Med.' tom. 3.) In a case of fatal dyspnœa, Beclard could discover no cause of the disease, but a tumour on one of the diaphragmatic nerves. A nearly similar case is related by Andral ('Dict. de Med. Prat.,' tom. 3, p. 109); and Parry mentions a case of dyspnœa, occurring by fits of aggravation, and at last proving fatal, without any symptoms of local pneumonic disease, in a person who had thickening about the upper part of the vertebræ of the neck, with some degree of distortion, from venereal affection." (Posthumous Works, vol. 2, p. 16.)

(a) "London Medical Gazette," vol. 1838-9, p. 797.

(b) Cyclop. "Pract. Med.," vol. 1, Article "Asthma," p. 189.

These cases were evidently spasmodic affections, proceeding from contraction of the nerves, connected with the function of respiration, viz., the pulmonic flexus, diaphragmatic and other nerves; but to what structures are we to refer the spasmodic action? If this were situated in the external muscles of respiration and diaphragm, such would be manifest: its seat must have been, then, the muscular or contractile fibres of the air-cells or bronchial tubes; but as these latter are furnished with cartilaginous rings, and, where these are deficient, possess sufficient resistance to prevent their being closed by the muscular fibres to be traced in them, I am of opinion that the principal seat of the disease in such cases is the contractile tissue of the air-cells themselves.

Supposing, then, the air-cells of the lungs to be endowed with muscular contractility, for the purpose, as already stated, of compressing the atmospheric air more perfectly into contact with the venous blood, in healthy or natural respiration, it requires only an increased degree or morbid state of this contractility to induce the various symptoms of asthma, and explain most of the phenomena to be observed in the course of this disease.

The diseases of other organs may excite this unusual degree of contractility sympathetically, and others induce all the asthmatic symptoms, without any appearance of such being manifest on a *post-mortem* examination.

It is most desirable that the pathology of this disease should be fixed, and that our professional works should get rid of the various names attached to its different features or symptoms, rather than the disease itself. This being once accomplished, a defined rational plan of treatment might be laid down for this affection, whether of independent existence or existing in conjunction with affections of the bronchial membrane, heart, or other neighbouring viscus. Sudden death rarely occurs in connection with other diseases of the lungs.

PART II.

ON CASES OF SUDDEN DEATH IN WHICH NO LESIONS OR MORBID ALTERATIONS OF THE LUNGS HAVE EXISTED, OR, IF PRESENT, HAVE NOT CONTRIBUTED TO THE RESULT.

The sudden deaths caused by drowning, strangulation, and exposure to carbonic and other mephitic gases, are so intimately connected with this part of our subject that we introduce them here, especially as their consideration will serve to assist in the elucidation of the physiological phenomena that present themselves whilst life is being extinguished from impediments to the function of respiration from various causes.

The principal cause of death in these cases is the sudden arrest of the function of respiration; indeed it has been, and is generally conceived to be, the sole immediate cause; but in this opinion I do not concur, as several phenomena which occur in these cases are quite inexplicable on this supposition; and we know full well that respiration may be voluntarily suspended, for a minute at least, without any serious result; we must look, therefore, to other impressions as contributory at least to the fatal termination.

Death by drowning, as it usually occurs in these countries, is chiefly to be attributed to the sudden arrest of the respiratory function. When an animal, such as man, is immersed in the water, no perfect act of respiration can be performed; the individual endeavours to inspire, but the rima glottidis becomes closed to prevent the ingress of the fluid into the lungs; the individual then expires, and forces out a small quantity of air which appears on the surface of the water in the form of a few bubbles; the attempt

at inspiration is renewed with the same results, and then succeeds a still more feeble effort at expiration; these attempts are repeated a few times, when the person becomes drowned or asphyxiated. In this state the patient continues for a few minutes, before life becomes wholly extinct; the exact time necessary to the complete extinction of life is variously stated, and is no doubt subject to much variety; some assert that three, four, and five minutes are sufficient to produce death, whilst others represent recovery to have taken place after three-quarters of an hour's immersion. Although little confidence is to be placed in most of these statements, it is certain that cases have been recovered where immersion had continued for half an hour at least. Dr. Copland states,(a) "Of twenty persons recovered from drowning, one had been three-quarters of an hour under water, four half an hour, three a quarter of an hour, and the rest for shorter periods." Much of this variety of opinion and experience must be owing to the various impressions made on the individual by the water, and to the health and strength of the person himself. If the temperature of the water be much reduced, say so low as 40° and under, there can be no doubt that the powerful impression made on the skin will contribute to the sudden appearance of asphyxia, and the more rapid extinction of the vital spark; we need not add that an old and unhealthy individual is less likely to sustain immersion for even a short period, than young and strong constitutions. I think I have remarked that suicidal attempts at drowning are more rapidly fatal than the contrary.

Dr. Gregory states(b) that Dr. Davy "informed him that he had not been able to recover dogs that had been under water two minutes, even by means of artificial respiration and galvanism employed immediately;" and also "an animal immersed in a freezing mixture, but with the respiratory organs free, speedily dies."

In cases of strangulation, suffocation is not the immediate cause of death. Where violence is used, death is caused by the concussion propagated to the brain, either directly or through the nerves compressed, or the vessels of the neck distended with blood, all of which are sufficient to cause death, even although respiration were still maintained. The rapid destruction of life caused by the peculiar manipulation of the Thugs in India is evidently to be attributed to some agency of this nature, rather than to the stoppage of the respiration. In most of these cases the sufferer was killed, and at once rendered incapable of making even an attempt at resistance.(c)

In the respiration of carbonic acid gas, death usually takes place too instantaneously to be produced solely by a cessation of respiration; from the following cases it will appear that asphyxia takes place at variable intervals, according to the strength or purity of the gas; death taking place almost instantaneously where this exists in considerable quantity.

In the year 1756, one hundred and forty-six Englishmen were confined in the blackhole at Calcutta, from eight in the morning until the next morning, when only twenty were found alive. A similar instance happened in London in 1742. Twenty persons were confined in the hole at St. Martin's Roundhouse, of these four were found dead in the morning. In 1813 two lads were found senseless in a brick kiln in St. George's-fields. ("Beck's Medical Jurisprudence" and "Edinburgh Annual Register," vol. 6, part 2, p. 64.)

Dr. Babington relates ("Medico-Chirurgical Transactions," vol. 1, p. 183) the case of a boy and a waiter, who slept during the night in a room where a chafing-dish of charcoal was kept burning. The boy died, after some attempts to restore him; the waiter, however, recovered, but with much difficulty.

In the Grotto del Cano, at Naples, insensibility is rapidly induced in dogs by the action of carbonic acid gas, which collects in the lower stratum of air in the grotto. D'Arcet, visiting the place at Montpensier, in France, where carbonic acid gas issues from the ground, as at the Grotto del Cano, in Italy, attempted to ascertain its effects, but they were so sudden that, having moved towards it on his hands, he instantly fell flat, and would have expired, had he not been drawn back by his guide.—("Beck's Med. Jur.," p. 612.) Sir Humphrey Davy ("Researches concerning Nitrous Oxide," p. 472, and "Kay on Asphyxia," p. 333), having prepared some very pure carbonic acid gas, attempted to inspire it, but it was in vain that he made repeated efforts to draw it into the windpipe. It occasioned such painful irritation as to cause a complete closure of the opening into the larynx. Many instantaneously fatal cases are recorded from the inhalation of carbonic acid gas, collected in brewers' vats, deep wells, graves, &c.

I have related these instances of the various effects of carbonic acid gas, for the purpose of showing that its effects vary considerably, according to its purity or otherwise; and that, therefore, its action on the animal economy depends on the degree of purity of the gas in use.

This is an important physiological fact, which has not received sufficient attention; much error and much difference of opinion being the result. Thus Bichat and Nyston ("Recherches de Physiologie et de Chimie Pathologiques") were led by their experiments to conclude that carbonic acid gas is not more deleterious in its effects, when inspired, than nitrogen or any of the negative gases.

M. Colland de Martigny ("Archives Gen. de Médecine, Juin 1827," t. 3, p. 91) has proved that it has a remarkable sedative influence; in this opinion he is supported by Dr. Bird ("Lond. Med. Gazette," vol. 2, 1838-9, p. 25), who has shown that the effects of this gas vary according to its purity and degree of intermixture with the atmospheric air. In five per cent. of carbonic acid, mixed with atmospheric air, death was produced in a bird in one hour. The same kind of bird, when placed in pure carbonic acid gas, immediately asphyxiated. M. Colland de Martigny and Dr. Bird both regard this gas as a direct poison.

The cases I have detailed show that its action is that of a sedative, or narcotic, when inhaled in a moderate state of purity, the exact proportion necessary to act thus, varying, of course, with the animal acted upon; whilst it will act as a more active poison and irritant, if inhaled in a pure state. In what manner, then, is death produced by the inhalation of carbonic acid gas?

In those cases where the gas is mixed with a certain portion of atmospheric air, death seems to be produced by its acting as a sedative or narcotic poison on the system. All animals, so exposed to its effects, fall gradually into a state of sleep or stupor, which continues until death supervenes, or recovery takes place. The narcotic effect continues for several days. In the case of the waiter, related by Dr. Babington, the patient did not recover his senses till the third day had elapsed, and then could only recal to mind the circumstance of the charcoal burning brightly shortly before he fell asleep. There is a striking analogy between this state and that of patients labouring under difficult respiration, in which coma takes place, when the disease becomes much aggravated. In both cases the cause of death is similar: the carbonic acid gas collects in the system until it paralyses the brain and nerves, and thus leads to a stoppage of the respiration and circulation. I place circulation last in order, as the experiments of Bichat(a) have shown, contrary to the opinion supported by Godwyn and others, that the heart continues to contract and the circulation is kept up for a considerable time after respiration has ceased, notwithstanding that black or venous blood circulates in the left cavities of the heart and arterial system. In cases, however, where the carbonic acid gas is present in larger quantities, as in brewers' vats, deep wells, graves, &c., death takes place so instantaneously that we must refer its occurrence to a morbid impression on the nervous system, the gas thus acting as a highly concentrated poison of a narcotic and irritating nature.

I cannot but consider that the morbid impression exercised on the mucous membrane of the air-cells of the lungs, by the carbonic acid gas coming into direct contact with the extremities of the nerves, is the principal source of the rapid asphyxia that takes place in these cases.

If we reflect on the extent of this mucous surface, certainly much greater than that of the whole cutaneous surface of the body, it will not appear extraordinary that such violent effects should result from contact of a mephitic gas, such as the carbonic acid.

Physiologists are gradually becoming more convinced that it is on the extremities of the nerves that agents produce the most decided results, and that the intermediate portion of the nerves are little affected thereby, the part being, *per se*, almost, if not wholly, insensible. This opinion is strongly supported by the fact that all impressions made on the trunks of the nerves are felt at, and referred to, their sensitive extremities; the feeling which appears to continue this action in cases of amputation of the limbs or divisions of the nerves does not negative this fact, as such may be accounted for on the theory that the nervous trunk continues to sustain an action to which it had long been familiar, and which, however false, takes a considerable time to remove. This power of the nerves of the extremities seems to be closely analogous to the power preserved by blind persons, of recalling the impressions of objects to the mind long after the sensibility of the retina has been lost. But some will perhaps state, in opposition to this doctrine, that the cutaneous surface of the body may be exposed to this and other gases with impunity. To this I reply, the cases are not analogous: animals may be poisoned by the application of carbonic acid gas to the skin only; the skin is less delicate than the mucous surface of the air-cells, is covered by the cuticle, and is constructed so that its nervous filaments may be subservient to the sense of touch, and but little affected by agents which operate powerfully on other tissues. Each organ seems to be most sensitive to its own immediate excitant: thus, for example, light is the peculiar excitant of the eye; sound, of the ear; food, of the stomach; air and gases, of the mucous membrane of the lungs. How inefficient would these agents be, if applied to other than their peculiar organs! Each is naturally sensible to its own excitant, and is morbidly sensible to its injurious operations. This principle is well displayed in the action of medicines on the human economy: one acts on the stomach alone; another on the small, a third on the large, intestines; others on the brain, the heart, the liver, &c.; these being the natural excitants of these parts. There is no peculiarity in the structure of these several parts, to explain such results; the only explanation available, if it can be called such, being that such is the law of Nature. We may reasonably conclude, then, that carbonic acid and, most probably, other mephitic gases exercise a peculiar morbid influence on the nervous expansions, distributed on the mucous surface of the air-cells,

(a) "Dict. Practical Medicine," Art., "Asphyxia," p. 132.

(b) "Elements of the Theory and Practice of Physic," 1828, p. 473.

(c) Where violence has not been used, death from strangulation is to be attributed to arrest of the function of respiration, succeeded by a congested state of the vessels of the brain. This opinion is confirmed by the experiments of Gregory and Brodie, from which it appears that if an artificial opening be made into the trachia of an animal, below the ligature by which it is suspended, it will continue to live for a considerable time. Sir B. Brodie has not omitted to observe on the injury done in these cases to the pneumo-gastric nerves.

(a) "Recherches Physiologiques sur la Vie et la Mort."

such being the natural, although morbid, result of their peculiar function. If such be the case, we can have no difficulty in accounting for cases of instantaneous or sudden death, produced by the inhalation of this gas, and which cannot be explained on any other theory that I am aware of.

In Sir Humphrey Davy's attempt to inhale the carbonic acid in its pure state, the glottis became immediately closed, the poison in this case acting as a direct irritant. It is to be observed, that no bad effects resulted, although respiration was stopped; had the gas entered the lungs, Sir H. Davy might have suffered severely for his temerity. In a less-concentrated form, might not the gas act as an irritant on the contractile fibres of the air-cells, although not sufficiently powerful to produce such an effect on the muscles of the glottis?* When treating of sudden death from asthma, I explained the theory I have advanced regarding the use of these fibres, and can easily conceive a spasmodic condition being produced in them by the action of concentrated carbonic acid gas, so as to resemble an attack of spasmodic asthma.

The morbid impressions made on the skin when an individual is immersed in the water seems analogous; in both, the impression is made on the surface, and is thence transmitted to the brain directly through the agency of the nerves, without any necessary intervention of the vascular system.

I do not understand why all impression made on the nervous extremities should be referred to the sensorium. I have long since advanced the doctrine that the ganglionic expansions of the nervous filaments may act as sensoria, and that impressions may be produced there, and propagated to the anastomizing filaments of the nerves, so as to excite these to action, ultimately the impression reaching either the brain or spinal marrow, thus establishing the nervous anastomoses and several plexuses as sensoria, independent of the brain in action, but dependent on it for the integrity of the function. This doctrine may appear to be similar to the views propagated by Dr. Marshall Hall on the nervous system; it differs, however, in many respects, as will be evident on comparing these together, the principal point of difference being the independent action of the medulla oblongata, which Dr. Hall contends for, and which, notwithstanding my respect for this gentleman's extensive researches and elaborate reasonings, I cannot consider as existing in man, or at all necessary in the physiological phenomena I allude to, except as a connecting medium.

The rapidity with which death takes place in these cases leads us to the conviction that the cessation or sudden stoppage of the act of respiration is not sufficient to account for such phenomena, and that there must be some other agency, as already stated, in operation to produce so rapidly fatal results.

Let us suppose for a moment, as is the general opinion, that the venous blood, not being arterialized, circulates through the vessels of the brain, and thus induces asphyxia. If we reflect a little, we shall see that this explanation is far from correct. The blood, thus unarterialized, cannot possibly reach the brain until after several pulsations, and then only in a mixed state. As the left ventricle does not propel more than four ounces of blood at each pulsation, several pulsations will be necessary to empty the pulmonary veins of the arterialized blood previously contained in them; let us suppose this quantity to amount to the comparatively trifling estimate of twenty ounces, it follows that five pulsations must take place before any portion of the unarterialized blood can enter the heart; after these, some, but mixed with partially arterialized blood from the capillary veins, will reach the left auricle, whence it is propelled into the left ventricle, and thence into the arterial system; but here, also, some delay takes place, inasmuch as the arteries do not empty themselves of their contained blood at each contraction of the heart; and, consequently, the unarterialized blood cannot reach the vessels of the brain until some few more pulsations take place; let us estimate these at five also, on the supposition that it takes this number of pulsations to fill the whole arterial system, we shall have ten pulsations as the number requisite before the unarterialized blood can reach the brain, so as to produce the effects on this organ generally attributed to it; but this supposition is opposed to facts, as asphyxia is often produced instantaneously, whilst, as I have shown, ten seconds are required for the unarterialized blood to reach the brain—a space of time sufficient to allow of the patient making some effort to escape, or some attempt at alarm. But may the patient respire the gas for this period of time without being conscious that this is the case, and only exhibit its effects at the precise period at which the unarterialized blood reaches the brain? The history of these cases negatives this supposition, and shows that the asphyxia is produced at the first act of inspiration.

Bichat, in his celebrated work on "Life and Death," (a) has induced the profession to regard this impression on the brain, by the circulation of the dark-coloured blood, as the chief source of asphyxia. I think this opinion cannot be maintained. I conclude, then, that the simple arrest of the act of respiration (b) is not sufficient to account for the suddenly fatal termination of the cases we have described, and that a more rapid impression on the constitution exists, and is necessary to produce such results; this I consider to be the sudden impression on the sensitive extremities of the nerves, produced in asphyxia from carbonic acid gas, by the contact of the gas itself; in drowning, by the contact of the water at a cold temperature; and in rapid strangulation, by the concussion on the nerves of the neck, immediately transmitted to the sensorium.

When we come to consider the phenomena produced by the action of prussic acid and other powerful agents on the system, we shall be able to show that these support very much indeed the theory I wish to establish, namely, that of the sentient extremities of the nerves being so susceptible of a powerful morbid impression, which is independent of the brain in its immediate action.

* (a) "La Vie et la Mort."

(b) The very remarkable case of the Honourable Colonel Townshend, related by Cheyne, serves to prove that *the act of respiration may be suspended for a considerable time without destruction of life.* The following is Dr. Cheyne's account of this singular case ("English Malady," p. 307):—

"He told us he had sent for us to give him some account of an odd sensation he had for some time observed and felt in himself, which was, that, composing himself, he could die or expire when he pleased, and yet by an effort, or somehow, he could come to life again; which it seems he had sometimes tried before he had sent for us. We all three felt his pulse first: it was distinct, though small and thready, and his heart had its usual beating. He composed himself on his back, and lay in a still position for some time; while I held his right hand, Dr. Baynard laid his hand on his heart, and Mr. Skeine held a clean looking-glass to his mouth. I found his pulse sink gradually, till at last I could not feel any by the most exact and nice touch. Dr. Baynard could not feel the least motion in the heart, nor Mr. Skeine discover the least soil of breath on the bright mirror he held to his mouth. Then each of us by turns examined his arms, heart, and breath; but we could not by the nicest scrutiny discover the least symptom of life in him. This continued about half an hour. As we were going away (thinking him dead) we observed some motion about the body, and upon examination found the pulse and the motion of his heart gradually returning; he began to breathe gently and speak softly." The patient died the same evening.

(To be continued.)

PROGRESS OF MEDICAL SCIENCE.

France.

ACADEMY OF MEDICINE.

Meeting of March 2; M. Begin in the Chair.

ETHEREAL INHALATION.

M. Gérardin stated that he had found a letter addressed to the late King Charles X. by a Dr. Hickman, and dated the 26th of September, 1828. In that letter the author recommended the inhalation of several vapours for the purpose of producing unconsciousness during surgical operations.

A favourable report was read by M. Dubois (d'Amiens), on a paper by Professor Trousseau, in which the treatment of organic stricture of the œsophagus, by dilatation, is specially recommended.

PARISIAN MEDICAL SOCIETY.

Meeting of March 3; Dr. Shrimpton in the Chair.

Carcinoma, by M. Pione, Curator of the Musee Dupuytren.

Setting aside the microscopical study of carcinoma, that disease may be considered as a malady, the forms of which differ not in nature, but merely on account of their peculiar seat. Cerebriform cancer, the only variety observed in childhood, is special to the cellular tissue; gelatinous cancer, to lamellar structures; scirrhus, to parenchymata; and fungus hematodes, to capillary organs. Cancerous growths should be studied in their texture—in their juice, their pigment, and their peculiar mode of circulation.

1. Carcinomatous texture is a special heteromorphous tissue, of a white colour, and furnished with areolæ, more or less considerable, according to the variety observed; all these areolæ communicate with each other, and are formed of solid, dense walls, to which the consistency of the tumour must be referred. The lobes are surrounded with cellular capsules, and fibrous bands irradiate in every direction, penetrating the neighbouring parts, and endowed with the property of causing reproduction of the disease, and that within fifteen or twenty days after operation, under the influence of a particular cause hereafter to be noticed.

2. Within the cells is deposited a secretion, the cancerous juice, which increases in abundance with the age of the growth. This fluid is whitish, slightly opaque, and presents a blue tinge, which permits it to be not inaptly compared to the blood of certain mollusca. Very soluble in water, the cancerous juice is, on the contrary, condensed and solidified by pure spirit, and its absorption into the system renders the disease general. In consequence of the communications existing between the cells, the juice readily escapes through any ulceration or aperture, without, however, the bulk of the tumour being thereby diminished, the solidity of the cellular walls keeping them, although partially void of their contents, in a gaping condition.

3. The pigmentum, when concentrated, is of a darker colour, but when disseminated in the tumour and mixed with the cancerous juice, it communicates to the latter a yellowish hue, which absorption disperses through the system, thus producing the characteristic tinge observable in the skin.

4. When considered in combination with the reproduction of cancer, the history of its circulation is highly interesting. In the article "Cancer" of the "Diction.," in vol. 25, Professor Bérard asserts that cerebriform cancer contains numerous vessels, but that none exist in scirrhus. This assertion is disproved by the energetic vitality of the growth, which is perfectly incompatible with the absence of a vascular system: it may be said, however, that the vessels of cancerous tumours do not resemble those of the healthy parts of the body. They first appear in the centre of the morbid product;

they are not veins, for they are unfurnished with valves; they cannot be called arteries, because when divided they collapse. These vessels—the only order of vascular texture proper to carcinoma—seem to hold an intermediate position between veins and arteries. For a long time these vasa propria do not communicate with the general circulation of the subject, hence for a time the disease remains local. When the vessels of cancer resemble more closely those of general circulation, the fact may be considered as a proof of the maturity of the tumour, and of the imminence of diathesis. The blood contained in the vasa propria is almost colourless, and bears a certain resemblance to the blood of mollusca. Inflammation of the cancerous growth promotes the softening of the tumour, but does not tend to increase its size; inflammation of the surrounding parts has a directly opposite influence, increasing the magnitude of the tumour, without modifying its density: hence, if a cancer be not removed in totality, the local inflammation consequent upon operation tends to develop those parts which have not been taken away: hence, also, the precept of Dupuytren and Samson, to operate without delay on each recurrence of the malady, and to display as much tenacity in the determination to destroy the disease, as the disease itself shows obstinacy in its recurrence. The following case is interesting in many respects:—

Case.—In the year 1834, Mr. B. came to Paris for the purpose of undergoing operation for a cancerous tumour of the orbit: the growth had acquired the size of the head of a fœtus. Pains in the limbs and some degree of previous paralysis, showing that the brain was in all probability implicated, induced Professor Samson at first to set aside all idea of an operation. But, the patient having expressed his settled determination to destroy himself if the operation was not proceeded with without delay, M. Samson consented to operate in the presence of several British practitioners, fellow-countrymen of the patient. A portion of the frontal, the nasal, and maxillary bones having been removed, the dura mater was found to be affected, and was likewise excised. But the cerebral substance itself was occupied by the disease, and after a short conference, in which Samson alone persisted in the opinion that it was his duty to achieve the operation he had begun, one ounce and a half of cerebral substance was removed by a section which penetrated into the lateral ventricle. The cerebral vessels were cauterized with a heated probe, and the patient recovered completely from the effects of this tremendous operation—no paralysis, no disturbance whatever of the cerebral functions, having been observed. Sixteen months after, the patient died in consequence of reproduction of the growth in the scar, and on dissection the disease was found to extend as far as the posterior cerebral lobe.

FACULTY OF MEDICINE.

Lectures on General Pathology, by Professor Andral.

A general diminution of the temperature of the body during the progress of disease is very seldom observed; even when a fatal termination is fast approaching, the temperature of the axilla is still found at or above the physiological limit. In one malady only can a notable diminution of heat be observed in all parts of the body. This malady is, therefore, an exception—it is sclerema, or induration of the cellular tissue—a disease special to infancy; in this malady the thermometer falls to a very low point (28°, 26°, 23°.5, Cent.; or 82°.4, 78°.8, 72°.4, Fahr.); 23°.5 is the lowest temperature observed, and the disease is preceded by this diminution of animal heat. In cholera the temperature of the limbs, and even of the tongue, undoubtedly descends; but, unfortunately, during the epidemic of 1832, no thermometric observations were taken in the axilla. About two years since, a case of cholera occurred in our practice; the temperature of the limbs was 26° (78°), and of the axilla 38° (100°.4). In tubercular disease, in anemia, chlorosis, scurvy, &c.,—in all which it would seem natural, from the imperfection of pulmonary hematosis, or the decrease of energy of all the vital functions, to suppose that the temperature of the body is below its average standard. Such is not, however, the case: it remains at its physiological level, and even rises when febrile excitement is present. The same may be said of diabetes, emphysema pulmonis, and prolonged convalescence. In sclerema only has the temperature of the axillary region been known to fall (the discovery of the fact is due to Dr. Roget); and, perhaps, in Asiatic cholera the same fact will be observed, but at present we possess no positive proof of the supposition.

Inanition, consequent upon prolonged abstinence, causes, as it appears from M. Chossar's interesting experiments, diminution of animal heat. When animals are deprived of food they undergo a daily and successive refrigeration of $\frac{3}{10}$ of a degree C (0·54 F.); and when the animal, after feeding upon his own substance, at last collapses, the remaining heat of the body suddenly falls about 11°, and descends to + 18°. When this is observed, death may be constantly expected within a limited number of hours.

In plethora and apyretic affections the thermometer is never observed to rise above the highest point noticed during health, *i. e.*, 38° (100°.4). M. Prevost, of Geneva, has, however, mentioned a case of tetanus, in which he found 41° (105°.8). But we think we may almost positively assert that fever was present. Let us, however, say that the anatomical seat of tetanus is evidently the spinal chord, one of the principal agents of the production of animal heat; that tetanus is marked by violent muscular contraction, which we know to cause development of heat; and we may therefore inquire if these two circumstances might not, in tetanus, explain, without fever, the increased production of heat?

The partial increase of the temperature of the body is observed on the surface of inflamed organs. It may be established as a general principle that the heat of inflamed surfaces is greater than that of healthy parts, but is never more considerable than that of the axilla of the same subject. This principle has been also demonstrated by Hunter, who established a true result on observations which were not very conclusive: having punctured a hydrocele, Hunter placed a thermometer in the tunica vaginalis, and found it rose to 38° (91°.4). A few days afterwards, when inflammation had set in, the temperature of the part was again observed; it had risen to 36° (96°.8). This is the only experiment of Hunter on man which did not yield a negative result. That same illustrious observer, having stimulated with mustard, ginger, and other irritating substances, the rectum and vagina of an ass, found that the process occasioned a rise of one degree in the temperature of the parts. In cold blooded animals, Hunter experienced great difficulty in determining any appearances comparable to inflammation; he never succeeded in detecting any increase of general or local heat. In general the temperature of inflamed parts rises from half a degree to two, but is never superior to that of the axilla. Becquerel and Breschet, on an inflamed tumour of the neck of a patient stated to be in high fever, observed the thermometer to rise as high as + 40° (104°) on the surface of the tumour, whereas in the mouth it remained at 37°.5, (99°.5). This result we cannot accept: the mouth is not a fit place for observation, on account of the continual passage of air, and evaporation which takes place in consequence.

The congestion necessary for the accomplishment of a function is said to cause development of heat. Sir Everard Home found 2° more than in the neighbourhood of the heart, in the oviduct of frogs, near the spawning time. During parturition, the temperature of the womb is said to increase.

Diminution of temperature in a limited part of one tissue may result from four distinct causes. 1. From arrest of circulation. 2. From the appearance of gangrene. 3. From paralysis: and here, besides the withdrawal from the diseased part of nervous influence, abolition of motion and diminution of the activity of nutrition concur to bring on decrease of heat. In a recent inaugural thesis, lately published by Dr. Routier, the interesting fact is proved by numerous observations, that in the paralysed extremities the temperature is decreased two hours after the accident, but rises above the physiological standard twelve or twenty-four hours later. 4. Œdema of any part also tends to diminish its natural heat.

The study of animal heat forms an easy transition from the inquiry into those properties special to organized bodies, to the investigation of those which living enjoys in common with inorganic matter. One of the most important of the latter is undoubtedly electricity, the sources of which in our system are exceedingly numerous. Thus free electricity is evolved in the multitudinous chemical actions which are perpetually performed within our body; it is produced by the movements, the frictions, which our parts continually undergo. But whilst in all animals a special apparatus exists for the production and disengagement of nervous power, none can be detected, at least in the human frame, for the liberation of electricity. The production of this fluid in living bodies is most variable, and from its varieties may arise some elements of disease. Further than this assertion, all is purely hypothetical, and founded upon facts incompletely observed, and consequently of very little value. Berlinghien endeavoured to ascertain the presence of free electricity in the blood, and asserted that its quantity was diminished in inflammatory affections; increased, on the contrary, in maladies of an opposite nature. Researches of this kind must, however, be made with a degree of delicacy which authorizes us to pause ere we adopt the results of Berlinghien's experiments.

The laws of gravity, in living bodies, exercise their sway within certain limits. Their power is more evident according as the structures are more deeply altered, the vital properties less energetic, and the obstacles to the return of venous blood to the heart greater. The veins, the capillaries, the cellular tissues and the serous cavities, are the parts in which its phenomena are the most distinct.

Thus in the veins, when they have lost their tonicity, when they present obstacles to the free return of the blood, that fluid obeys the laws of gravity: in the capillaries the same is observed, peculiarly in the inferior extremities of debilitated subjects. We may notice a phenomenon of the same kind in the capillaries of the face of subjects weakened by disease; again, in hypostatic congestion of the lung, or in the enlargement of the liver consequent upon disease of the heart, &c., during the last moments of life, and even after death, so long as the blood remains in a fluid state, the intestinal mucous membrane is also the seat of accumulation of that liquid, from the operation of the same cause. The phenomena of œdema, and those physical signs which permit us to detect dropsy of the serous membranes, can serve to illustrate the effects of the force of gravity in cellular tissues, and on the serous cavities of the body.

The continual processes of evoporation, of endosmosis and exosmosis, and of capillarity observable in the system, can, by their disturbance, occasion the development of various morbid elements, which also deserve our attention.

Besides these general physical operations, other phenomena must be taken into account, which depend upon the special properties each tissue is endowed with. Thus the extensibility natural to cellular and fibrous textures, the elasticity proper to the yellow fibre, to fibro-cartilage and to cartilage, to the bronchial apparatus, may all be more or less modified by disease, and become the origin of new morbid appearances. Need we add that chemical causes may

likewise occasion the functions to deviate from their healthy and regular accomplishment? Thus the presence of pus in the urine from vesical catarrh, for instance, renders that fluid alkaline, and may give rise to phosphatic deposits and the formation of calculus in the bladder. In the present state of science, disease cannot be properly studied without the full and intelligent appreciation, not only of the vital alterations of the body, but of the numerous chemical and physical operations of which it is the seat.

Few diseases are constituted by one only of the alterations we have laid before you: neuralgia is one of those few; sensibility alone, in that pathological form, appears to have undergone any change; but in general a malady is the result of the combination of several elements, whether they have originated from one, or arisen simultaneously in the system.

In certain cases, disease can be readily traced to a local origin—to a circumscribed dynamic—anatomical or chemical disturbance; disease is there termed local; but in other instances a simultaneous disorder seems to arise in various parts under the influence of a universal cause: such are the alterations of constitutional syphilis; disease then receives the denomination of general.

It is the special property of that force which regulates living bodies, to establish a connecting link between their various functions, to unite them so as to form a whole; hence in the healthy or diseased organism no one point can suffer without its sufferings being more or less distinctly re-echoed in all the other parts of the system. This property essentially distinguishes organized from inorganic substances, and constitutes the share of vitalism in physiology and in pathology; and the object of the physician must be to establish the laws of life, as it is the object of the chemist or natural philosopher to establish those of affinity and of electricity.

The elements of disease are, therefore, the alterations of the physical or of the dynamic conditions of our organs. The elements can combine *ad infinitum*: observation, however, shows that in most cases they are associated so as to produce a certain number of abnormal states,—which are endowed with almost similar characters,—and resemble each other by their mode of development, of succession, of termination; observation likewise teaches us, that in general they yield to the same therapeutic agents; whenever, for instance, under the influence of cold, accumulation of blood takes place in the lungs—whenever they become the seat of fibrinous or purulent deposits, when at the same time febrile excitement appears, together with an increase of the average amount of fibrine contained in the blood—experience shows that venesection is profitable. When the same phenomena occur elsewhere, the case is not changed; setting aside the nature of the diseased part, the pathologist constitutes from the association of the circumstances enumerated a whole, which he terms a disease, and to which, according to its degree, he imposes the appellation of "hyperæmia" or "inflammation."

A certain number of groups can thus be formed, and a division of the morbid elements into classes from their resemblances, or from their disparities. Hence the artifice of nosological classifications—an indispensable but recent process, which was first attempted two centuries ago. This division of diseases is essentially temporary, and can be considered complete only when science itself shall have ceased to progress.

MADAME HAHNEMANN AND THE POLICE CORRECTIONELLE.—The widow of the celebrated father of homœopathy has been condemned to 100 francs fine for illegal practice of medicine. The amount of the penalty may appear "infinitesimal," but a second condemnation subjects the culprit to personal imprisonment.

The *projet de loi* on medical practice and instruction, presented to the Chamber of Peers and Deputies, excites in the profession considerable disappointment and discontent. A protest, signed by a very large number of physicians and students in medicine, was handed to the Prince de la Moskowa, son to the late illustrious and unfortunate Marshal Ney, and the noble peer promised to support the petition in the Upper House.

D. M'CARTHY, M.D.P.

GERMANY.—ON SPERMATORRHŒA, by Dr. H. Kaula, Pupil of Lallemand. -The effects of this malady on the economy are first carefully examined. Mental alienation of different forms are frequently complicated with spermatorrhœa. Seminal weakness arises from various causes. Irritation advances from the urethra gradually towards the testicles, the secretion of which becomes augmented. The seminal fluid, imperfectly elaborated, is scarcely arrived in the seminal vesicles, which have become extremely irritable, before they eject it, the ejaculatory canals having lost the power of retention. All the phenomena attending the normal ejectment, erection, orgasm, and erotic thoughts, disappear. There is simply excretion of a thin fluid, without any symptom of excitement peculiar to the genital organs. Cauterization of the prostatic surface is sometimes, though not always, beneficial; but it must not be rashly employed without regard to the *Minutiæ magni momenti*.

Great Britain and Ireland.

DISSECTION OF THE EARS OF A DUMB AND DEAF PERSON.—RIGHT EAR.—The meatus externus is full of cerumen of a dark-brown colour. The membrana tympani is of a dull white, and somewhat thicker than natural. The epithelium covering its external surface is denser than usual, and its internal mucous layer thick and soft. The cavities of the tympanum and mastoid cells are completely filled with a secretion of a leaden-white colour; it is thick, and in some parts rather viscid. On microscopic examination it was found to consist chiefly of pus globules pervaded with granules, characteristic of scrofulous matter. The mucous membrane of the tympanitic cavity is much thicker than natural; it is very soft, and contains large tortuous vessels full of dark-coloured blood. The ossicules are quite enveloped, and in a great measure concealed from view by this thick membrane. The only part of the stapes discernible is the point where it joins with the incus. The eustachean tube is healthy; the auditory nerve and cochlea quite healthy; the fluid in the vestibule and semicircular canals transparent; but the membranous labyrinth is rather thicker than natural, and under the microscope it is seen to contain numerous blood-vessels; the superior semicircular canal is incomplete at its posterior half, and the posterior canal is almost wholly absent. The left ear was in a similar state to the right, excepting that the external meatus is slightly contracted, and the layer of bone separating it from the mastoid cells is partially absorbed at the posterior surface of its internal extremity for a space of five or six lines in circumference. The membrane covering this portion of bone is thick and vascular, and its blood vessels directly communicate with those of the mucous membrane of the mastoid cells.

I have observed an absorption of the layer of bone between the external meatus and mastoid cells in other in other instances, and in one dissection the cerumen was found projecting from the cavity of the meatus into the mastoid cells. It is not improbable that the absorption of the bone is constant pressure of hardened cerumen. The superior semicircular canal was almost wholly wanting.

Observations.—There can be no doubt that the cause of deafness in the patient from whom the ears were taken was the deficiency of the semicircular canals, but it is interesting to notice the thickened condition of the mucous membrane of the tympanic cavity, and the presence of the purulent matter. From the dissections I have made during the last seven or eight years, which amount at the present time to 911, it is quite apparent that the most frequent cause of deafness is a morbid condition of the tympanic mucous membrane. In some instances there are bands connecting various parts of the tympanic cavity together, and preventing the natural motions of the ossicula and membrana tympani; in others the cavity is nearly filled by the thickened membrane, and very often there are large quantities of thick viscid matter, which I have every reason to believe may remain for many years if not affected by medicinal agents. A great number of this kind originated in scrofulous inflammation. It is also interesting to remark how rarely the Eustachian tube is affected. I hope, ere long, to lay before the medical profession the results of some of my later investigations into the nature and treatment of diseases of the ear.—*Mr. Cross, of Norwich, in Provincial Medical and Surgical Journal.*

USE OF TARTAR EMETIC.—In children, especial regard should be had to their constitutions. In those naturally delicate, and especially where the scrofulous diathesis exists, it should never be used if it can be avoided. Prostration is much more apt to ensue in them, and where the article is persisted in for any length of time, it is sure to do harm. It is in such constitutions, when labouring under hooping-cough, and where the use of this article has been too long continued, that the baneful effects of it are most strikingly observed. It is perhaps hardly necessary to say, that if tartar emetic be an article of such danger, the younger the subject to whom it is given, the more likely is it to do harm. In children under a year, I should say, as a general rule, it ought never to be used. During that period, the powers of life are too feeble to bear so active a remedy, at the same time that all the beneficial effects of an emetic may be gained from the use of ipecacuanha, or even milder means.

An engorged state of the uterus is very liable to alternate with, translate to, or coexist with, congestion of the liver or spleen: a fact that ought to be borne in mind, as these states set in so rapidly at times as to render them difficult to discuss, and more particularly, if our patient be worn out by the disease and reduced by the treatment, it places her in a very unfavourable position for bearing the discipline which this new complication demands. Leeching and counter-irritation, with mercurial alteratives, must be had recourse to, for the organs secondarily engaged; but what we have derived the most marked benefit from, under these circumstances, has been a course of Pullna water and taraxacum, followed by the discutient waters of Germany, change of air, and the use of the Russian bath. —*Dublin Quarterly Dr. E. Kennedy.*

PATHOLOGICAL SOCIETY.—JAN. 16.

Dr. HUTTON in the Chair.

Dr. LAW presented a specimen of acute ulceration of the larynx that had occurred in a man, aged sixty-eight, a shoemaker by trade. Six months before coming under Dr. Law's notice the man said he had sore throat, which he attributed to his having used his voice rather freely, for it appeared the man had been a noisy politician.

On admission to Sir P. Dunn's Hospital his most prominent symptom was complete aphonia, his voice being reduced to a low, scarcely-intelligible whisper; his breathing was loud and stridulous, and attended with extreme embarrassment. The character of the respiration so closely resembled that occasioned by the pressure of an intro-thoracic tumour upon the trachea, that Dr. Law at once directed his attention to ascertaining the existence or otherwise of such a tumour; but he found no fulness about the throat such as usually accompanies those tumours, nor was there any turgescence of the vessels of the neck, or any trace of dulness at the top of the sternum. Next, the infra-clavicular regions were examined, with a view to ascertain how far the feeble, impeded respiration might not be connected with dulness in those regions; but here also there was no physical

evidence of disease; so Dr. Law concluded that the case was one of pure laryngeal disease.

On making particular inquiry as to whether the patient had ever been affected with *syphilitic* disease, he said he never had. When the finger was passed along the tongue the epiglottis was felt standing up and much thickened. The patient's greatest distress was referred not so much to the larynx (which was sore on pressure) as to the top of the sternum, where he described a choking sensation from the difficulty of expectorating the mucus accumulated there.

The treatment consisted of local bleeding, blisters to the throat, and mercury; occasional emetics also were administered, and afforded him much relief. The man became so much better that Dr. Law was rather surprised at the case taking a suddenly unfavourable turn.

He was subject to occasional attacks of suffocation, particularly at night; and in one of these he died.

Specimens of what may be called idiopathic or original, primary laryngitis are, Dr. Law observed, rarely met with; and here we have a considerable portion of the mucous lining of the tube deeply ulcerated, particularly occupying the ventricles, and extending on each side. The epiglottidean fold was much thickened, as also the epiglottis itself. A triple lesion existed here, viz., ulceration, œdema of the glottis and of the epiglottis, and dipthorita or effusion of lymph. He had on a former occasion exhibited to the society a specimen of extensive ulceration of the larynx in a case in which there was œdema and ulceration of the glottis. The case was one of pemphigus gangrenosus, supposed to have resulted from an animal poison: the patient when alive having presented every appearance like the result of an animal poison, and, although he had not come into direct contact with such a source of disease, yet there was a glandered horse in an adjacent stable.

There was one point, dysphagia, as connected with aneurism which Dr. Law felt anxious to allude particularly to, and which he had omitted to do on the last day, on which occasion, it would be remembered, he had [illegible]ught forward a case of aneurism of the asce[illegible]ng aorta. In aneurisms of the latter class it would be found, he believed, that difficulty of respiration would be the prominent symptom; while, in aneurisms of the descending aorta, the œsophagus being placed between the aneurisms and trachea, the difficulty of respiration would be less, and the dysphagia greater.

The coincidence of dysphagia and aphonia favoured the diagnosis of laryngitis as contradistinguished from [illegible]o-thoracic tumour; the dysphagia, not being a remarkable symptom, shows the aphonia depends on pressure from tumours, as in such cases the intestinal trachea protects the œsophagus.

Dr M'Donnell laid before the society a preparation taken from a person who died in the Richmond Hospital two months ago of strangulated congenital hernia in a state of sphacelus. The strangulation occurred on a Saturday, and the patient was admitted into the hospital on the following Tuesday. From the symptoms present immediate operation was decided on. The tumour was at the right side, about four inches in length, running in a line with Poupart's ligament, and its breadth in a direction at right angles with that ligament was two inches and a half; it was of a dingy brownish red colour, and, at one part, light pressure showed it to be slightly œdematous; the integument did not roll over the tumour, so that it was evident the parts beneath were matted together by lymph. These particulars, in reference to the tumour, Dr. M'Donnell was anxious to direct attention to as indicative of the state of things within, and enabling one to draw correct conclusions in cases of that particular kind; moreover, he (Dr. M'Donnell) was of opinion that the symptoms, as laid down in books for our guidance in such cases, are void of real practical value; the symptoms upon which most stress is laid as indicative of the occurrence of sphacelus being an apparent amelioration of the case, a cessation of pain and vomiting, with other general signs of improvement; while, at the same time, the countenance becomes hippocratic; cold sweats occur, with feeble, intermittent pulse.

Now, of three cases which came under his (Dr. M'Donnell's) own care, and in which sphacelus occurred, not one of these symptoms was present, but the tumour had the characters above described, viz., the matting together of the coverings of the tumour; the skin, on endeavouring to move it, would not roll under the fingers, and when the first incision was made it did not fly open like healthy skin. The incision was linear, in accordance with the condition of the parts described, and which might lead at once to a suspicion of the true nature of the state of the internal structures. Besides these, the dingy red colour of the skin, and the œdema, all taken together, proving the presence of effused lymph matting together the parts lying between the integument and intestine.

On cutting into the tumour in the foregoing case, Dr. M'Donnell found the deeper parts confounded with each other in such a manner as to render it almost impossible to distinguish the different structures, but it was quite evident that the sac lay in the inguinal canal, and that it was a hernia by oblique descent, with the hernial sac extending to the lower extremity of the inguinal canal. As the sac was approached there was an obviously gangrenous tendency exhibited; the dark fibres of the internal oblique and transversalis muscles could barely be distinguished, and even the tendon of the external oblique was scarcely to be distinguished; the sac contained a large knuckle of intestine distended with its contents, and lying below and to the outside of the intestine was the testicle in a health state; between that time and the time of the patient's death it had inflamed and increased somewhat in size.

Another material point in guiding the judgment of the practitioner in deciding as to the occurrence or otherwise of sphacelus was (Dr. M'Donnell said) a fact observed here, viz., the very fetid odour exhaled by the liquid contained in the hernial sac. The surface of the intestine was tolerably smooth, but of a mottled greenish-yellow colour. The stricture was found at the internal ring, and the finger-nail was with some difficulty insinuated for the purpose of dividing it. Dr. M'Donnell, having freely divided the stricture, left the intestine *in situ* for the time. He returned after a few hours. There was an apparent improvement in the patient's condition; but, as the intestine was still distended, he opened it freely, giving exit merely to the contents of the knuckle of intestine. During the two next days, no discharge of fæces taking place, the patient was obviously sinking, and exhibited an aggravation of the symptoms. Dr. M'Donnell now endeavoured to introduce a gum-elastic catheter and syringe, in the hope of finding the extremity of the intestine; but in vain. Acting, therefore, upon the rule, which he considers well founded, that the less such cases are interfered with the better, until driven to operation by the progress of mischief, he declined interfering further. At the end of the second day he again divided a stricture, and was strongly under the impression that the division took place at the same point as previously, that is, at the internal ring. After dividing this stricture, in introducing the finger in search of the upper end of the intestine (and here again was one the interesting points of the case), this portion of intestine was torn from its adhesion to the inner aspect of the internal ring—a fact which, even had the case been otherwise favourable, would have produced a fatal termination from extravasation into the abdominal cavity. From the stomach down to the seat of stricture the intestines lay in large folds enormously distended, while the lower portion was remarkably small and flaccid. There was little inflammation except from the stricture up to the stomach, and very little coagulable lymph effused.

DEEP-SEATED ABSCESS OF THE NECK—ŒDEMA GLOTTIDIS.

Dr. M'Dowel brought forward a specimen of a disease which, although it had already more than once been brought before their notice, yet was, as he judged it, one of such extreme importance, owing to its rapid progress, insidious mode of access, and too frequently fatal termination, that every fact relative to it should be laid before the profession; and, as such a society as the Pathological afforded peculiar facilities for effecting this, he deemed it his duty to bring the following case before the meeting.

The specimen, he further observed, was one of that form of acute laryngeal disease which is characterized by infiltration, either with serum or more rarely with pus, of the submucous tissue of the glottis, hence termed "œdema glottidis," or, by some writers, "laryngitis œdematosa."

The subject of the case from which the preparation was obtained was a man of the name of Patrick Kevin, aged forty-eight, who was admitted into the Hardwicke Hospital, under the care of Dr. M'Dowel, on the 7th inst. He was then labouring under pneumonia of the upper lobe of the left lung, travelling from above downwards, and accompanied by fever of an adynamic character. Under appropriate treatment the pulmonary inflammation was subdued, when the patient began to complain of pain below the angle of the jaw on the left side; here tumefaction and tenderness on pressure existed; in fact, deep-seated inflammation was set up in the cellular space between the fasciæ of the neck below the lower angle of the parotid gland. This, Dr. M'Dowel was disposed to regard as a critical abscess, such as is not unfrequently found selecting this locality in patients convalescent of febrile affections. For three or four days neither constitutional disturbance nor local distress was occasioned. However, on the morning of the 18th, the patient complained greatly of pain in the tumour; the motions of the jaw were a good deal restricted, and there was slight difficulty of swallowing observed; the integument over the swollen part was tense and unyielding, presenting a blush of redness on the surface and some œdema when pressed on. An incision was now made, and when the fascia was freely divided, healthy pus in considerable quantity was given exit to, and the patient expressed himself as being greatly relieved. On the evening of the same day, however, he complained of difficulty of breathing, even then very alarming, and which, although he had not mentioned it, had existed and been gradually getting worse for several hours previously. One of the clinical clerks then saw him, and found him breathing with the utmost difficulty—the inspirations being prolonged and loudly stridulous, and the difficulty of swallowing greatly increased; he sat up in bed gasping for breath—his face presenting a *lividly pale* appearance, and his skin bathed in clammy perspirations. Dr. M'Dowel was sent for, but before he could arrive the man died suddenly; stupor first, and afterwards two or three severe convulsions, preceding dissolution.

On examination, the abscess in the neck was found occupying the situation already indicated; it did not extend to the larynx, but the cellular tissue, between the base of the abscess and the exterior of the thyoid cartilage on the left side, was greatly condensed from solid effusion. On cutting into the larynx, considerable serous infiltration of its submucous tissue was observed; this engaged its upper opening, and on the *left* side chiefly. The aryteno-epiglottidean folds were so thickened as to overlap each other, and so, doubtless, acted mechanically in preventing the entrance into the lungs of atmospheric air. Having presented several drawings illustrative of the recent appearances observed in other cases of this affection, Dr. M'Dowel remarked, that had the abscess in the neck, from which the œdema of the glottis originated in the case he had just detailed, been neglected, and not opened sufficiently early, he would probably have felt reasons for self-reproach; but here,

after matter had been freely given exit to, and tension relieved, and at a period when usually no danger might be expected, this fatal complication occurred. A careful examination of the preparation, which shows how purely mechanical the cause of death here was, must, he observed, lead to the conclusion that nothing but an opening made into the larynx or trachea, lower down than the obstruction, could in such a case have afforded any chance of saving life—a chance which, in this case, was totally denied by the extreme rapidity of the disease.

Jan. 30.—Mr. Hamilton in the Chair.

Dr. Banks said, the person from whose body the specimen he now presented was taken, was admitted to the Whitworth Hospital on the 21st of January, almost in a dying state. Her debility was so extreme that she was scarcely able to answer a question, so that hardly anything of the history of her case could be obtained from the woman herself. But the following facts were chiefly furnished by Dr. Denham, under whose care she had previously been at the Lying-in Hospital:—

The woman was forty years of age, married, and mother of eight children; she was a person of temperate habits, but of a highly strumous diathesis; her father and brother had both died of phthisis, and she herself had always been delicate. In the year 1836 she had an attack of acute rheumatism, for which she had been under the care of the late Dr. Crampton, at the Whitworth Hospital. In about six weeks she recovered from that illness, and enjoyed tolerably good health until October of 1845, at which time she aborted and lost an enormous quantity of blood, both before and after the abortion. She was at this period in the Rotunda Hospital, where she remained for some time, being in a very weak, debilitated condition, extremely emaciated, and suffering much from palpitation of the heart and pains in the lumbar region. In 1846 she again become pregnant, and was again admitted to the Rotunda Hospital. On the 27th of November, being then in the fifth month of pregnancy, Dr. Denham there observed that her countenance was pale and anxious, and her general appearance indicated extreme debility; three weeks before, she had a severe attack of uterine hemorrhage. She complained much of palpitation of the heart; no morbid sound, however, was heard. She suffered from sleeplessness, which was attributed to the palpitation.

The hemorrhage returned from time to time, accompanied with uterine pains, until the 7th of December, when she again aborted. From this period there was no return of the hemorrhage, but excessive prostration of strength and palpitation continued. On the 25th of December she left the hospital, contrary to the advice of Drs. Johnson and Denham.

On admission to the Whitworth Hospital, on the 21st of January, she was universally anasarcous, but particularly the lower extremities, and there was effusion into the abdomen. The skin of the face and, indeed, that of the whole body was perfectly bloodless. The lips, tongue, and lining membrane of the mouth, were blanched; the pulse was small and frequent, and the prostration of strength was so great that she was unable to move; the heart's action was feeble and labouring, but no morbid sound existed; the liver was felt below the margin of the ribs, and was tender on pressure; the bowels had not been moved for five days before. The posterior part of the chest was dull on percussion, with sonorous and sibilous râles all over it. She complained of extreme difficulty of breathing. The urine was found on examination to be of low density, a 1010, with slight traces of albumen. Bowels acted upon by enemata. Ether, brandy, and wine were administered. She died on the fourth day after admission.

On examining the body in eight hours after death, a considerable quantity of serum was found in the cavity of the abdomen, as also in the pleural cavity and the pericardium; the heart was healthy, but rather more fatty than usual. The lungs were in an œdematous state when cut into, giving exit to a large quantity of frothy serum: this condition was most observable at the base. At one portion the lung, for about the size of an egg, was perfectly solid, the solid part being surrounded by healthy lung. The liver was enlarged and easily broken down; spleen large and soft. The kidneys also were enlarged and brittle; one of them particularly so, probably resulting from commencing Bright's disease. The uterus was found more vascular than natural, and a small fibrous tumour adhered to its posterior wall. The spermatic veins were observed to be coated with lymph, and the cava was also thickly coated with it, constituting phlebitis, the disease being found to have stopped short exactly at the junction of the cava with the right auricle. The whole lining membrane of the venous system, in fact from the heart downwards, was either coated with lymph or filled with coagulated blood. The pulmonary veins presented a similar appearance, as did also the deep epigastric vein. Considerable effusion had taken place into the tissue surrounding the femoral vein, giving rise to a fat resembling brawn.

Dr. Banks thought the case worth bringing under the notice of the society, so few instances are met with of phlebitis occupying so great an extent of the venous system. It was an example, too, of pure adhesive phlebitis, not passing into the suppurative stage. In no part of the body was there any trace of purulent deposit, the lungs, liver, and other organs having been accurately, but ineffectually, searched for it. The joints were also entirely free from such deposit. The axillary veins contained coagulated blood, but the veins of the arms were in the natural condition. The heart was quite free from disease, as was also the superior vena cava—the disease, as before observed, having stopped short at the point of junction of the inferior cava and right auricle. The history of the case, it is to be observed, from the period of her leaving the Rotunda Hospital, on the 25th of December, up to the time of admission to the Whitworth, remains untold, owing to the extremely debilitated condition of the woman when she came under Dr. Banks's observation.

Mr. Hamilton exhibited a diseased elbow-joint, and observed that ulceration of the cartilages of joints is generally found to follow either upon disease commencing in the bones or synovial membrane, and finally extending to the cartilages, or upon diseases primarily affecting the cartilages themselves. In the preparation now on the table, however, the disease had not originated in either of these ways; but commenced by an abscess external to the joint, which worked its way under the muscles and fascia of the forearm, and finally effected an entrance into the joint, where it gave rise to inflammation and subsequent ulceration of the cartilages. The present case Mr. Hamilton was disposed to feel the more interested in because of its being the second of that kind which had come under his observation within the last few months.

The first was a woman with lupoid inflammation at the outside of the knee-joint—an extremely dangerous locality, there being not more probably than the thickness of paper between the interior of the joint and the destructive external ulcer. In spite of the most careful treatment, the ulcer continued to deepen till the joint was perforated, followed by great swelling; profuse discharge of thin matter; pain, most violent and aggravated by spasmodic starts; and finally, the destruction of the ligamentous connection of the joints was such that dislocation of the tibia took place behind the condyles of the femur, with the limb in nearly a straight position. Three weeks after the joint had been perforated she died, amputation not being feasible on account of the presence of disease in the lungs. The cartilage had been ulcerated away from the articular surface of the femur to a great extent, leaving the cancellated structure of the bone exposed; also from the head of the tibia and patella. The synovial membrane was dark green, and quite changed in appearance; the crucial and lateral ligaments destroyed, and scarcely a feature of the former state of the joint remaining.

The present case was as follows:—A man, aged about fifty-five or fifty-six, came to Mr. Hamilton about a year and a half ago, with a rather large chronic abscess in the middle of the front of the forearm, upon a free incision of which a quantity of whey-like and curdy matter escaped. After some time the opening had nearly healed, a small fistulous opening alone remaining, through which whey-like matter was occasionally discharged. About a month ago the swelling of the forearm became very great, extending to the elbow-joint, with loss of motion in the joint, severe pains, startings at night, hectic fever, and loss of flesh. It became evident that amputation afforded the only prospect of relief, and a few days ago, the patient having been previously placed under the influence of ether, the arm was removed.

On examining the forearm and elbow-joint a fistulous track could be discovered from the seat of the abscess up the forearm, deep under the muscles, till it penetrated the cavity of the joint. As in the case of the woman who had the perforating ulcer of the knee, the cartilages were found ulcerated away from the greater part of the surfaces of the inner condyle of the humerus, and the corresponding portion of the inside of olecranon, the bone exposed and softened. The synovial membrane was red, thickened, and pulpy, the joint contained grumous matter, and several abscesses surrounded it.

PATHOLOGICAL SOCIETY OF LONDON.

NECROSIS OF THE SHAFT OF THE HUMERUS, AND OF THE HEAD OF THE FEMUR.

By Dr. Ogier Ward.

The patient, a girl aged ten, came under the care of Dr. Ward, in August, 1844, complaining of a tingling pain down the right arm to the hand, and of the right hip, down the back of the leg to the foot. This was followed, in six days, by a high state of fever and phlegmonous erysipelas of the right shoulder and arm. A large abscess formed in two days, and which was punctured about the middle of the arm, a large quantity of healthy and sanious pus escaping. A few days after the opening of the abscess, a red spot appeared over the head of the humerus, and which ulcerated in about a fortnight, and through the ulcerated opening the head of the bone, deprived of its epiphysis, protruded to the extent of two inches, the other wound having healed in the interim. She soon afterwards entered St. Bartholomew's Hospital, where she remained fifteen weeks, at the end of which time nearly the whole length of the humerus was extracted, and the wound healed rapidly. After her return, there appeared to be ankylosis of the joint; and shortly afterwards she was thrown down, the new bone becoming bent at its upper third, in which state it still remains. At this time, the head and upper part of the thigh-bone were affected with periostitis, followed by the formation of several abscesses about the great trochanter, and the discharge, at intervals, of small pieces of bone. The disease of the thigh-bone continued for more than a year and a half, and the healing of the sinuses was immediately preceded by the coming away of a large portion of the head of the bone. The patient now enjoys good health, the right arm being shorter by two inches than the left; there is great mobility of the the scapula, and when this fixed, there is motion of the arm to the extent of 20°. The right leg is an inch and a half shorter than the left; and in consequence of a false joint between the femur and ileum, she possesses tolerably free movement.

KIDNEYS OF AN INFANT PRESENTING CARCINOMATOUS DEGENERATION.

By Mr. Obre.

The subject of this case was the only child of

young parents, born apparently healthy, and continued so until its seventh month, when scrotal hernia presented on the right side. The following month, a hard abdominal swelling, the size of an egg, was felt in the anterior part of the left lumbar region, which rapidly increased, in a few days attaining the size of a small melon. No definite opinion being given of its character, he was visited by Sir James Clarke, who also was unable to decide either on its structure, or from what organ it had its origin, all the functions and secretions being apparently undisturbed. The rapidity of its growth suggested malignant disease; but that was the only symptom which indicated such a result. A fulness was shortly observed in the right hypochondriac, caused by a similar tumour under the hepatic region. In the course of three or four months, the swellings had gradually increased until they attained a most enormous size, filling the abdomen, pressing back into the lumbar regions, and so distending the abdominal parietes, that they required the application of oil to promote their relaxation from the enormous pressure within; the tumours coalesced till they presented no definite boundaries; the distention was too great to prevent the child being placed in any position except lying on its face. It lingered in this state until its thirteenth month, when it died exhausted, emaciated to a miserable skeleton, presenting a sad object with this enormous abdomen. Occasional constipation and vomiting were the only distressing symptoms. The abdomen was the only cavity examined after death: its contents were pale and attenuated; the intestines displaced by two large, globular swellings, filling either side of this cavity, which proved to be the kidneys converted into cancerous structure, the right weighing two pounds twelve ounces, the left, two pounds four ounces; conjointly, therefore, five pounds. Their external surface is smooth, the fibrous covering not being diseased; internally, they are of an encephaloid structure, the several tissues of the organs being transformed into brain-like substance, but of firmer consistence; they had lost all character by which it could be supposed that they had been transformed from kidneys, not even the pelvis or infundibulæ being distinguishable; the left is lobulated as in the fœtal state, having somewhat its normal form; the other has lost all anatomical character. These organs were not suspected to be diseased; therefore the urine was not chemically examined. After death, the bladder contained a little of this secretion, but only sufficient to detect its constituents, being largely impregnated with alkaline matter.

OSSEOUS TUMOUR REMOVED FROM THE FACE OF A GIRL, AGED FOURTEEN, INVOLVING THE RIGHT SUPERIOR MAXILLA AND THE MALAR BONE.

By Mr. Fergusson.

Enlargement was noticed six or seven years before the operation, and seemingly commenced in the alveolar ridge. There was no trace of the antrum. Patient made a favourable recovery, and has remained well since.

OSTEO-SARCOMATOUS TUMOUR FROM THE FACE OF A WOMAN, AGED 36, INVOLVING THE GREATER PART OF THE LEFTSUPERIOR MAXILLA.

The tumour projected slightly into the mouth, and filled the interior of the antrum. Portions of the alveoli had been removed on two occasions previous to the last operation, when the whole mass, including the malar bone, was extirpated. The operation was performed about three months ago, and there has been no indication of return of the disease. The reappearance of the disease, which does not indicate malignancy in its physical characters, may probably admit of explanation, by reference to the manner in which the growth has extended in an upward direction, so that it was not isolated by the horizontal sections of the alveoli which had been made for its removal at the first operation.

PORTION OF A MEDULLARY TUMOUR OCCUPYING THE SITE OF THE SUPERIOR MAXILLA, REMOVED, AFTER DEATH, FROM A MAN, AGED FIFTY-FOUR.

An operation had been proposed at an early period; but the patient refused to submit. The tumour grew rapidly, and he was anxious for an operation when it was too late. It extended to the base of the cranium, and had all the characters of malignancy.

TUMOUR OF THE LOWER JAW,

removed by Mr. Key. The patient, a boy, aged thirteen, was admitted into Guy's Hospital in October, 1841. He was pale and sallow, with a high and somewhat projecting forehead, light hair and eyes, and emaciated appearance. In consequence of his not being able to articulate distintly, some difficulty was experienced in obtaining a history of the case. The following particulars were noted at the time:—

About two years ago, a small lump appeared on the anterior part of the lower jaw, gradually increasing and extending backwards, forcing out, after a time, many of the lower teeth. Has never experienced any pain. The jaw gradually increased in size, when he applied to a surgeon, who tried various remedies without relief. Has always enjoyed a fair share of health, and can eat and drink well.

When admitted into the hospital, the lower jaw was apparently much enlarged and thickened, and advanced beyond the upper, having, resting upon the upper part of the symphisis a globular, vascular sarcoma, which, about fourteen days back, had begun to ulcerate on the surface, and at intervals bled profusely. Styptics were applied to arrest hemorrhage.

Seven days after admission, Mr. Key determined to remove the diseased part, which was accomplished in the following manner:—An incision was made along either side of the horizontal ramus of lower jaw, commencing from the angle in the hollow of the neck, meeting each other in the mesial line; the flap was turned up, and the cut vessels immediately secured; the lower jaw was sawn through, just anterior to its angles, detaching a small portion of the massiter muscle on each side. The jaw was carefully dissected out, the flap brought together, and sutures applied.

On the fourth day the sutures were removed, and the whole of the wound had nearly healed. He left the hospital on the 9th of November, having had no bad symptom, and is now in perfect health.

Dr. Hall Davis exhibited

MICROSCOPICAL PREPARATIONS OF MOLLITIES OSSIUM,

with which a woman, dying from rare uterine disease, the particulars of which had been submitted to the consideration of the society some weeks back, had been affected. Dr. Davis had previously submitted some specimens to the examination of Dr. Sharpey, Mr. Dalrymple, and Mr. John Quekett, who had remarked that the Haversian canals were much larger than natural, as also the bone cells; and in parts, near the edges of the bone, forming the wall of the Haversian canals, the canaliculi were but slightly visible, or had entirely disappeared. The bone along the edges above mentioned was extremely transparent; and numerous nucleated cells, blood discs, and fatty matter, occupied the cancellated structure, and some of the Haversian canals. The bone had also been examined chemically by Dr. Garrod, who found that 100 parts dried at 212° yielded—

Phosphate of lime	16·40
Carbonate of lime, with phosphate of magnesia	4·88
Fatty matter	20·35
Gelatine yielding matter	58·37
	100·00

thus exhibiting a considerable difference from the proportions given for healthy bone by Berzélius—viz.,

Earthy matters	66·70
Animal matters	33·30

The history of the case was then detailed, and it appeared that the female had, at the commencement of the affection, lived in a dry climate, and for the last six years of her life in Lancashire, on the borders of a lake surrounded by woodland. There had been no hereditary tendency, the father and mother being still alive, as also five other children, all enjoying perfect health. She had never been affected with rheumatism, and died from an acute attack of pneumonia.

ANEURISM BY ANASTOMOSIS, IN THE SUBSTANCE OF THE PARIETAL BONES.

By Mr. Toynbee.

The subject of the disease was a youth aged nineteen, who died of consumption. He was brought into the room for dissection; and there is no evidence to show that the disease was detected during life. Corresponding with each parietal eminence, there is a rough and slightly elevated portion of bone apparently occupying the centres of ossification, and situated about an inch from the coronal, and an inch and a quarter from the sagittal suture. These osseous projections are pear-shaped, the apices being directed posteriorly, and the broad ends in front. That on the right side is rather the larger, measuring three inches in length, and at its greatest breadth one inch and three quarters; that on the left side is in length two inches and three quarters, while its breadth is an inch and a half. The surface on the right side measures seven inches in circumference; that on the left, seven and three quarters. The right projection, though as broad as its widest end, diminishes so much as to be not more than three quarters of an inch at its narrowest. On further examination of these surfaces of bone, they are found to present at their circumference a certain degree of unevenness, caused by numerous superficial grooves, as if from vessels lying upon the bone. These grooves radiate from the circumference of the surface; and as they approach the portion of bone most diseased, they become deeper, and small orifices are observed opening into them. The rough surface itself is composed, firstly, of grooves, which are in some parts from a line to a line and a quarter in depth; secondly, of osseous cavities, about a line in diameter, and bounded laterally by the walls of the canals; thirdly, of canals which admit of a free communication between the grooves. These grooves, cells, and canals, are so numerous, and their intercommunication so intricate, that they form a labyrinthine network of singularly beautiful appearance. Into the floor of the canals and sulci innumerable orifices enter. The grooves and canals were, in the recent state, full of an intricate network of ramifying bloodvessels, but it was impossible to inject them, from their being cut into before their nature was detected.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Feb. 23.—Dr. Copland, F.R.S., in the Chair.

CASE OF ELEPHANTIASIS.

By George Southam, Surgeon to the Safford Royal Hospital and Dispensary, Manchester.

(Communicated by Mr. T. B. Curling.)

The patient, an unmarried female, first came under the author's notice in the autumn of 1843. The disease had then existed about twenty years, and commenced when she was in her eighteenth year, on the dorsum of the foot, having been preceded by attacks of deep-seated pain. As the œdema extended, the pain became more severe, and the integuments became the seat of frequent erysipelatous attacks. A large ulcer formed on the inside of the thigh, and three others near the ankle. The only cause assigned for the disease was the sudden cessation of the catamenia from cold. A drawing of the disease, taken in 1845, was exhibited to the society; the measurement round the calf of the leg was two feet nine inches; above the knee, three feet four inches; and at the upper part of the thigh, including the nates, five feet six inches. Owing to the integuments having yielded unequally, the leg had a somewhat lobulated form; there was neither indentation nor pain on pressure; the sole of the foot was the only part of the limb

not implicated. She was able to go about the house, and assist in household duties, until within a few weeks of her death, which took place on the 21st of November last, from an attack of dysentery.

On examining the body, the enlargement was found to have been caused by the deposit of a dense, white, lardaceous substance, interspersed with fat, in the subcutaneous cellular tissue. The principal venous trunks were much larger than natural, and when divided transversely, were patulous. The coats were thickened and converted into a fibrous substance, disposed round the vessel in laminæ. All the smaller vessels, when divided transversely, resembled arteries filled with coagula. The disease in the veins had not extended beyond the groin; those of the pelvic cavity were sound; the viscera were healthy; nothing beyond slight hypertrophy of the epidermis and cutis was detected in the skin.

The author remarks, that he has been informed by several medical friends who saw the patient, and who had witnessed elephantiasis as it is met with in the natives of South America and the West India islands, that the tumefaction seldom attains so great a size as was observed in the case now related. From the appearances found on dissection, it is evident that the disease originated from repeated attacks of subacute or chronic inflammation of the venous capillaries, which caused the pain and febrile symptoms. The author is of opinion, that the immediate cause and pathological changes of elephantiasis bear an intimate relation to those of phlegmasia dolens and the induration of the cellular tissue, in newborn children; the apparent differences depending on the degree of venous obstruction, and on the remote influences which have originated it.

Mr. Curling mentioned a case in point, recorded by M. Chevalier in the second volume of the Society's "Transactions."

ON TUBERCULAR PERICARDITIS, WITH PATHOLOGICAL AND PRACTICAL REMARKS.

By George Burrows, M.D.

After alluding to the rapid advances made in our knowledge of diseases of the heart during the past twenty years, the author refers to the paper of Dr. Taylor, "On the Causes of Pericarditis," published in the twenty-eighth volume of the Society's "Transactions," where that physician assigns rheumatism, granular disease of the kidneys, and extension of inflammation from contiguous parts, as the chief causes of pericarditis. To this opinion the author assents, but invites the attention of the society to another form of that disease, which he designates tubercular pericarditis. After taking a review of the statements of different pathologists who have described tubercular deposits in the pericardium, more especially of the descriptions of Baillie, Laennec, Andral, Louis, and Rokitansky, and of the opinion expressed by the latter, that tubercular diseases of the pericardium are the consequence, and not the cause, of chronic inflammation of that membrane, the author proceeds to detail three cases of tubercular pericarditis.

Case 1.—A young Italian was admitted into St. Bartholomew's Hospital, labouring under the symptoms of incipient phthisis. After three weeks' residence in the hospital, the appearance of blood in the sputa caused a careful examination of the chest by the stethoscope to be made, when the physical signs of unsuspected pericarditis were detected. The friction-sounds of pericarditis were heard through fifteen consecutive days, and then subsided, leaving no cardiac murmur. At the expiration of two months, a fresh accession of fever, and examination by auscultation, indicated the presence of double pleurisy, which continued during nineteen days, when the man died. The post-mortem examination revealed the existence of abundance of effused lymph in the pericardium, of copious serous and fibrinous exudations in either pleura as well as in the peritoneum. Numerous opaque, yellowish tubercles were found disseminated throughout the self-coagulable lymph effused on these membranes. The lungs also contained numerous tubercles in the crude state scattered throughout the different lobes; the bronchial glands and spleen also contained tubercles.

Case 2.—A young man in Millbank Prison, when convalescent from chronic dysentery, was attacked with the symptoms of incipient phthisis, but auscultation detected no signs of extensive tubercular disease. The young man sunk, and, upon examination after death, both lungs were found thickly studded with yellow tubercles, varying in size from a millet-seed to a small pea. The pericardium contained a large quantity of firm lymph, intensely stained with blood; and upon separating the layers of lymph towards the base of the heart, several small yellow tubercles were distinctly recognised in those portions which were most carefully examined. A coloured drawing of this heart was exhibited to the society.

Case 3.—A young man, who had been imprisoned in the hulks and at Millbank, became the subject of dysentery in the latter prison, from which he was convalescent, when he exhibited the symptoms of phthisis. Upon auscultation, Dr. Baly detected the presence of pericarditis, and he was forthwith removed to St. Bartholomew's Hospital. The physical signs of pericarditis were manifest during twenty consecutive days, and then disappeared, leaving the heart exempt from all murmurs. This young man quitted the hospital, convalescent, a few days after the cessation of the pericarditis; and, although his recovery prevented the verification of the diagnosis of pericarditis, still the history of the case, so closely analogous to that of Case 2, and the absence of the usual causes of pericarditis, induced the author to regard Case 3 as one of tubercular disease of that membrane. The author then points out the class of cases in which this rare affection may be suspected—viz., in those persons who, having been long exposed to the most powerful exciting causes of tubercular cachexia, exhibit symptoms of incipient phthisis; and yet the auscultatory signs of tubercles in the lungs are inconclusive. In such persons tubercular affections of serous membranes and of the pericardium should be looked for. The author then considers the pathological question, whether the tubercles are to be regarded as the cause or the effect of these chronic inflammations of the pericardium. After quoting the opinions of Laennec and Rokitansky, who appear to regard the tubercles as the result of a change taking place in the layers of fibrine, consequent upon acute inflammation, and which tubercles then cause the inflammation to become chronic, the author endeavours to show that it is more in accordance with our present knowledge of the history of tubercle, to suppose the tubercles to be deposited on the pericardium in the first instance; and that these foreign bodies, acting as exciting causes of inflammation there as elsewhere, keep up chronic inflammation. A similar train of phenomena may be observed in chronic tubercular peritonitis. The author concludes by pointing out how inapplicable the usual remedies for pericarditis are in the tubercular variety. Large losses of blood and the lavish use of mercury should be abstained from; while counter-irritation over the chest, saline diuretics, with combinations of iodine, and the speedy removal of the patient from the influence of depressing causes, are the means most likely to arrest the progress of chronic pericarditis produced by the irritation of tubercular deposits.

REVIEWS.

Facts which Prove the Immediate Necessity for a Measure of Sanitary Reform. By John Charles Hall, M.D., &c. 8vo., pp. 60. London: Longman and Co., 1847.

Dr. J. C. Hall is well known to the profession for several able communications on subjects connected with medicine and surgery. His writings, are for the most part of a practical character and are, therefore entitled to our best consideration. Years of experience and careful observation must necessarily have qualified him for judging correctly upon subjects connected with the sanitary condition of the public at large; and we are, consequently, right glad to find that his energies are being devoted to a conscientious investigation into the subject of the health of towns. It is a topic pregnant with importance, and we earnestly hope that others of our profession, who may have fitting opportunities for a like investigation, will prosecute it in due faithfulness. This topic has much to be said upon it, as our author eloquently observes:—

"With all our boasted knowledge, the star of civilization is still clouded, and the art of government is in its cradle; and yet the womb of the future is pregnant with much that is good; public attention has been, and is still about to be more closely than ever, directed to the sources of fever—to the means by which the filth of our cities and villages may be removed, and the frightful ravages of syphilis controlled. Then, and then only, may we hope that the value of life will be increased, and increased it most assuredly must be, by the removal of these heaps of filth—these noisome open drains—the whole paraphernalia of pestilence which is daily exhibited around the dwellings of the poor; and lastly, by the removal of all places of interment beyond the walls of towns."

The observations of Dr. Hall upon this most important subject (would that every practitioner would view it in the same light, and as honestly and ably treat it!) were suggested by several cases of fever, which he was led directly to account for by reference to the particular circumstances, atmospheric and other, in which the sufferers were placed. He says:—

"We have been led to make the above remarks from the unusually large number of cases of gastric fever which have come under our own care, or the care of some of our professional friends; and, from our own experience, we venture to state that the great majority of the cases of fever we have seen, during a somewhat extensive practice, both in London and the country, may be traced to a neglect of the proper sanitary measures for clearing away those nuisances, which are the prolific nurseries of pestilence, and the parents of death. Near one of the houses in which the first case of fever broke out, is an open drain, into which several soughs, carrying offensive and putrid matters, arising from animal and vegetable bodies in a state of decay, ran. So offensive were the effluvia arising from it, that we called once or twice at the door of the house and cautioned the occupier of the danger he and his family exposed themselves to. No notice was taken by the good easy man. To his house we were first called to see his son, a youth of nineteen; this case was a very severe one; he recovered. A young girl, his sister, was next attacked slightly; the mother was the next victim; she died. Another child, aged five, was then attacked most severely, and recovered; this child altogether lost the power of speech for some weeks, and even now it has not perfectly returned to him. Crossing the road, in another house, a young woman was attacked with the same fever, and died; and, in the same house, we afterwards attended a little boy and an old man, who both suffered most severely; and another case occurred within twenty yards of it. Going down a narrow lane, about 120 yards in a direct line from the house first mentioned, we attended an old man and his wife, both suffering from the same fever; and fifty yards along the same lane, in a house surrounded by heaps of filth, another case of the same fever came under our care." (Pp. 5 and 6.)

These are startling, serious truths, told with no wavering or want of purpose. Of such truths, boldly related, and with the best intention, is Dr. Hall's work made up. We wish we had space further to quote his valuable remarks. They do infinite credit to him, both as a philanthropist and a physician, and we warmly commend his able monograph both to the profession and the public.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct from the Office of the Medical Times to Annual Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; *Quarterly,* 6s. 6d.

A HANDSOME PORTFOLIO *for holding the* "MEDICAL TIMES"*—very desirable to those who would keep the numbers clean for binding, and easy of reference—may be had, by order of any Bookseller, or at the Office, price* 5s. *An allowance is made to the trade.*

☞ *We beg to direct our readers' attention to the magnificent work on Physics, which is commenced in the* Pharmaceutical Times. *It will be illustrated by* 600 *beautiful engravings, and continued weekly without interruption to its conclusion, which will be reached in about* 35 *numbers. The annual joint subscription to the two journals (The* Medical Times *and the* Pharmaceutical Times, *is two pounds.)*

F. A.—*There is no chance of any bill passing this session. In England the body that has the repute of giving diplomas on the cheapest terms, as far as qualification goes, is the Royal College of Surgeons of England. We are, however, unable to say if they are contented with less than* any *other corporation in Great Britain and Ireland. When there were no fellowships the members had to undergo a respectable examination. It is now, we believe, otherwise.*

Y's *inquiries about the injustice he has suffered from his coroner are answered by Lord Denman's celebrated judgment—the judgment, indeed, of the whole Court of Queen's Bench. The Hounslow inquest having developed every kind of hardship to which a medical man can be exposed under all circumstances of inquest-mismanagement, Lord Denman's judgment meets every injustice of which our correspondent complains.*

"A Subscriber and Well-wisher," *on the same subject, shall be published next week, with some remarks by ourselves.*

A. F. G. R.—*The rapid absorption and fatality of prussic acid applied externally, forms one of the unsolved problems of medicine.*

A mass of correspondence must lie over till our next number.

We receive so many cases of letheonic operations, which would be of no public service to publish, that we must again remind our correspondents that in every case sent us, there should be some new or interesting point evolved to justify its publication.

Mr. Hardwick's *letter has been received.*

M. R. C. S.—*The question put to us can be answered only by the Secretary, or one of the Officers of St. Andrew's.*

THE MEDICAL TIMES' PRIZES FOR THE BEST REPORTS OF MEDICAL AND SURGICAL CASES.

The results of our last Prizes have been so far encouraging that we propose for Professional Competition, for the year 1847, the following Prizes:—

Twenty-five Guineas for the twelve best reports of original cases in hospital or dispensary practice.

Ten Guineas for the twelve reports of original cases, as above, second in merit.

Five Guineas for twelve reports of original cases, as above, third in merit.

In offering these prizes we repeat that our aim in this, as in other matters, is to promote the SCIENCE of our Profession. The groundwork of the best part of our *practical* science and of most of our subsequent Professional worth is laid down in our studentship; and the great and the only true teacher of the student must ever be—hospital practice. Lectures and books have their uses; but it is by the bed which holds a human being, with the joy of health or the pain of disease, the chance of life or the peril of death, depending on the aids of science, that we acquire our true knowledge. There is there for the student no listless ear, no dull eye of the lecture-room; it is not the memory alone that is appealed to, or some abstract love of a pedantic and inapplicable lore. *Every power of his mind* is engaged: he is forced by the sympathies of his nature to hear and see, to observe, to reason, to prognosticate, to be EXPERIENCED: each patient's case is a volume of medical science in its most practical aspect, forced on his acquaintance for life!

The authors must be students who shall not have received any medical diplomas or licenses.

Six of the cases are to be medical, and six surgical.

The cases must have occurred during the year; and the names of the gentlemen under whose treatment they may have principally come must be distinctly mentioned.

Three arbitrators will be appointed—one surgeon, one physician, and one general practitioner—whose names will be duly announced. The decision will be on the 1st of July.

The Prize Reports will be published in succession in the "Medical Times," with the names of their authors.

They are to be sent to the Editor of the "Medical Times" on or before May 1, 1847, accompanied by a certificate from a surgeon or physician to a hospital, declaring that the writer is *bonâ fide* a medical student. A motto or device must be inscribed on each report, to identify the author, whose name, with a duplicate of the motto or device, must be mentioned in a private note, which will be opened when the award shall have been made.

THE MEDICAL TIMES.

SATURDAY, MARCH 13, 1847.

"Respice quid moneant leges, quid Curia mandet;
Præmia quanta bonos maneant."
JUVENAL.

WE will stoutly maintain that English civilization will have attained neither its true development nor stability, until the position of medical men, in reference both to the Government and to society, undergoes a total revolution. Their mission is not understood: their faculties not taken account of: their capabilities utterly misappreciated. They are no longer a body of men whose responsibilities commence with disease and conclude with death—and who, when in best exercise, are but "conductors of drugs, of which they know little, into bodies of which they know less." Time, that has stripped other professions of their utilities and influence, has endowed ours with more than the difference. While it is the boast of RELIGION, that she is no better now than when eighteen centuries since she first appeared to humanize and bless a depraved and animalized population,—while LAW remains, as ever, a social curse scarcely less grievous than the curses it would ward from us, and whose uselessness for good is best evidenced by the hourly-increasing call for its *calamitous* exercise,—MEDICINE has walked its onward march through centuries, with tortoise pace but sure, every step an increase of knowledge, and in every increase of knowledge the germ of nations on nations' happiness. We have been for the world the advance guard of intellect. We have *made* the only *true* knowledge—the knowledge of that physical salvation on which even all wholesome psychical advancement must depend—*science.* We have never stood still. In the dark-ages we added the works of Avicenna and Geber to those of a Hippocrates and a Galen, and, even then, groping in a world of almost Cimmerian obscuration, evolved that cause and mainstay of modern civilization—*chemistry.* We have disarmed circumnavigations of their terrors and perils; evidencing, under Cook, that vessels of war may voyage round the globe and not lose a man. Lethal factories we have made healthy; deadly colonies compatible with European life; towns scarcely less unfavourable to health than the country; diseases mitigated, others enfeebled, some extinguished. Whatever, in truth, the intellectual and moral superiority of the present generation, it *is* our work and our merit. We were the first to evoke it, and are now the first to turn it to profit and public utility.

The State comprehends neither the *much* that we have done nor the *more* which we ought to do, and can do. It knows not that, while law and religion have been contracting their utility, we have been expanding ours. The religious teacher has not only abandoned law and physic, but so wholly gives himself to speculative theology that even morality is left by him, in nine cases out of ten, as a specialty for some other authority. LAW is so busy between individuals that the rights of the public are forgotten. Their abandoned functions we take up, and aid them in those they retain. To the well-meaning we recommend virtue by showing its physical rewards: to their adversaries we enforce moderation by making sure the detection of vice: we are, in some sense, the substitute of conscience in an age where the control of religion appears on the decline.

Our utilities, indeed, have no measure save the boundaries of science and the requisitions of humanity. We are allied to every part of the population—tied to them alike in their pleasures and their sufferings; influencing, by our knowledge, now the legal regulation of their property; now the aspersion or clearance of their suspected characters; now their legal innocence or guilt; now the healthiness of their locality—of their employments—and their houses; in short, personally, domestically, legally, socially, we are the exponents and authorities of what is true, and what is right. With the smallest rewards we have the heaviest responsibilities; with the highest state utilities we have the worst possible state position. In short, our duties and dues, our powers and possessings, make us the great social anomaly of our time.

It is a cardinal part of our duty personally, and of the policy of the whole profession, to keep this discrepancy fully in the public view. It is right that the Government should be hourly admonished that they are playing false to the substantial and best interests of those whose wellbeing they should watch over, in tolerating the existence of such a chasm—first, between the profession and its full development; and, secondly, between the profession and its full appreciation. There should be a league of intellect and science to extort justice *from* the public. There could be no greater benefaction even *to* the public. Every instance of Government liberality in that novel direction should be welcomed—should be encouraged. Every instance of Government meanness in that direction should be just as energetically marked and reprobated. The Chemist Marsh dedicated his life to the service of the Government, winning by his discoveries a European name. Ill paid through life, he died and left a widow in penury. The Government, then—that of Lord John Russell—that marked their sense of these high services, and the touching appeal made to them by the widow, by a cheque for twenty guineas, ought not to go unscathed. It should be a stigma on their management

never to be forgotten by the man of science, so that future historians chronicling the meanness may have the satisfaction of feeling that their judgment has not been unanticipated even in our own days. Again, the Government of Peel, in a somewhat different spirit, originated more than one scientific commission and winning useful services treated the donors—whether an Owen, a Lindley, a Kane, or a Playfair—with liberality, with justice. We well remember the miserable acerbity with which some public writers—men of literature too!—delivered themselves on that occasion. The Minister was charged with silly extravagance, the men of science as overpaid and too well used. Prudence and the plainest justice require a very different course. Whatever the feuds that divide men of science, they should never be indulged in at the expense of the whole craft—and at the result which that supposes—the retardation of improvement. Let us unite to hail every step which recognises the claims of knowledge and the prerogatives of mind. To fail is a self-betrayal. It is not long since that a celebrated member of the French Institute, M. Double, was refused a peerage, which on many accounts was acknowledged to be his due, on no better ground than that he was a medical man. Our astonishment that such prejudices should be felt in France—and at Paris too—is perhaps as great a compliment to French public opinion on this subject, as our tame acquiescence here, to such scientific insults infer a reproach to ourselves.

However heavy the personal grounds, we have to press this social charge on the Government, they are but as dust in the balance compared with the social improvements involved by the alteration. We are a large body, comparatively unemployed, while thousands of matters—the most important to the wealth, the health, the well-being of the community—invite, demand, require an attention we may not and cannot give them. How much does this imply?

DEPUTATION TO SIR GEORGE GREY.

We are authorized to state, that a deputation from the Council of the Provincial Medical and Surgical Association has had an interview with the Right Hon. Sir George Grey, and that, from the result of this interview, strong hopes are entertained that a settlement of the questions connected with Medical Reform, satisfactory to all branches of the profession, may be obtained. These hopes are, however, dependent upon some approach to unanimity, in the concession of minor points, being manifested by the different sections of the profession.

APPEAL TO THE MEDICAL PROFESSION THROUGHOUT THE KINGDOM, ON THE GENERAL MEDICAL ANNUITY FUND.

Gentlemen,—The project for establishing a General Medical Annuity Fund for disabled members of the profession, and for widows and orphans, has now been nearly two years before the public. It is true that in the first instance it was designed to form an integral part of the affairs of the Provincial Medical and Surgical Association, but the meeting at Norwich having decided that it should stand alone, a separate and distinct institution from that body, it now becomes necessary to reorganize it, and give its independent existence that permanence and stability which its value and importance demand.

The unexpected decision of the Norwich meeting somewhat staggered me, for I had previously felt I was acting under the auspices of the Provincial Association, and that many members of that important body had not only lent their powerful names to the institution, but had aided its advancement by donations and subscriptions; still, though I was staggered, I was not paralysed in my energies, or disheartened as to the final accomplishment of the project, even though it stood alone: for that which possesses in itself an intrinsic virtue seldom requires foreign aid to sustain it. The human heart, although corrupted by selfishness and deadened by apathy, has many soft and gentle impulses which need but the right stimulus to excite into activity; and, when excited, a freshness and beauty is given to character—superior to renovated bodily vigour after the wastings of disease, for "true philanthropy is health of soul!"

Although the motives which have impelled me in all I have done in this matter are open to God, and I trust unimpeached by man, I have nevertheless felt a delicacy in obtruding myself—an unwillingness to seem too prominent—a desire that that which was of general interest to the profession should find amongst its ranks others who would step forward and bear with me the heat and the toil. I thought, if the project was worthy of support, the acknowledged talent of an enlightened profession like ours would be employed in its behalf, and expected ere this to have found many advocates: nor have I been altogether disappointed. To the Editor of this periodical I am indebted for valuable assistance in two leading articles devoted to the cause; and Mr. Kelson, of Sevenoaks, Kent, has furnished to the "Provincial Journal" a letter which evinces an enthusiasm worthy his benevolent spirit, and an activity, in a pecuniary point of view, which is an unequivocal earnest of his sincerity. If every county in the kingdom would produce a spirit like his, the prosperity of the institution could not be problematical. My thanks are likewise due to those gentlemen who honoured me with an answer to a circular published a few weeks back. They have with much kindness encouraged my efforts, expressed a confidence which is cheering, and, moreover, have promised active co-operation so soon as they shall be put into a position to become active. This latter promise is more congenial and satisfactory to my mind than all the compliments they have been good enough to pay to me, for I feel that counsel and help are essential. It is a gigantic establishment which is contemplated—a vast institution, comprehending in its grasp a huge tract of territory, and having for its object a diffusive spirit of benevolence. I, therefore, trust that many of these gentlemen will give to us their personal presence at the forthcoming meeting at Northampton. It is worth while in such a cause to make some sacrifice.

I am informed, both by the public press and by private letters, that the "General Medical Annuity Fund" has many well-wishers, who are at present unknown as its supporters. These gentlemen are in abeyance, waiting the further development of the scheme, and its final establishment, ere they give to it their countenance and support. To such I would remark—"If you think well of the scheme, why hesitate to support it? Your help is most needed *now*, in the early stages of its establishment, when your opinions and your counsel might lead to valuable results. The growth of a tree depends much upon the planting: if the labourers fail to loosen the earth, to arrange the fibres, to seek congenial soil and proper locality—if they neglect to watch and water it, to shelter from the rude blast, and sustain its delicate and yielding form from the rough winds which blow upon it, the chances are that it perishes. But if, on the contrary, they combine their powers, and unite their skill in all that be necessary for its sustenance, then shall it take deep root in the earth, rear its majestic form, thicken its bole, and spread around its branches, while its impervious foliage shall shelter from heat and storm, and beneath which they may repose in calm security."

To advance the interests of medical science is a duty we all owe both to the public and ourselves. To watch over the political movements which bear upon our profession—more particularly at a time like the present, so rife with such movements—is equally important; but let not the claims of philanthropy and benevolence be lost in the struggle. Let their still small voice be heard—they speak to the heart, and it should feel it. In this age of general improvement, when the spirit of amelioration is abroad, and societies are established to meet the contingencies of disease and death—the calamities which accompany such visitations,—when the artisan, the mechanic, nay, the agricultural labourer, have combined to furnish help to their distressed brother, and to the bereaved families of their departed fellow-workmen,—can it be endured that we who claim for ourselves the advantages of education, the privilege of expanded minds, the influence of moral and religious feelings, and in some measure the pride of clanship,—can it be endured that, in pure benevolence and nobleness of spirit, we should be outdone by these? Does the cause of the widow and the orphan require either eloquence or talent to plead with enlightened men? Is not the certainty of their fallen condition, when shrouded with poverty and neglect—oftentimes their utter helplessness, their agony, their privations—eloquence itself? Cannot imagination picture how forlorn and miserable must be that object who, having once enjoyed ease, comfort, and competency, is, from no fault of her own, but from the dispensations of Heaven, thrust from her home and her pleasures to toil for bread, to sink into dependence, or to have her weekly dole from the hands of a parish functionary? It is rank hypocrisy to put up a prayer to Almighty God in the venerable ritual of our Church, asking *Him* "to defend the fatherless children and widows," while we refuse a small mite from our resources to make the prayer effectual, as far as human means can make it.

The difficulties under which many worthy and intelligent practitioners labour, in a pecuniary point of view, render assurance upon their lives often impossible; but, admit that a prudent and careful man has paid from his yearly income sufficient to guarantee to his widow a thousand pounds, now, what is the interest she will receive from this amount? Unless she adopts some speculative mode of investment (which is always dangerous), or, to obtain large interest, gets security—uncertain as to the punctuality of payment, her income from the ordinary funds of the country will scarcely afford a very humble maintenance for herself; but if she have a family it is obvious she must herself labour to obtain any respectable position, and it may be she is utterly unqualified for such labour. The capital must not be touched, for that capital is designed for ulterior purposes—to place her children in suitable situations, and to enable them in the end to embark in business on their own account. Now, to meet such cases is the great object and design of the directors of the "General Medical Annuity Fund." An annuity accruing from such a co-operative institution would place the widow in a position of comparative independence. But when the average calculation of mortality amongst medical men, as proved by statistical returns, is compared with other professions, the lowest on the scale, the inference is fair that many die before they can have had time to make provision of any kind. Take the following fact as an example:—A young physician, respected for his general demeanour, and honoured for his talent, possessing public appointments, with every prospect of obtaining extensive practice, died after a short illness, "a few minutes only, at the early age of thirty-six, leaving a widow and five children *totally* unprovided for." I quote this passage from an esteemed correspondent, to show that I have not drawn my picture from imagination, but trusted the detail of facts.

The proposition for a "General Medical Annuity Fund" has occupied the consideration of

wiser heads than mine. Dr. Percival, in his "Medical Ethics," more than forty years ago, threw out the suggestion, but no one appeared to act upon it. I have quoted the passage in former communications to medical periodicals, but it will bear reiteration:—"In the county of Norfolk and in the city of London, benevolent institutions have been lately formed for providing funds to relieve the widows and children of apothecaries, and occasionally also members of the profession, who become indigent. Such schemes merit the sanction and encouragement of every liberal physician and surgeon, and, were they extended, their usefulness would be greatly increased, and their permanency almost with certainty secured. Medical subscribers from every part of Great Britain should be admitted, if they offer satisfactory testimonials of their qualifications. One comprehensive establishment seems to be more eligible than many on a smaller scale: for it would be conducted with superior dignity, regularity, and efficiency; with fewer obstacles from interest, prejudice, or rivalship; with considerable saving, in the aggregate, of time, trouble, and expense; with more accuracy in the calculations relative to its funds, and consequently with the utmost practicable extension of its dividends." (a)

Some gentlemen have thought a guinea a year subscription would be inadequate to accomplish the object we design. It is scarcely necessary to enter again into this question, for I have met it on many occasions. A guinea a year subscription *will* enable us to fulfil the engagements to which we pledged ourselves(b), and, should the institution meet with the patronage it deserves, *it will do much more*, because the liberal and the kind hearted of the profession will not confine themselves in their philanthropy. We have already had examples of this fact; nor will the public, when it is properly represented to them, withhold their assistance in furthering so exemplary an object.

If our anticipations in these particulars be realized, we may fairly hold out the prospect of better annuities.

It has been stated too, publicly, that there is an objection in sending money to Northampton, and that making application for annuities there would be inconvenient; but what is the consequence of locality to a "General Medical Annuity Fund," provided the parties who control it are men of integrity and honour, and provided the representative system be fully carried out? It will be our great aim to neutralize all objections of this nature. When the project was first mooted, it was done at the annual meeting of the Provincial Association, held at Sheffield; it was received there without a dissenting voice, and a committee for carrying out the scheme was appointed upon the spot. The retiring president of that association, Dr. Robertson, of Northampton, kindly accepted the office of treasurer, while the directors were all gentlemen, chosen for their high standing in the profession, and their known integrity; for my own part, I took the office of honorary managing director, only as an earnest of my zeal, devoting to the cause my time, and the small measure of ability I might possess; being, in short, willing to "spend and be spent" in the noble undertaking. But the institution is now a citizen of the empire, and is ready to take up its abode where it has the best chance of support. I am willing, at any moment, to yield the feeble protection I have given it, to any more efficient guardianship; nor do I believe an objection would be raised by my colleagues, to placing it in a position of greater advantage than we may possess. Our object is the final establishment of the "fund," and we care not who are the parties who shall develop its energies and spread abroad its usefulness.

The medical profession throughout the kingdom are especially invited to the consideration of this subject. Honorary local secretaries are [illegible] (for furthering the scheme), and we shall esteem it an especial favour, if gentlemen will accept this office voluntarily—that is, will offer their services rather than wait for an application. Oh! let them remember the greatness of the cause, and the glory of its achievement, and methinks they will not lack in their zeal.

In the early part of the spring, a meeting of the subscribers will be held at Northampton; of which due notice will be given by advertisement in this journal. In these times of rapid travelling, when railway communication puts distance at defiance, we earnestly hope that many gentlemen will sacrifice to us their time and services on this interesting occasion. A noble superstructure is about to be raised, the foundations of which are love in its best and purest acceptation, while its hallowed cement is co-operative philanthropy, upon which the blessing of God shall rest, for God will not withhold his blessing when men "hear the cry of the orphan, and wipe tears from the widow's eyes."

Gentlemen who desire to be present at this meeting will confer a favour if they will apprise either Dr. Robertson or myself of their intention.

I have the honour to be, gentlemen,

Your obedient servant,

E. Daniell, Managing Director.

Newport Pagnell, Bucks, March 1.

(a) Medical Ethics, p. 359. Ed. 1827.

(b) See "Address," published by Churchill.

MR. CLOSE ON HOMŒOPATHY.

The following observations were written before the appearance of Dr. Orpen's letter in this day's *Medical Times*, and do not specially relate to the discussion now carried on by that gentleman and Dr. Hilbers, although they will be found to contain a reiteration of the challenge advanced by the former writer.

They were more immediately elicited by the passing fireside reminiscence of the Editor of this journal having promised his readers some reflections upon the subject. Whilst musing upon the probable causes of their non-appearance, "thinks I to myself," Homœopathy has had its day; like its hydropathic sister, it is on the wane; nevertheless, it has not stated and promulged its hypotheses and dogmas, nor ruffled the surface of established medical doctrines, without producing some effect on men's minds. The agitation of any question is sure to attract attention; the attention excited will be in the ratio of its novelty; error for a time may be dominant, but, as time rolls on and sober thought acts, the chaff of error will be winnowed from the pure grain of truth, and "truth must prevail." I have watched the revivification, progress, and decline of the system with interest, as anxious to select its truth as to reject its error.

One correct impulse to legitimate medical science may be derived from the attempt to discover a universal law affecting the phases and treatment of disease. *This* cannot be heterodox or irrational. Experience and analogy tend to support it. But as, in other instances, the law ought to be sought for *inherently*, rather than *extrinsically*. Gravitation, electricity, magnetism, are general laws which coexist with, and depend upon, the integrant constitution of the natural objects themselves; so likewise the healing law, it may, *à priori*, be anticipated, should be sought for, and will be found, in the organic construction of the living being itself, and not in the extrinsic *materiel* which may be brought to act upon it. This law has been long recognised as the *vis medicatrix*, and not the *similia similibus*. To watch, to assist, to control its operations, make up the sum of the true philosophy of medicine. Acting, not upon matter merely, but upon living matter, its phenomena are essentially connected with life itself; and until the properties and contingencies of life be understood in their full extent and bearings, the extent and power of this law will remain undiscovered. Nevertheless, much of its genius is already known. It will, under favourable influences, speedily correct a simple aberration from a condition of health; in spite of great obstacles it will gradually restore; in some instances it succeeds partially, in others it fails; in some it seems to act too powerfully, and, like the viper, inflicts upon itself the sting of death; in all, under circumstances favourable to observation, its benign influence may be more or less recognised.

Here is a field where the explorations of the medical philosopher will be amply rewarded. Well would it be if the lovers and followers of "day dreams" turned the exuberance of their talent to "search it out."

I infer, and am fully persuaded, and am prepared to test the statement with any of the remaining advocates of homœopathy, that in no case has their system proved successful, where simple regard to the diet or the isolated influence of the *vis medicatrix* would not have succeeded, unaided by any homœopathic or any allopathic drug or chemical. In other words: the patient's diet being subjected to proper regulation and surveillance, I am prepared to prove practically and ocularly, that any case, curable as it is supposed by the administration of homœopathic medicine, is equally curable without the exhibition of an atom of medicine of any kind. A disease of the same nature, acute or chronic, existing in two or half a dozen patients, of like age and circumstances, subjected solely to a proper arrangement of diet, air, temperature, and exercise, shall disappear as quickly as when homœopathically treated—in fact, *more quickly*, if the practitioner has a better knowledge than his opponent, of the virtues and influences of those hygienic agents. This I am ready to test: a select and disinterested medical committee, *and* the profession in general, being the judges. Then, on the contrary, I can select cases, if human life and all its fearful responsibilities were not the cost of the experiment, in which the system of no-medicine and the homœopathic would alike fail, and the *allopathic* succeed. Here hangs many a sad and doleful tale.

To disregard the accumulation of experience in premature and hasty generalization is a great evil—one which Hahnemann and his followers have committed. Facts are the only basis of accurate knowledge, though not in themselves sufficient without collation and comparison with each other, and with general laws. But when so treated they become "stubborn things." Assertions having the semblance of facts are not wanting; but *bonâ fide* facts are altogether wanting to prove the oft-vaunted law and the elementary principles of homœpathy. In adopting a system of practice which professes to be superior to others it is not sufficient that it be postulated by a man whose intellect and judgment I may highly estimate. I cannot honestly confide in the *ipse dixit* of a person who half a century ago tried certain drugs which he said produced symptoms or appearances like those of certain diseases. In order to satisfy my mind as to the reality of phenomena, the value of which is intended to supersede the traditional and recorded experience of ages past, and upon which hang interests of the vastest moment, I must witness their occurrence in connection with the repetition of the like experiments. Now, there has been a copious flow of ink wasted in fine-spun speculations and enigmas as to infinitesimal exhalations and impingements of infinitesimal odoriferous particles upon infinitesimally expanded nervous structure; most infinitesimally difficult to be understood even by the most infinitesimally sublimated intellect. But I should like to know of one well-authenticated, undoubted, and modern or recent instance, in which homœopathic belladonna has produced a scarlet rash, or homœopathic cinchona the ague. Here, again, I challenge its disciples to the *experimentum crucis*. I am in a good state of health, and readily disposed, for the sake of science, to become, perhaps, the victim of their folly. But they reply, with all the ready repartee of the sophistry which is ever the handmaid of a bad cause, "No!

the onus of disproof rests with the objector; we make statements—he can test them;" or, in reply, they wander far away into those infinitesimal labyrinths into which none but their own infinitesimal thoughts can enter. For example:—one of your correspondents observes—"I have tried eighty-four of their (the homœopaths) medicines, with my corporeal system in an unexceptionable state, and I denounce their system and their statements as a shameless tissue of false assertions." To which is rejoined—"In the proving of medicines (*i.e.*, in ascertaining their action on the healthy organism), by Hahnemann and others, the *undiluted substances* were employed in doses varying according to the commonly received opinion of their medicinal activity." This must be a piece of most abject sophistry, easily discoverable by any one who has paid a mere cursory attention to Hahnemann's writings, or those of his scholars; or the propounder of it must have given less than an infinitesimal effort, to read "that which is written." He goes on to say:—"Let him who wishes to verify the correctness of Hahnemann's provings, take a few doses of two or three medicines in the undiluted state—as aconite, belladonna, nux vomica; and having carefully noted, day by day, the symptoms produced, compare them with those given by Hahnemann. I know that this has been done, and the accuracy of Hahnemann's provings has thereby been wonderfully corroborated."

Now, an assertion like this is worth nothing. This is the beginning, the alpha, the fundamental point, the nucleus, the essence of the system. When? Where? How? What? How many are the instances in which "the accuracy of Hahnemann's provings has thereby been wonderfully corroborated." Having made this assertion, he then wanders into a maze of subtilties, attenuations, aromas, marsh miasmas, and infinites, mixed up with musk and new hay, into which, as I am not fond of fairies, I shall not follow him; but will return to the sober reflection, that, if the system be not founded on facts, its superstructure must fall. The onus of the proof of these belongs to their promulgers. Show me a scarlet rash produced by the internal administration of "undiluted" belladonna; to be consonant with the law "similia similibus," &c., which it is intended to establish, should it not produce scarlet fever or scarlatina? Show me ague produced by "undiluted" cinchona. Let the experiment be limited to these two propositions. Or go further: show me any other phenomenon said to arise from the use of homœpathic medicine; but let that result be clear, definite, direct; not occult, not needing to be deduced or "made to appear." Let it be done in my own or in that of any other healthy person; then I shall consider it a figment worth attention, though requiring the recurrence of the same results under the same circumstances, nine times out of ten, or ninety-nine times out of one hundred, to establish the facts beyond all question.

I presume, I hope, I confidently believe there are many sincere and honest men amongst the lovers and practisers of homœopathy, but until the above facts, to say nothing of others which are said to form the crumbling superstructure of the system, be openly tested and established, by every cautious man it must be considered a German chimera, consanguineous to "clairvoyance."

There are numerous cases in which, if the state of society and the mode of remuneration were honest, every honourable-minded, honest-hearted medical man would say—"The patient must go to bed; regulate the temperature of his room; give him 'so and so' for diet; clear out the bowels with a dose of castor oil or rhubarb; other medicine is not necessary." It is a fact to be remarked, one which I have received from a homœopathic practitioner, that to produce a direct effect, which all could appreciate and understand, a homœopathic dose is not used: a full allopathic dose of oil or rhubarb is given when an aperient is needed. Surely this is being unfaithful and unbelieving to the system—*similia similibus curantur*—"like cures like." Why not give a globule or atom of a drug, whose effect is to bind or astringe? To cure ague, you must make it; to cure scarlet fever, you must induce it; to cure costiveness, you should create it.

It may not be necessary to put the patient to bed, but only to arrange the diet, air, temperature and exercise, and means of a psychological nature. In illustration of these views, long known to medical science, and in proof of the utter nullity of homœopathic drugs, I will engage to produce from twenty to thirty cases of bronchitis, influenza, simple continued fever, scarlatina, spasmodic croup, hysteria, anæmia, epilepsy, which have been cured—in some not a particle of medicine having been given, in others by the mere administration of a table-spoonful of *aqua fontana*—"undiluted water"!—three times a day. A learned friend of mine, in a lucid work, "On the Brain," observes—"The brain has ever seemed to exist as the special instrument of *thought*; and how much there is implied in that simple proposition—the manifestation of the *conscious* principle with all its attributes!" Verily, and indeed, there is a vast responsibility implied in a man's making right use of his brains.

Possessing, then, the consciousness of a conscious principle, with a sincere desire to use it right, I cannot, nevertheless, but feel persuaded that if homœopathy were stripped of its honourable, efficient agencies, diet and hygiene, it would be also either indebted for success to the politic cultivation of a wise and knowing countenance, a shrug of the shoulder; a grave, affected, and sonorous voice; a marked and grateful adulation of the *post hoc*, an increasing disregard of the *propter hoc*, a showy establishment, a carriage and pair, and such-like adjuvants, the common resources of empirics, and of such a character as was faithfully described in "Jerrold's Journal," a few months ago. But I am not desiring to pen the "confessions of a homœopathist," though the stream I have slid into is all but the very words of some of them, educed, spontaneously articulated, in moments of confession, when the heart sought to be "disburdened of its load." Such a character is deprecated by the "sincere" and "honest" homœopathist. The most sincere of us, whatever may be his calling, ought to remember the divine declaration | "The heart of man is deceitful above all things;" "who can know it?"

Here I will for the present conclude. At some period hereafter, if I fall not a martyr to homœopathic experiments, I hope to furnish and authenticate the cases treated on the nego-pathic plan.

A. W. Close.

Grosvenor-street, Manchester, Jan. 23.

ST. GEORGE'S HOSPITAL.

VAPOUR OF ETHER.

The use of the vapour of ether has become so very general now, not only in the London hospitals, but throughout the provinces, that an operation under its influence fails to excite the interest it was wont to do. Nevertheless, a subject of so much importance, not only to the profession, but to every individual in the empire, can lose but little of its interest; and the recital of some operations, and these among the most formidable in surgery, performed while the patients were under the influence of ether, must rouse the fading interest, particularly when the fact is added that three operations were performed with the most perfect success, and without the unhappy sufferers feeling the slightest approach to pain.

At St. George's Hospital, on Thursday, 25th ult., there was a large assemblage of gentlemen to witness three operations. Amongst those present were observed Lord Morpeth, Prince Jerome Bonaparte, Dr. Paris, Sir B. Brodie, and many others of distinction.

Dr. Snow, in all the cases, administered the ether, and, doubtless, to this and the perfect apparatus may be attributed much of the success.

The first patient was M. F., aged thirty-five. Scirrhus of the right breast. Mr. Cutler, whose patient she was, performed the operation. In three minutes from the first inspiration of the ether she became insensible; the operation was performed without her showing the slightest symptoms of pain: two or three vessels were secured, and during the whole time she lay perfectly quiet: she neither moved, spoke, nor even moaned. When it was over she could hardly imagine such to be the fact, and subsequently she stated she had a kind of dream, but that she felt no pain, nor any uncomfortable sensation.

The second patient was a lad, aged thirteen, whose knee joint was involved in disease, consequent upon the fracture of the patella some time before. The leg was removed without the exhibition of any symptom of pain, and during the taking up of the vessels he smiled and said, he had not been aware of what was going on. Both of the cases are doing well.

In the third case the efficacy of the vapour of ether was tested more severely. A girl, aged twelve, suffering from strumous disease of the knee-joint, and reduced to a mass of skin and bone, of exceedingly irritable disposition; the approach of the surgeon excited her so much that treatment was almost suspended for want of examination of the knee. By the vapour of ether the joint was examined and its hopeless state made evident. When brought into the theatre she was made insensible in about four minutes. Mr. H. J. Johnson performed the operation very skilfully, and removed the thigh in fifteen seconds; during this time and the subsequent treatment of the stump, she was, like the former patients, totally motionless and insensible, though, when returned to consciousness, her irritability was evinced by abundance of tears.

After the operations, Mr. Johnson made a few remarks on the cases. Lord Morpeth for a few moments inhaled the vapour, but did not seem inclined to go beyond tasting its flavour.

Apothecaries' Hall.—Gentlemen admitted members March 4:—Patrick Brady, Thomas Orton, William Cumming, Edmund John Burman, and James Graham.

MORTALITY TABLE.

For the Week ending Saturday, March 6, 1847.

Causes of Death.	Total.	Average of 5 Winters.
All Causes	1008	1068
Specified Causes	1007	1061
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	148	183
Sporadic Diseases.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	110	112
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	173	170
Diseases of the Lungs, and of the other Organs of Respiration	363	354
Diseases of the Heart and Blood-vessels	36	32
Diseases of the Stomach, Liver, and other organs of Digestion	60	70
Diseases of the Kidneys, &c.	10	8
Childbirth, Diseases of the Uterus, &c.	12	12
Rheumatism, Diseases of the Bones, Joints, &c.	10	7
Diseases of the Skin, Cellular Tissue, &c.	2	2
Old Age	49	81
Violence, Privation, Cold, and Intemperance	34	30

A

COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the THEATRE of QUEEN'S COLLEGE, Birmingham.

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Epidemic fevers of 1846; indications of the simplest forms thereof; varieties of these, and observations upon them; particular causes of the simple fever; general causes—atmospheric, telluric, or both; treatment of this fever; advantages of simple treatment; reaction in this form of fever; general and local tendencies of such reaction; anticipations of organic disturbance in fever; observations thereupon; treatment in prospective; cautions concerning it; signs of local lesions; only to be learnt by experience; value of attending to them; cases in illustration; their treatment; illustrations and comments upon them.

Gentlemen,—Having concluded our discourse upon the epidemic bowel complaints of 1846, we have now to speak of the epidemic fevers of the same period. During the entire winter of last year, simple continued fever prevailed in this town and neighbourhood to a greater or less extent. As the spring, and summer, and autumn successively advanced, this fever acquired certain pathological modifications, of which we shall speak in necessary detail.

In the most simple and uncomplicated forms of this ailment which you saw, the following symptoms presented themselves. There was considerable depression, both bodily and mental; the patients had an inability, as well as a disinclination, for active exertion; the ideas were confused and irregular, memory weakened, and there was great indecision of purpose. There was seldom any anxiety or apprehension, such as we meet with in typhus and other varieties of fever—the great feature was one of temporary weakness, more or less striking. In some cases the intellectual processes were so enfeebled that the individuals could not fix their attention upon any subject for a few minutes at a time, or even remember, so as to be able to recount them, the events that had most recently transpired. This peculiar state of mind seemed to depend upon nothing more than nervous debility, which incapacitated for action. It was a *negative* rather than a *positive* error of intellectual function. There were no strange ideas, no morbid fancies or fears, no raving or muttering delirium, no dreaming or starting in the sleep, and no incoherence, except what might be imputed to the abstraction arising from utter indifference to passing objects or remarks. The patients generally complained of giddiness, but very rarely of pain in the head, and that only temporary, and for the most part after eating. The skin was seldom dry or harsh, and never very hot; it was usually moist, and often bedewed, especially in the night, with copious perspiration. The surface was pale, features languid: eyes dull, expressionless, and watery; tongue pale and trembling, and sometimes covered with a white fur; pulse small and feeble, and averaging from ninety to one hundred beats per minute; urine scanty; bowels costive; appetite weakened, or wanting altogether; thirst frequent, but not urgent.

This was the simplest and most tractable form in which the fever prevailed here, and hereabouts, during the winter and early spring of last year.

In some instances it was traceable to definite causes easy of comprehension, such as to exposure to night air, sitting or sleeping in a draught, getting the feet wet, over-exertion, over-fasting, and moral circumstances of a depressing nature. But in a vast majority of the cases, no particular cause whatever could be assigned for them; and we could only surmise that some general influence, whether atmospheric or telluric, or both, was in operation. This was the more probable, from the fact that the fever commenced, and continued, and extended, without any seeming relation to locality, to age, sex, occupation, mode of life, or any of the other contingencies that often stand connected with the origin and progress of disease.

The treatment of this fever involved no difficulty. As a rule, those cases of it were best treated which were least so: I mean, which were least troubled with drugging. In a great many of them the ailment ran its course in from four or five days to a fortnight, and then terminated, though no medicines were given; the convalescents shortly recovered their appetites, and these, judiciously gratified, soon restored them to health and strength.

The medicinal treatment, when indicated, was not very comprehensive. If the bowels were obstinate, a dose of calomel, of three or four grains, followed in as many hours by an appropriate dose of senna infusion, compound rhubarb, or jalap powder, fluid magnesia, or colocynth pill, often cut short the ailment, and superseded further physicking. In other cases, when the bowels were less torpid, but the biliary and other secretions deficient, a milder mercurial, such as five grains of blue pill, or of *hydrargyrum cum creta* sufficed, followed by a gentle aperient of castor oil, rhubarb and magnesia, or something like. When pyrexial symptoms pointed to febrifuge treatment, this best consisted in restricted vegetable diet, moderate use of toast-water or barley-water, and the exhibition of some such saline as the following:—℞. Sodæ bicarbonatis, potassæ nitratis, vini ipecacuanhæ aa. ʒj; sp. eth. nit., ʒiij; aquæ, vel misturæ camphoræ, ℥viss.: m. ft. mist. cujus capiat. coch. ampla duo tertiis horis. If there were no acidity of saliva, or lithic deposit in the urine, the soda could be supplied by half an ounce or an ounce of acetate of ammonia; if there were nausea or vomiting, the ipecacuanha wine was best substituted by eight or ten drops of Scheele's prussic acid, the carbonate of soda being retained.

This form of treatment had the effect of aiding the several secernent functions, especially of the liver, kidneys, and skin, and of anticipating any tendency to febrile reaction. This latter is what you have chiefly to guard against in the management of fever, however simple its type. The skin is apt to become dry and hot, the mouth parched, the eyes red and suffused, and the pulse quick, hard, and bounding. This is an evening exacerbation, common in the cases I speak of; and the great ground of apprehension in it is, either that the symptoms thus increased will continue in severity, or that some organ or other will suffer, and give rise to another and worse train of pathological phenomena. When any particular organic disorder arises out of the general progress of fever, special treatment is instantly indicated, and often none but the most energetic will suffice. It is to anticipate and, if possible, prevent, such an occurrence as this, that, even in the mildest forms of fever, a little judicious management is necessary. To keep up a good action of the kidneys, so as to enable them duly to depurate the blood, and carry from it any morbific matter; to preserve the skin moderately and equally warm, so as to favour a gentle and sustained discharge from its pores, maintain a moderate fulness of its vessels, and thus guard against internal congestions; to free the liver of any accumulated bile, and unload the intestines of any stagnant irritating fæces; to give appropriate drinks to assuage thirst, and such food as may be best suited to the stomach under these circumstances,—is to answer all the intentions that ordinarily require fulfilment in the treatment of fever. These purposes are best met by doing enough on the one hand, and not doing too much on the other. Always be discretionary in your remedies in such cases—

rather help Nature in what she is about to do, than urge her beyond this by severe measures. When functions are sluggish, prompt them, but still not extravagantly, or you may invite the very mischief you are intending to avert. Desperate purges, or diuretics, or mercurials, or sedatives, will often cause as much organic disturbance, or nervous prostration, as will defy both nature's efforts and your own to compensate.

Sometimes, in spite of your best services, organic derangement or disease will supervene upon simple fever, and call for specific treatment of an active kind. The *signs* by which these local lesions are manifested, experience and careful observation will alone enable you to understand. It is all-important, however, that you should be able to recognise them directly on their occurrence, so as without loss of time to meet the emergencies which they indicate. These trifles overlooked, often lead to fatal consequences. It is a grave fault to be over officious with remedies when they are little needed; but it is a graver one to withhold those that are called for in exigency. Never, in prejudice or blindness, prejudge the occurrence of organic lesion upon any general disorder, but always be mindful of its possibility, and prepared for its requirements. In the management of fever patients, this discretion will frequently be of service to you. In illustration, let me mention one or two cases that have lately occurred in the hospital.

Mary Ann Frost, a middle-aged married woman, was admitted some weeks back, under my care. She was the subject of simple fever. Her pulse was 130, small and rather firm; tongue pale, trembling, and coated with a white fur; skin relaxed, and covered with a sticky perspiration; a feeling of lassitude, and soreness all over; no particular pain in any spot; head moderately cool; pupils natural; no abnormal sounds in the chest, except those of increased circulatory and respiratory function; constant thirst; no appetite; bowels confined. She complained, additionally, of inability to make water. This, however, was not a feature of her general ailment, for she informed me that she had been the subject of occasional retention of urine for some years, especially if she took cold or got her feet wet. There was plenty of urine in the bladder, so that the kidneys were not at fault. The retention appeared to me to be spasmodic, and I therefore ordered her a hip-bath. She passed urine copiously and easily, directly she was placed in it. She had only one return of this difficulty a few days afterwards, and it was relieved by similar treatment. She was directed to take immediately ten grains of jalap and two of calomel, to evacuate her bowels, which she said were habitually torpid. Her further prescription consisted of carbonate of soda and nitrate of potash, one drachm each; nitric ether and tincture of henbane, two drachms each; camphor mixture, eight ounces; of this she was to take two table-spoonfuls every four hours, with one of the following pills. ℞. Hydrarg. chloridi, gr. iij.; pulv. Jacobi veri, ℈j.; ext. hyoscy., q.s. ut ft. pil. viij.

This treatment, you will perceive, had no specific character about it; it was intended to answer the general purposes, for there were no marked particular ones to be fulfilled. On the following morning we found her improved; she had slept comfortably; her pulse was 90, and softer than at first; tongue moist, but still very furred; thirst less troublesome. There were all these favourable appearances, *notwithstanding that her bowels had not been opened.* I remarked upon this fact at the time, telling you that, *à priori*, I should have expected to have found her more feverish, and with an increase of her general feeling of soreness. In nine cases out of ten this would have been the result of the unrelieved constipation. We were fortunate in not having it so in this instance; but it was additionally desirable not to lose any more time. She was, therefore, ordered an ounce of the sulphate of magnesia, and three drachms of the carbonate, in half a pint of peppermint-water: of this, an ounce was to be taken every hour until the bowels were well opened. This happened satisfactorily after the fourth dose, and the general symptoms were still further relieved.

On the following day the aching of the limbs was quite gone, so I omitted the henbane from the febrifuge mixture, ordering this to be continued as before, the pills with only every other dose of it, and the cathartic, when necessary, the first thing in a morning.

From this time until the eighth day succeeding her admission she steadily advanced towards convalescence; but on visiting her this day, I found her complaining of a dull heavy pain in the right temple, with occasional shooting pains towards the back part of the head; the pupil of the right eye was considerably more dilated than that of the left, and imperfectly sensible to the stimulus of light; there was slight drowsiness; partial paralysis, and diminished temperature, of the left arm and leg; pulse 60, and somewhat labouring; tongue tremulous, and coated with a thick fur. Here, you observe, we had a train of symptoms and signs totally different from any that had appeared before, and very formidable. What did these things indicate? Enumerate them in your own minds, and you will see that they pointed to local congestion of the brain. There was no evidence to show how this had arisen, but at least the evidences of its existence called for prompt and particular treatment. Eight leeches were ordered to the right temple, and a derivative action was established by means of a turpentine enema, and the immersion of the feet in hot mustard and water. The febrifuge mixture was continued, and with each dose of it two grains of calomel were given. The back of the neck was to be blistered, if the pain in the head were not relieved by the leeching. Fortunately it was, for the next morning she complained little of it; but the state of the pupil, and pulse, and left side of the body, told us that the mischief was not yet overcome. The bowels, partaking of the general sluggishness consequent upon the cerebral oppression, had not acted since the enema was given, and then only slighly. A drop of croton oil, and three grains of calomel, were given at once. In about two hours, these produced a most copious purgation, which was followed by further signs of amendment. The purgative, febrifuge, mercurial, and derivative treatment were continued for a week, at the end of which time there were no evidences whatever of cerebral congestion, or of its more direct consequences. She was then ordered a light vegetable tonic, and nutritive unstimulating diet, under which she rapidly improved, and shortly left the hospital well.

Now, had we overlooked these signs of congestion of the brain, and directed no treatment against it, there can be little doubt that the termination of the case would have been the reverse of what it was. The congestion might have extended, until complete apoplexy had resulted; or, without extending, a vessel might have given way, and fatal insensibility have followed in a moment; it might have run on to inflammation of the substance, or the meninges, of the brain; or, remaining comparatively passive as it was, have proved destructive of serous effusion.

In treating this case, local depletion was preferred to bleeding from the arm, for two reasons: first, because the congestion was evidently limited to a certain extent of the brain, and was rather passive than active in its kind; and secondly, because the general appearance of the patient, her relaxed frame, absence of inflammatory hardness of pulse, and previous impoverished living, told us that sudden or severe exhaustion might have been fatal to her. What the leeching might want in effect, was endeavoured to be supplied by the derivative treatment, as being not only efficacious, but free from the objectionableness of direct depression. The calomel was given, both to act upon the bowels, and to anticipate any absorbent services that might be called for in case of serous effusion.

Another example in pathological bearing, with which you are all familiar, occurred in the person of the little boy, Gill, who was some time an inmate of the top ward. He was admitted under my care, for simple fever, which exhibited no organic tendencies. Under judicious diet, and mild febrifuge medicines, with occasional laxatives, he steadily progressed towards recovery, for the space of a fortnight: one evening, however, without any forewarning or assignable cause, he was suddenly seized with excruciating pain in the bowels. It chiefly twisted round the navel, and prevented the poor fellow from standing upright on the floor, or lying with his legs straight in bed. Yet he was perpetually tossing in bed and out, to find any position that might be favourable to the relief of his sufferings. There was nausea, but not vomiting, attendant upon this pain, and there was an occasional inclination to tenesmus. Slight pressure, how suddenly soever made, upon the abdomen, did not increase the suffering, but it was augmented proportionately to the amount and continuance of pressure. The pulse was quick, and somewhat firm and full; the tongue vividly red, with strikingly elevated papillæ. Muco-enteritis was suspected: twelve leeches were ordered to the abdomen, the bleeding to be sustained, first, by hot fomentations, and, subsequently, by poultices of linseed meal. The bowels had been well opened during the day, as also during several previous days; and his medicinal treatment, therefore, was the following: —℞. Sodæ carbonatis, tinct. opii, aa. ʒj.; tinct. hyoscy., ʒij.; aquæ, ℥vijss. *M.* ft. mist. cujus cap. coch. ampla duo tertia quaque hora, cum pilula. ℞. Hydr. chloridi, gr. j.; ext. papaveris, ℈j. *M.* ft. pil. viij. In twenty-eight hours all this fresh accession of ailment had subsided, and nothing was left but the general febrile symptoms of which the boy first complained.

George Jones, you will remember, was admitted into the hospital on the same day as the woman Frost, before mentioned. He was the subject of simple fever, and the simplest treatment sufficed for him. He improved under it, and in the course of a week was on the verge of convalescence. On the eighth day succeeding his admission, we found all his febrile symptoms aggravated, and, additionally to these, he had hurried respiration, a short frequent cough, difficult expectoration of tenacious phlegm, and a hard bounding pulse, numbering 126 per minute. The local signs were, dulness on percussion over the situation of the lower part of the right lung, with a crepitant râle in this neighbourhood, and a strong mucous rattle superiorly. This accession of *signs*, as well as the aggravated symptoms, told us of the supervention of local pneumonia. He was ordered the following:—Ten leeches over the seat of inflammation; the bleeding to be succeeded by a blister, six inches by four in size. ℞. Sodæ carb., vini ipecac. aa. ʒjss.; tinct. hyoscy., sp. eth. nit., aa. ʒij.; tinct. humuli, ʒiij.; aquæ, ℥vij.; misce, ft. mist. cujus, cap. coch. ampla duo tertiis horis, cum pilula. ℞. Hydrarg. chloridi, gr. iij.; pulv. Jacobi veri, ℈j.; acet. morphiæ, gr. j.; ext. conii, q.s. ut ft. pil. viij.

Under this form of treatment, he speedily and satisfactorily improved, and in a few days was suffering only from the general fever for which he came into the hospital. But the dulness on percussion never subsided from the situation where the inflammatory action was first indicated, and the respiratory sound here was almost exclusively tubular. This was due to the condensation of pulmonic tissue, which even in this short space of time had resulted from the inflammatory process and its products; the passage of air was limited to the bronchial branches. Still this was not a serious evil, inasmuch as there was plenty of lung on either side to answer all the purposes of even healthy respiration. The sound parts of the lungs are capable, to a certain extent, of being supplemental of the obstructed parts; and thus are the emergencies of these organs often answered. So it appeared to be with this man; for, after the subsidence of his pneumonia, he advanced as

steadily towards recovery as he had done after the cessation of his early febrile symptoms. But, poor fellow, he seemed fated to die in the hospital: for directly that he became the subject rather of the *materia alimenta* than the *materia medica*, he stumbled in the lobby one night, in the dark, and fell violently with his left temple against a sharp corner. You remember what a local tumefaction and black eye he had the next morning. The cerebral symptoms were not severe, but he never recovered the shock: his vital powers were prostrated from this time; his pulse never acquired any tone, nor did the discoloration of his eye disappear during the further month that he lived. The concussion killed him, though it was very slowly. The pathological features of this case I shall consider on a future occasion.

DUMAS ON ORGANIC CHEMISTRY. No. XIV.

ON THE URINE.

(Continued from p. 39.)

We can have no difficulty in at once perceiving that the function of the kidneys must be to a certain extent modified by the age and sex of the individual, and also, in an especial manner, by the kind of regimen which may have been adopted. The influence which these different conditions exercise over the secretion of the urine has been studied by various observers, and more especially by M. Lecanu, who has devoted great attention to this subject. His experiments were performed on sixteen individuals, of different ages and sex, namely:—

6 men	from 20 to 45 years	
2 old men	„ 84 to 86	„
4 women	„ 18 to 28	„
4 children		

The density of the urine examined by M. Lecanu varied in a remarkable manner. Annexed are the extremes of these variations, calculated on ninety-three samples representing the entire quantity of urine voided during one day by the above sixteen individuals:—

4	times the urine offered a density inferior to	1·016
34	„ „ ranging between 1·016 and	1·020
44	„ „ „ „ 1·020 and	1 030
11	„ „ „ higher than	1·030

The urine of man, when in the prime of life, is always found to be denser than that of women or of children. We may, moreover, remark that in man the amount of urine secreted is, *cœteris paribus*, greater than in the other sex. The quantity of urine voided by thirteen individuals of different ages and sex, who were living well, but were subjected to different external influences, varied from 525 grammes to 2 kilogrammes—271 grammes, daily. In individuals of the masculine sex, and at the middle age, the urine is secreted more copiously than in old men, in children, and often, even, than in women.

By comparing the quantity of urine given by five men, between twenty and forty-five years of age, during several consecutive days, I have found a mean ranging between 743 and 2271 grammes. These differences are less than in the thirteen cases which furnished the numbers from 525 to 2271. The variations were even less marked in three individuals, respectively of the ages of twenty, twenty-two, and thirty-eight years, in whom the urine was collected for several days in succession.

	Kils.
The first gave in 12 days	11 969
The second „ 12 „	11·572
The third „ 8 „ 7·622, equal, in 12 days, to	11·433

Lastly, these same individuals, when placed under similar external influences, voided equal quantities of urine.

M. Lecanu also quotes, on this subject, the following experiments:—

	Kils.		Kils.
In 6 days, a person furnished	5·961	In 6 other days	6 310
6 „ „	5 839	„ 6 „	5·713
5 „ „	10 056	„ 5 „	9 859
3 „ „	1·977	„ 3 „	1·916
4 „ „	3·897	„ 4 „	3 653

The mean of the above forty-eight experiments gives 1268 grammes of urine. But, in some, the quantity of urine secreted never reached this figure; in others it invariably exceeded it. This circumstance explains why various observers, who have made calculations on this subject, have arrived at such different results. In fact, the quantity of urine secreted in twenty-four hours has been, by Haller, set down at 1568 grammes; by Bostock, at 1280; by Proust, at 1040; by Thomson, at 1510; and by Rayer, at 1257 grammes.

Let us now compare the proportion of urea contained in the urine of various individuals, collected during several consecutive days. The following table is extracted from the work of M. Lecanu:—

In 12 days,	a man, aged	20, furnished	334 grammes of urea.
—	—	22	334
—	—	38	310
—	—	43	351
—	—	35	301
—	a woman	28	205
—	—	16	210
—	a child	8	171
—	—	8	168

M. Lecanu deducts the urea from the given weight of nitrate of urea; he considers 100 parts of this salt to be formed by:—

Urea	53·50
Nitric acid.....	46·50

Now, the experiments of M. Regnault have proved that urea takes up an equivalent of water, while combining itself with bases; this will consequently give:—

$C^2 H^4 Az O^2$ =	60 —	48·8
$Az O^5, HO$ =	63 —	51·2
	123	100·0

The urea is then valued too high, by about a tenth, in the experiments of M. Lecanu. But this is not of great consequence, inasmuch as the memoir of M. Lecanu is rather designed to show the direction of the variations of the urea than the absolute quantities of this principle.

The amount of urea secreted is much greater in men in the prime of life than in women, old men, or children. It is also more considerable in women than in children and aged people. Annexed are some calculations as to the quantity of this principle yielded in twenty-four hours:—

	Mean.	Maximum.	Minimum.
Man.............	28·0	33·0	23·1
Woman	19·1	28·3	9·9
Old man	8·1	12·2	3·9
Child of 8 years..	13·4	16·4	10·4
Child of 4 years .	4·5	5·3	3·7

We know that the urine of very young children does not contain any appreciable amount of urea; and I am inclined to believe that that of convalescents will be found in the same condition, or at least that it will resemble the urine of children a little more advanced in years.

The quantity of free acid which is found in the urine varies remarkably. In general, we may state that one pint (French) of urine is capable of being saturated by one gramme of carbonate of soda; the most acid urine which M. Lecanu has met with never required more than 2·75 grammes.

The secretion of uric acid varies according to the age, diet, sex, &c., of the individual, within the limits of 0·089 and 1·575 grammes daily; but the difference which exists, by reason of age and sex, is here greater than we find to be the case with regard to the quantity of urea, although it sometimes happens that individuals of the same habit, age, and sex, furnish, during a similar space of time, apparently equal quantities of uric acid.

		Uric acid secreted in 12 days.
Adult man	1°	11·945
	2°	11·945
	3°	13·434
	4°	3·624
	5°	5·027
Old man	1°	6·516
	2°	2 286
Adult female	1°	3·667
	2°	5·425
	3°	7·083
	4°	3·942
Child	1°	1·977
	2°	2·108

We see, according to this table, that the production of uric acid does not follow so regular a course as that of urea; and this may be readily conceived, when we consider that the production of uric acid is merely an accident arising from the circumstance that a portion of the neutral azotized matters have been but imperfectly burned. We know, in fact, that uric acid is a less oxidized body than urea.

The proportion of mucus has been found by M. Lecanu to vary considerably: in the four men, mentioned in a former experiment, who were aged, respectively, twenty, twenty-two, thirty-eight, and forty-three years, it amounted to 1·13, 1·72, 1·27, and 1·63 grammes; a fifth man, who was remarkably robust, yielded but 0·312, and another only 0·478 grammes. In several women and old men, it ranged from 0·29 to 0·375. With children the quantity furnished was quite inappreciable.

We shall hereafter find, in pursuing our investigations as to the matters which pass off by the urine, that the quantities of fixed salts, voided in twenty-four hours by the urine, vary considerably. In fact, by experiments performed on eleven individuals, these materials were proved to fluctuate between 4·84 and 24·5 grammes; these variations were even observed on the same person; still, under normal conditions of diet, &c., we may in general remark, that these saline matters are more considerable in men in the prime of life than in women, children, or aged persons; and this is not difficult of comprehension, if we bear in mind that men usually take a much larger quantity of nutriment, charged with fixed salts, &c.

	Mean.	Maximum.	Minimum.
Man............	16·8	24·5	9·9
Woman	14·3	19·6	10·7
Child of 8 years....	10·0	10·9	9·9
Old man..	8·0	9·7	4·8

Among the salts, the earthy phosphates have presented the greatest variations, and which cannot be said to have borne any relation to the sex or age of the individual; their weight fluctuated between 1·960 and 0·029 grammes. M. Donné has observed that the urine of pregnant women contains a less amount of earthy phosphates than that which is found in ordinary urine. Fourcroy stated his opinion, that the urine of old men contains the largest quantity of salts, and especially of earthy phosphates. MM. Guibourt and Rayer affirm the contrary. M. Lecanu has, by analysis, found the urine of children more loaded with earthy phosphates than that of old men, although the urine of one of these latter, when experimented on, was remarkably acid.

The quantity of chloride of sodium rendered daily by the urine, in different individuals, varies from 0·016 to 7·550 grammes. These variations are seldom so great in one individual, but still they may range from two to five grammes in the day. The amount of this salt has been found to be sensibly the same in man, at the middle age, and in the child; but in old men and in women it decreases in so remarkable a manner, that it is impossible to attribute the difference observed to mere errors of experiment. The women, moreover, had fared on the same diet as the men. Whilst, then, the man yielded by the urine from 2·9 to 4·6 grammes of chloride of sodium, the woman voided no more than from 0·690 to even less than 0·017 grammes. Proust has noticed that the urine of dying persons is almost entirely deprived of this salt—a fact which accords with its progressive diminution in the advanced stages of life.

The quantity of the soluble phosphates varies, in the same individual, from 0·111 to 4·643 grammes in the day; nor does it appear to be regulated by age or sex. Generally speaking, it but rarely exceeds one gramme.

The sulphuric acid which is held by the urine in the state of a soluble sulphate fluctuates, in the same manner, from 1·988 to 3·730 grammes.

The following are the conclusions drawn by M. Lecanu on this subject.

Urea and uric acid are secreted in equal quantities during given periods, in the same individual. The quantity of urea secreted by

different individuals, during equal periods, varies in respect to sex and age: being greater in man in the full vigour of life than in woman, and more considerable with the latter than in old men and children. Those materials which are indecomposable by heat, and which are found to be secreted during a given time by different individuals, vary without any relation to sex or age, and even present remarkable changes in the same individual. The general results of the experiments of M. Lecanu are given in the following table:—

Products voided in twenty-four hours.	Child of four years.	Child of eight years.	Man.	Old man.	Woman.
	Grammes.	Grammes.	Grammes.	Grammes.	Grammes.
Uric acid	—	0·15 to 0·25	0·3[illegible] to 1·0	0·20 to 0·50	0·30 to 0·60
Urea	3 to 5	10 to 16	23 to 33	4 to 12	10 to 28
Salts	—	10	10 to 25	5 to 10	10 to 20
Chloride of sodium.. ...	—	2 to 5	4 to 7	0·4 to 1·5	0·1 to 0·7
Earthy phosphates	—	0·3 to 1·3	0·4 to 2·0	0·2	0·2 to 2·0

We have now to study the influence which drinks, solid aliments, and other matters, when accidentally introduced into the system, exercise over the urinary secretion. Every one knows that the ingestion of a large quantity of water into the economy immediately augments the secretion of urine. It has been remarked that, under these circumstances, the urine becomes clearer, and that its density diminishes. It would, indeed, be difficult to understand how it could be otherwise. The excess of water introduced into the stomach passes rapidly into the current of the circulation, without exercising the least influence over the secretion of urea and the other organic materials of the urine. All that it can do is to charge itself with the salts which it meets with in the economy, and thus to augment, in a slight proportion, the quantity of inorganic materials excreted during a given time.

It is generally admitted that the nature and quantity of the aliments exercise a great influence over the urinary secretion. This fact is incontestible, although, perhaps, it has been exaggerated by some observers. Indeed, it is impossible to maintain that it is at the expense of the aliments alone that the urea and other organic materials of the urine are created. The formation of these principles is continued during the lowest or most restricted diet which is imposed in certain diseases, or even during the periods of forced fasting to which animals are sometimes submitted. We have already stated that its origin must be attributed to the metamorphoses which the materials of the organism, on being taken up by the returning or impoverished blood, experience as an effect of respiration. However, it is clear that wherever an excess of the reparative materials is introduced into the economy, as under the influence of too full a diet, a part of the azotized materials of which the nourishment is composed is directly eliminated by the urine under the form of urea.

On the other hand, the varied aliments, to which the progress of civilization has gradually habituated us, introduce into the economy a variety of azotized substances which are incapable of serving in a direct manner for the nutrition of our tissues. The assimilative powers of the organism, however active they may be, can never transform *theine* into flesh. This substance, like many others of an analogous character, can only perform a secondary part in the great act of nutrition: and it is probable that, after serving the requirements of respiration, these matters concur directly in the formation of urea. Hence we may understand the influence which aliments exercise over the urinary secretion.

M. Chossat has proved that the solid materials of the urine vary, not only with a given weight of aliments of the same nature, but likewise with aliments of different kinds, when taken in the same quantity. On the other hand, MM. Simon and Lehmann have shown that the proportion of urea is augmented in the urine by an abundant azotized nutriment, and that it diminishes under the opposite condition.

Among the matters introduced into the economy, in an accidental manner, there are some which pass off by the urine, either in their natural state, or after having undergone a greater or less amount of alteration, whilst others are not met with in this liquid at all.

M. Woehler has performed a number of experiments on this subject. According to this chemist, the colouring matters of rhubarb, madder, logwood, beetroot, mulberries, black cherries, the sulphate of indigo, gamboge, &c., pass into the urine, giving it a deep colour. Asparagus communicates to it a peculiar fetid odour, which results from the partial decomposition of certain materials contained in it. Many essential oils, as those of the juniper-berry and of garlick, pass off by the urine; spirits of turpentine, certain resins and balsams, communicate to it a smell of violets. Opium, copaiba, assafœtida, and saffron, give their peculiar odour to this fluid. The carbonates, sulphates, chlorates, sulpho-cyanurets, nitrates, and phosphates pass off by the urine without alteration.

According to M. Cantu, mercury is found in remarkable quantity in the urine of individuals when undergoing a mercurial treatment. The preparations of gold, antimony, and arsenic are eliminated in great part by the urine; iodine passes into it in the state of an iodimet; sulphur, sulphuretted hydrogen, and the sulphurets are found there, but in the state of sulphates. Generally speaking, the ingested products pass into the urine after having undergone a true oxidation. The red ferro-cyanuret of potassium, however, is met with in this fluid in the form of a yellow ferro-cyanuret, while the latter salt passes into it without alteration.

It is a difficult matter to acidulate the urine by means of the organic acids, for they are in great part destroyed within the system. Thus, the citrates, the malates, and the acetates are burned within the economy and reduced to the state of carbonates; the urine will, consequently, often become alkaline after the administration of these salts, even when they contain an excess of acid. We have only to eat ripe fruits, as strawberries or cherries, which contain tartrates or citrates, to observe this alkaline reaction manifest itself in the urine.

Benzoic acid undergoes a very remarkable transformation in the economy; we find it in the urine in the state of hippuric acid combined with bases. Dr. Ure was the first to draw attention to this fact, which has since been confirmed by M. Keller. Benzoic acid, then, combines itself in the economy with some azotized body arising from the metamorphosis of the tissues, and it is afterwards eliminated in the state of hippuric acid. This fact becomes of great importance in a physiological point of view, by demonstrating that certain non-azotized principles of our economy may intervene in a direct manner in the transformations which the azotized matters of the organism undergo.

The preparations of iron, lead, and copper, alcohol, ether, camphor, musk, the colouring matter of cochineal, litmus, alkanet, &c., are never found in the urine. The same may be said with regard to a great number of inorganic matters; many of them undergo an immediate decomposition within the digestive tube, which, by rendering them insoluble, prevents their absorption and passage into the blood.

SUBSTANCE OF A LECTURE,

By Sir B. BRODIE, Bart.

ON SOME DISEASES OF THE SHOULDER-JOINT, AND CONCLUSION OF REMARKS ON COUNTER-IRRITANTS.

GENTLEMEN,—In my last lecture, when speaking of diseases of the shoulder-joint, there was a peculiar consequence which I was unable to notice. I should have said, when speaking of scrofulous diseases of this joint, that it is often followed by dislocation, just as happens in the case of diseases of the knee or hip-joint.

When I was first assistant-surgeon, or, I think, when I was a student, I saw a boy brought in who had a dislocation of the shoulder. It was no common dislocation, for the head of the bone stuck out directly forward. The surgeon who attended the case supposed that it was the result of maltreatment by the practitioner who had previously been attending the patient. The boy died in the hospital, and an opportunity was afforded for examining the body. We found scrofulous disease of the bone, the head of which had been absorbed, and the glenoid cavity, in its anterior part, destroyed.

In another case a young lady had scrofulous disease of this joint, and I recommended a leather splint, made and applied in the way that such splints usually are—wetted, and adapted to the form of the part, and then dried, the arm being bound up to the side. The case went on well for a long time, but, as the lady afterwards went abroad, I was unable to trace it further.

There is a peculiar disease of the shoulder-joint, brought on by the wasting away of the deltoid muscle, the consequence of which is a paralytic affection of the arm. This is not properly a disease of the shoulder-joint, but, as it is very liable to be mistaken for it, I shall make it the subject of a few remarks. It is not uncommonly a consequence of dislocation, and I suppose that the circumflex nerve is torn by the head of the humerus, and thus the deltoid muscle is paralyzed; it is often the cause of great perplexity to surgeons. A gentleman whom I knew fell and dislocated his shoulder; he consulted a practitioner of eminence, about eighty miles from town, who reduced it very properly. Some time after this the gentleman lost the power of using his arm, and the shoulder was evidently getting smaller; he consulted another surgeon, who said it was an unfortunate case, as it was an unreduced dislocation of the shoulder, and that the time was gone by for reducing it. This brought much blame on the gentleman who had been first in attendance upon the patient. Not long afterwards, some other cause produced the death of the gentleman whose shoulder had been dislocated, and the surgeon who had first attended wished to examine the shoulder, which he did. The head of the bone was found in its place, showing that the dislocation had been properly reduced; but the deltoid muscle had wasted away, almost to nothing, and this, causing the appearance of hollowness under the head of the acromion, had induced the opinion that the dislocation had not been reduced.

I remember a lady, who, a fortnight after her confinement, had a strong pain in the shoulder-joint, extending from the coracoid process to the back of the scapula. The pain continued forty-eight hours, and then subsided, but when that was gone she had no power of raising her arm. The deltoid muscle was paralyzed, and I believe she never regained the use of her arm. Inflammation, as I think, of the circumflex nerve took place, which became so disorganized as to lose its influence.

Another disease connected with the shoulder-joint, and of frequent occurrence is very important to be understood. The patient comes with a great tumour in the region of this joint, not always of the same size, containing fluid. It will probably come out, on inquiry, that this tumour has been a long time forming, and has gained its present size slowly. As I said, it appears to contain fluid, and if you puncture it serum escapes, with lymph floating in it; at other times it is like

synovia. This tumour is the result of inflammation in one of the numerous bursæ about the shoulder-joint, and corresponds to the disease which occurs about the knee-joint from a similar cause. You can never tell by the appearance of the tumour in what exact bursæ the disease originated: in one case these bursæ may be situated beneath the muscles and tendons, and, when the tumour has become enlarged, it passes away to a spot where less opposition is offered, and quickly increases in size. Thus I have known a bursa between the psoas muscle and the bone become inflamed and swell; the fluid passes down the course of the tendon, and makes its way outward amongst the parts connected with the gluteis maximus, forming a very large tumour. So also you will sometimes find one of these bursæ about the shoulder-joint, enlarging till it makes its way under the scapula or under the edge of the trapezius muscle; it is therefore not uncommon to find this disease situated at some distance from the point where it had its origin. Suppose in one of these cases a tumour is formed by the fluid in a bursa between the latissimus dorsi and the inferior edge of the scapula: you then have the swelling in the place which it might have occupied had a bursa near the shoulder been the seat of disease. You must be very careful what you do with these bursæ near the shoulder-joint; for, if inflammation supervene upon an operation, it extends over a very large surface. In one such a case I punctured a bursa to make an opening by which the fluid might escape, and did not take the trouble to squeeze it out; I bound up the arm, serum continued to come away, and the case did well. When I was assistant-surgeon, there was a patient in this hospital in whom one of these bursæ had been opened, and inflammation had followed; I do not know whether he died or not, but I am sure that he was in very great danger. In another case which I saw, a surgeon ran a seton several inches in length through the swelling, and there left it; inflammation, attended with great constitutional disturbance, followed, and the patient died. In another case the patient died in consequence of the opening and rough handling of a bursa of this kind. This rough handling you must invariably avoid; but when the tumour is of large size, the necessity is even greater, and the greatest caution will be requisite in making an opening. I saw, in consultation with another surgeon, a large bursa near the hip-joint, under the edge of the gluteis maximus; the lining membrane was to a great extent inflamed; we agreed to puncture it. The patient was very ill, and an attack of rheumatic fever followed, which, I think, was brought on by the inflammation of the bursa. You may do good by merely opening the cyst, and allowing the fluid to run out, as it has a tendency to do; when this has been done, tie up the arm, and, if it is disposed to heal, let it do so, and, if it seems inclined to remain open, leave it to do so. Perhaps the cyst may gradually contract, granulate, and heal. I am, I may say, inclined in these cases to avoid operations; and I think you may often do much good by merely tying up the arm, so as to keep it perfectly quiet, and applying a blister over the tumour. I do not say that you will thus be sure of getting entirely rid of it, but, if this treatment be kept up for any length of time, it may be considerably reduced.

Having offered these observations upon diseases of the shoulder-joint, I shall proceed to bring to a conclusion the remarks which I commenced in a previous lecture in connection with the subject of local stimulants or counter-irritants. As I have already spoken of blisters and liniments, it only remains to consider the uses of setons, issues, and moxas in surgical practice. I need not tell you what a seton is, or how it is made. I may just say, with respect to issues, that the old way of making them was to divide the skin with a lancet or bistoury, and introduce peas, beans, or beads, or some other substance which would hinder the sore from healing, and serve to maintain suppuration. A more usual method now is to rub the surface of the skin with caustic potash or nitric acid till you bring on sloughing of the cellular or adipose membrane; after a few days the slough will come away, and the sore thus formed is kept open by artifical means, as by peas or beads, which are put in daily. The introduction of these is often very inconvenient, and another mode of keeping the issue open is by some surgeons adopted, and which in local disease is preferable to any other: the sore is dressed every day with simple cerate, and once a week is touched with caustic potash. Setons and issues have been recommended, both in medical and surgical practice, to accomplish two distinct purposes—sometimes with the view of relieving the blood of some supposed poison, and thus of preventing the occurrence of scrofulous disease; at other times, with a view to act on merely some local affection. With respect to the general effect on the constitution, I cannot find that any very beneficial results have followed their use. Suppose a man comes to the hospital with scrofulous disease of the ankle or knee, and in other respects he is very well; this ankle or knee is amputated, and the stump heals, but the man gets disease of the lungs, and dies—the limb, which had acted as a drain on the system, being removed. I cannot say that, in the case of a person so affected, I think in these cases issues or setons are of much benefit. I am aware that many surgeons think that they act as a drain for any noxious matter existing in the system, but according to my experience the seton or issue never answers a purpose similar to that which we find accomplished by the scrofulous ankle or knee; in fact, the discharge from an issue is not of scrofulous matter at all; a person may have a large suppurating wound, but it does not act as the scrofulous knee, and if it swells, and weakens the system, it makes him actually worse. With respect to the operation of setons and issues in local disease, I have not the slightest doubt of their beneficial results, nevertheless the cases in which they are serviceable are not numerous; in chronic determination of blood to the head, there can be no doubt of their beneficial effect when inserted in the back of the neck. Medical men are in the habit of employing issues in cases of diseased kidney, placing one in the loins. In certain of these cases—not the tubercular or Bright's disease, but simple chronic inflammation—I have known an almost immediate effect follow their use. Even when the power of voiding urine has been completely lost, the application of a seton has restored it. I knew a gentleman, having disease of the kidney of the chronic kind, who, with his urine, voided large quantities of lymph, attended with pain. This state of things had existed for a long time. I made a large issue in the loins with caustic potash, keeping it open with peas, and from the time when the discharge might be considered established, no more lymph was voided with the urine. He ultimately died of diseased kidney, and of stone in the bladder, but never had any secretion of lymph. It is chiefly, however, in disease of joints that the necessity of the use of these stimulants is met with in surgical practice; and, from all the observations I have made, I can say they are then of great value. Of the two kinds I prefer the caustic issue. There are two periods at which I think the effect of the caustic is most beneficial: the first, when it is first applied; the second, when the slough separates and the discharge commences. But in what cases of diseased joints are these applications most indicated? If there be ulceration of the cartilage, independently of scrofulous disease of bone; where there is ulceration of the cartilage in consequence of inflammation of the synovial membrane; and where there is primary ulceration of the cartilage, depending, as I believe, in general, on rheumatic inflammation of the harder texture. In these cases I think they are very useful applications. How these kinds of disease are to be distinguished in practice I informed you in the last lecture: when the cartilage ulcerates in connection with scrofulous disease there is very little pain, but in those cases where the bone retains its natural texture, and ulceration is a primary disease, or comes on in consequence of inflammation in the synovial membrane, there the pain is very great in the joint itself, with painful starting in the limb. In such cases as these the issue is useful—not that I always use the caustic, for it is not always required; mercury and sarsaparilla will be sufficient, and, as the caustic is a painful remedy, it is better not to use it when it can be dispensed with. In some cases of diseased spine the caustic is very useful—those, for instance, corresponding to primary ulceration of cartilage, where the bones have their natural texture; and where, as I believe, caries begins, not in the bones themselves, but in the intervertebral cartilage: these I believe also to be chronic and rheumatic affection of the tender textures of the spine. Though this case is difficult sometimes to ascertain in the living person, there are three ways in which it may be done—first, by observing whether the case presents the marks of scrofulous disease; second, by the age of the patient, as it occurs principally in the old, while scrofulous disease is seen mostly in the young; and third, by the degree of pain, which is very great, while in scrofulous disease there is often none at all.

It used to be the custom to make setons and issues in a great number of cases, where now they are thought unnecessary, if not injurious. When a patient came into the hospital, with disease of the hip or knee, I remember, when young, it was said—"This is a hip case, or this is a white swelling; let a blister be applied, or an issue made." If the patient came with scrofulous caries of the spine, or angular curvature, the immediate exclamation was—"This is one of Pott's cases—make an issue;" and, I believe, in nine cases out of ten, they did more harm than good. After a large experience in cases of scrofulous disease of the joints, I venture to say, that whatever the case may be, they do harm instead of good, because the patient is weak before the sore is made; and its effect is to make him still weaker, by the constant drain on the system which their discharge promotes. If an issue be made, it requires to be rubbed with caustic potash every now and then, to keep it open; the sore is thus a means of constant distress to the patient, especially if it be a child, who the whole day anticipates with dread the approach of the time of dressing, which tends very much to impair the general health. Those other occasions for the use of these counter-irritants, as they occur chiefly in medical practice, I need not here enumerate.

Another method of producing counter-irritation I will just mention: you make a slough by means of the actual cautery, or the application of a piece of red-hot iron. I have tried this a long time in order to satisfy myself of its value. The iron is applied just as the red heat is going off; it burns the skin, and, according as it is kept in contact a longer or shorter time, it makes a thick or thin slough. When the slough comes away you may keep it open, make it an issue, or let it heal, and apply it again elsewhere. The caustic has this advantage, that it terrifies the patient less than the cautery; Englishmen have a great dislike to such a remedy. Sir A. Cooper used to call it a rude piece of farriery; and, perhaps, he was not far wrong.

Another way of making counter-irritation is by burning cotton on the skin for a certain time: this is called a *moxa*. Sometimes the material is dipped in a solution of nitrate of potash; the surgeon blows on it by means of a blowpipe, till, heating the part more and more, it destroys the organization, and makes a slough more gradually than the hot iron, and not so thick, indeed scarcely thick enough for an issue. It has been the custom to make with the moxa, first one slough and then another, and so on. I am not aware that this has any advantage over the other methods of counter-irritation; and this seems to be the general opinion in England, though on the Continent it is much in use. There is another way of applying moxas which has

some advantages over the one just described. I have generally employed what is called German tinder, which is sold in the shops for lighting cigars. I first cut it into small pieces, and then, tying a portion tightly with a bit of thread, and laying it on the part where the issue is intended to be made, holding the tinder all the time with a pair of forceps, I light it at the top and let it burn, which it does very slowly, and blowing it by means of the blowpipe till the patient complains, when you remove it. In this manner blister after blister may be made. Of course a slough may be made as well with the moxa, but I am supposing that you do not apply the heat a sufficient time to cause sloughing, but only a blister, which will soon heal. This is a method in some respects preferable in cases of diseased joints and of inflammation of the synovial membrane, especially as it is less painful and troublesome than the moxa. They may be kept open like any other sore, by rubbing with potassa fusa, repeated nearly every day.

With these observations my lectures for this season conclude; and, with my best wishes for your success in your studies, I take my leave of you for a time.

ORIGINAL CONTRIBUTIONS.

OBSERVATIONS ON URINARY CALCULI, AND ON LITHOTOMY.

By F. H. BRETT, Esq., M.D., F.R.C.S.,
Member of the Royal Asiatic Society; late Surgeon to the Governor-General of India's Body Guard, and Government Ophthalmic Hospital, Calcutta.

Introductory remarks; statistics of lithotomy; remarks on the varieties of urinary calculi; on the causes of urinary calculi; on the great frequency of the disease in India; size and figures of calculi; symptoms of calculi; on the operation of sounding; on the extraction of minute calculi. Case—mode of operating for lithotomy; introduction of the forceps; bilateral section; treatment of the fragments; method of crushing the stone when large.

AFTER-TREATMENT; OBSERVATIONS; CASE OF ENCYSTED CALCULUS; CASE OF "OPÉRATION A DEUX TEMPS"; CURIOUSLY FORMED CALCULUS; TETANUS; PERITONITIS.

INTRODUCTORY REMARKS.

The statistics of lithotomy exhibit instances of the great success of this operation in experienced hands; they also adduce a fearful record of average failures. Did, we follow the first it would seldom be requisite to resort to the modern operation of lithotomy. On the other hand, we cannot reflect on the average fatality in some hospitals, and under some lithotomists, without a *blush* and a *sigh*. I trust I may be permitted to quote the result of 108 operations. The proportion of fatal cases in the first thirty-eight is very considerable, being seven out of that number. The last seventy cases afford a far greater subject for congratulation, having all recovered. The experienced surgeon speaks of the operation of lithotomy, especially in children, as one which *ought not to be* dangerous. We have now the power of preventing the pain, the knowledge of the appalling ceremony, the SHOCK! We can, in fact, make the operation itself a dream of pleasure. In the child we have not even the *dread by anticipation*.

URINARY CALCULI.

It is only when deposits originally formed in the kidneys have passed into the bladder that they become the subject of surgical attention. It will be seen how little the varieties of calculi in India differ from those in Europe. They are exceedingly various in their composition. Some of them, the uric acid for instance, and the phosphates, are the natural constituents of the urinary secretion; whilst others are the results of new combinations of its elements, as the oxalate of lime, and the cystic oxide. The most prevalent dispositions of the system to these deposits have been termed the lithic or uric, and the phosphatic diatheses. (Prout.)

The "lithic acid diathesis," by far the most common, is characterized by the deposition of red particles (whether amorphous or crystalline), and lithic concretions of a whitish brown, or mahogany colour, in laminæ or strata soluble by solution of the alkalis. If a small portion of nitric acid be added, and the whole evaporated to dryness, it assumes a beautiful carmine colour.

Statistical Record of the Lateral Operation of Lithotomy in India, by F. H. Brett.

Number	Date of Operation.	Name and Caste.	Age. Y.	Age. M.	Duration of Disease. Y.	Duration of Disease. M.	Result and Remarks.
1	Oct., 1827	A Moosulman Child	8	0	3	0	Successful.
2	Oct., 1828	Makhun Brahmin Child ..	4	0	3	0	Ditto.
3	March, 1829	Kissoonaee Hindoo	35	0	30	0	Died a month after the operation, constitution having been much impaired from thirty years of acute suffering.
4	April, 1829	Hindoo (Brahmin)	17	0	10	0	Tetanus, which on the 11th day proved fatal.
5	21 April, 1829	Hindoo Child	3	6	1	0	Tetanus, which proved fatal on the 2nd day.
6	Oct., 1829	A Hindoo Child	7	0	2	0	Successful.
7	17 Feb., 1830	D'hunnea Hindoo	5	0	2	0	Ditto.
8	21 April, 1831	Peetum Hindoo	6	0	5	0	Ditto.
9	3 Nov., 1831	Khoondun Hindoo	7	0	1	0	Ditto.
10	22 Nov., 1831	Jijeona Moosulman	6	0	2	0	Ditto.
11	9 Dec., 1831	Bhuyjooa Hindoo	8	0	[illegible]	0	Ditto.
12	21 Dec., 1831	Zoorra Hindoo	25	0	8	0	Ditto.
13	28 Jan., 1832	Gholamie Moosulman ..	4	0	1	0	Ditto.
14	28 Jan., 1832	Munsa Brahmin	3	9	2	0	Died of peritonitis on the second day.
15	14 April, 1832	Motie Chungun Brahmin ..	60	0	11	0	Successful.
16	16 May, 1832	Newla Hindoo	12	0	4	0	Ditto.
17	2 July, 1832	Bhumma Hindoo	18	0	6	0	Ditto.
18	11 July, 1832	Rubmaun Brahmin	30	0	1	0	Ditto.
19	11 Aug., 1832	Nunda Hindoo	7	6	6	0	Ditto.
20	13 Aug., 1832	Juwahir Rajpoot	14	0	7	0	Ditto.
21	13 Aug., 1832	Lutlaee Hindoo	23	0	10	0	Ditto.
22	23 Aug., 1832	Cho reva Hindoo	9	0	4	0	Ditto.
23	Sept., 1832	Poosa Tēlie	60	0	8	0	Died of hemorrhage from irregular distribution of the internal pudic artery, which was very profuse.
24	Sept., 1832	Romzan Dhanook	26	0	5	0	Successful.
25	Oct., 1832	Kurreea Gurreleea	60	0	0	0	Ditto.
26	6 Nov., 1834	Nulloo Munneeyar	26	0	0	0	Ditto.
27	6 Nov., 1832	Sewgholam Brahmin ..	16	0	0	0	Ditto.
28	7 Nov., 1832	Gungapershaud Brahmin ..	7	0	0	0	Ditto.
29	8 Nov., 1832	Alim Khan Pathan	60	0	0	0	Ditto.
30	9 Nov., 1832	Guyan Rajpoot	5	0	0	0	Ditto.
31	4 Dec., 1832	Séwa Dhanook	60	0	0	0	Died of peritonitis on the third day.
32	7 Dec., 1832	Duela Buthaee	26	0	0	0	Successful.
33	8 Dec., 1832	Subha Kissan	5	0	0	0	Ditto.
34	10 Dec., 1832	Dhunna Moosulman ..	15	0	0	0	Ditto.
35	26 Dec., 1832	Bheckarrie Chumar	6	0	0	0	Ditto.
36	Dec., 1832	Hindoo Rajpoot	4	0	0	0	Ditto.
37	March, 1831	Chudda Baghwan	6	0	2	0	Ditto.
38	March, 1834	Rēamdal Jat'h	17	0	5	0	Died of peritonitis on the fourth day.
39	26 March, 1834	Séwa Aheer	9	0	4	0	Successful.
40	1 April, 1834	Tulphie Lodhie	60	0	5	0	Ditto.
41	11 April, 1834	Cheda Baghban	11	0	3	0	Ditto.
42	25 May, 1834	Kulloo Hindoo	5	0	3	0	Ditto.
43	26 May, 1834	Desraj Rajpoot	19	0	7	0	Ditto.
44	Aug., 1834	Choonchoo ditto	30	0	3	0	Ditto.
45	21 Nov., 1834	Sooklal ditto	7	0	2	0	Ditto.
46	16 Nov., 1834	Heera Bunneea	8	0	3	0	Ditto.
47	16 Nov., 1834	Elaee Bukhs Moosulman ..	8	0	7	0	Ditto.
48	16 Nov., 1834	Goolooa Mehter	0	0	0	0	Ditto.
49	16 Nov., 1834	Jhindoo Durgie	7	0	1	6	Ditto.
50	9 Dec., 1834	A Chummar	28	0	10	0	Ditto.
51	10 Dec., 1834	A Moosulman Boy	11	0	1	0	Ditto.
52	10 Dec., 1834	A ditto Fukeer	60	0	12	0	Ditto.
53	18 Dec., 1834	Soojarut, son of Emam Bux ..	7	0	3	0	Ditto. These cases have occurred chiefly at Cawnpore, Meerut, Shahjehaupore, and Mooradabad.
54	31 Dec., 1834	Ramjee Brahmun	12	0	5	0	Ditto.
55	5 Jan., 1835	A Hindoo	10	0	3	0	Ditto.
56	21 Jan., 1835	Rumzuan Ali Shaikh	53	0	8	0	Ditto.
57	21 Jan., 1835	Khoondooa Chummarr ..	9	0	3	0	Ditto.
58	24 Jan., 1835	Ram Ruttun Brahmun ..	9	0	5	0	Ditto.
59	3 Feb., 1835	Séwa Aheer	60	0	5	0	Ditto.
60	4 Feb., 1835	Guorie Shunkur Brahmun ..	8	0	4	0	Ditto.
61	8 Feb., 1835	A Bhesties Child Moosulm ..	7	0	4	0	Ditto.
62	28 Feb., 1835	Heera Loll Bunneea	10	0	3	0	Ditto.
63	28 Feb., 1835	Mungoo Moosulman	5	0	2	6	Ditto.
64	5 Nov., 1835	Oomraoo Brahmun	7	6	5	0	Ditto.
65	7 Nov., 1835	A Brahmun little Girl ..	7	0	6	0	Ditto.
66	7 Nov., 1835	Bhugwan Aheer	14	0	13	0	Ditto.
67	8 Nov., 1835	A Moosulman Child	12	0	3	0	Ditto.
68	Dec., 1835	A Brahmun Child	8	0	4	0	Ditto.
69	Feb., 1836	James Diggs, European ..	4	0	2	0	Ditto.
70	1 Feb. 1836	A Mehters Child	10	0	4	0	Ditto.
71	March, 1836	A Brahmun Child at the Nuwab of Bandah's ..	7	0	4	0	Ditto.
72	23 April, 1836	A Chummar's Child	9	0	4	0	Ditto.
73	19 Jan., 1837	Data Ram Doobé	35	0	4	0	Ditto. At the Central Hospital, Calcutta.
74	21 Jan., 1837	Ram Churn Hullwaee ..	6	0	1	0	Ditto.
75	2 Feb., 1837	Nokool Pousy	60	0	3	0	Ditto.
76	1 April, 1837	Toorab Moosulman	25	0	5	0	Ditto.
77	14 April, 1837	Soorja Munuie	60	0	0	0	Ditto.
78	Sept., 1837	A Brahmun Child	3	0	2	0	Ditto.
79	17 Feb., 1838	Edward, son of Troop-serjeant-major Boles, H.M. 16th Lancers	4	0	2	0	Ditto.
80	20 Feb., 1838	Elaee Bux Moosulman ..	30	0	6	0	Ditto.
81	20 Feb., 1838	Oodh Saeea Korie	14	0	4	0	Ditto.
82	20 Feb., 1838	Janee Fukeer Moosulman ..	25	0	3	0	Ditto.
83	20 Feb., 1838	Noor Bukhs Dhobee	6	0	2	0	Ditto. At the city of Delhi, during the Rt. Honble. the Governor-General's halt there, on the tour of the Upper Provinces in 1838.
84	22 Feb., 1838	Jae Ram Kut'hurie	4	0	2	0	Ditto.
85	22 Feb., 1838	Son of a Vukeel Moosulman ..	4	0	3	0	Ditto.
86	22 Feb., 1838	Hindoo, Mehter caste ..	7	0	3	0	Ditto.
87	22 Feb., 1838	A Child, Korie caste	4	0	1	6	Ditto.
88	Mar., 1838	Dhunnaee Brahmun, a native of the Hill Rajah of Nahun's district	60	0	10	0	Ditto.

			Yrs.	Yrs.			
89	30 Oct., 1839	A Brahmun	20	5	Successful.	Munnoomajera.	
90	17 Nov., 1838	Mohundy Cashmerian Boy	12	4	Ditto.	Loodhiana.	
91	22 Dec., 1839	A Shroff, Khutrie ..	27	10	Ditto.	Camp Lahore.	Attached to the Maharajah Runjeet Sing.
92	23 Dec., 1839	Runjeet Sing Sikh ..	25	4	Ditto.	„ Lahore.	
93	3 Feb., 1839	Hussunoo Moosulman ..	5	2	Ditto.	„ Hansi.	
94	13 Feb., 1839	Abdool Ruhman, do. ..	6	3	Ditto.	„ Delhi.	During the Gov.-General's halt in 1839.
95	14 Feb., 1839	Buha Ooddeen, do. ..	6	3	Ditto.	„ Delhi.	
96	18 Feb., 1839	Peer Bukhs*, do. ..	17	11	Ditto.	„ Delhi.	
97	19 Feb., 1839	Uzeez Bukhs, do. ..	3½	2	Ditto.	„ Delhi.	
98	19 Feb., 1839	Ulla Rukhee, do. ..	3½	2	Ditto.	„ Delhi.	
99	20 Feb., 1839	Imteyaz Hoosun, do. ..					
	1839	Son of the Hukeemto, the King of Delhi	6	2	Ditto.	„ Delhi.	
100	23 „ 1839	Keout Juth	70	4	Ditto.	„ Soomput.	
101	1 March, 1839	Hurdé Ram Jath ..	45	5	Ditto.	„ Soomput.	
102	9 March, 1839	Puthan Jath	40	3	Ditto.	„ Delhi.	
103	18 March, 1839	Nunna Dhobee	7	3	Ditto.	„ Delhi.	
104	18 Dec., 1839	A Kassaee's son	6	2	Ditto.	„ Agra.	
105	10 Jan., 1840	A do. do.	7	2½	Ditto.	„ Gwalior.	
106	10 Feb., 1840	Nephew of Shaik Furzund Ali Rissaldar	4	1½	Ditto.	„ Near Allahabad.	
107	24 June, 1840	Debchund	12	6	Ditto.	Fort William, Calcutta.	
108	10 July, 1840	Purbuttie Churn Sircar's son	4	2	Ditto.	Calcutta.	

* Fistula in perineo, and a large calculus impacted in urethra beyond it, and opposite to the scrotum. Had been operated on formerly by a native, which produced the fistula.

Abstract.

	Moosulmauns.	Hindoos.	Europeans.	Cured.	Died.	Total.
Number under Puberty	15	53	2	68	2	70
Number of Adults	8	30	0	33	5	38
Total	23	83	2	101	7	108

In the "phosphatic diathesis" the phosphate of ammonia and magnesia predominates. It is the result of an impaired constitution, rather than a primary affection. It is sometimes termed the triple phosphate, has a white chalky appearance, and is soluble in acids. It generally forms the exterior of calculi, whilst the interior is ordinarily composed of the lithic acid, or lithate of ammonia. The triple phosphate is covered with minute shining crystals; it is easily pulverized—but occasionally hard, compact, and crystallized in texture.

The "lithate of ammonia" is likewise by no means uncommon. It is of a clay colour, composed of concentric layers, and confined principally to children. It is soluble and alkalis and alkaline carbonates, and emits the odour of ammonia when treated with caustic potass.

The vitrifying calculus is the next most ordinary form of the complaint, so denominated from its running into vitreous globules under the blowpipe. Its composition consists of phosphate of lime, in combination with phosphate of ammonia and magnesia. It much resembles the triple phosphate in colour, and leaves a white dust on the fingers. It is not usually laminated, but is so sometimes, the interstices being studded with sparkling crystals of the triple phosphate. The unlaminated species is often large, spongy, and moulded to the contracted cavity of the bladder. It is easily soluble in acids, and partially in dilute muriatic acid. If the solution of oxalate of ammonia be added, a precipitate of the lime takes place, and the magnesia may be separated by the addition of pure ammonia.

Next in frequency probably is the oxalate of lime, or mulberry calculus. It is more generally found in children than in adults, and is of great weight in proportion to its size, and has usually a number of irregular prominences on its surface, generally of a dark brown or black colour.

All these varieties are subject to alternation, especially in adults, their successive laminæ being manifest on a section of the stone; and there may be sometimes, though rarely, an admixture of these ingredients. The above enumerated descriptions constitute the vast majority of urinary calculi, but there are a few other rare varieties which it is merely necessary to enumerate.

6. The bone earth, or phosphate of lime calculus.
7. The cystic oxide.
8. The carbonate of lime.
9. The xanthic oxide. (Dr. Marcet.)
10. The fibrinous calculus.
11. The prostate calculus.

I have witnessed a few specimens of the cystic oxide calculus, of a yellowish white colour, confusedly crystallized throughout their substance. One of these had a beautiful golden metallic lustre.

The causes of these numerous alternations are referable to the nature of the ingesta, to the vicissitudes of temperature, to affections of the nervous system, to hysteria, and occasionally to injuries in the neighbourhood of the kidney producing proximately a deranged condition of the assimilating functions of chemification and chylification, and altering the qualities of the blood.

A hereditary predisposition is frequently manifest in the urinary and neighbouring organs; such tendency is often curiously modified in different individuals of the same family. A parent, for instance, shall have laboured under disease of the kidney or bladder; one of the sons has been cut for the stone, and another has suffered from diseases of the rectum; the daughters have suffered from uterine affections. Indeed it has been frequently remarked that, when the males of a family have been subject to urinary affections, the females have been more or less liable to disease of the generative system. Persons also suffer from different forms of the disease at different periods of life, and this again alternates with diabetes. Lastly, where acids are formed in excess in the kidneys, the urine is commonly small in quantity and high coloured; whereas in neutral or alkaline deposits the urine is pale and increased in quantity, and the diseases are those of irritation and debility. (Prout.)

Calculous affections frequently occur in gouty subjects.

The above circumstances teach us the deep-seated and constitutional nature of urinary diseases generally, their intimate connection with each other, and the important information respecting the nature of any particular disease to be derived from the nature of the urine.

The free use of acids and acescent drinks is considered to be often a cause of that derangement of the digestive organs leading to calculous deposits. The errors in diet of the natives of India, especially in children, who are permitted to devour various kinds of unwholesome acid sweetmeats, and particularly coarse unleavened bread at all hours of the day, are notorious. A late intelligent surgeon (Burnard) attributed to the latter article of food the main cause of the disease in India in the same manner as it has been referred in Norfolk to the coarse dumplings in that county, where the complaint is also so common. The bodies of natives of India are generally exposed to the vicissitudes of heat and cold in a variable climate, especially in the western provinces (where the disease is far more prevalent than in Bengal). The vicarious office of the kidneys is consequently often called forth. In the moister and more equable climate of Bengal, and where the ordinary diet consists of rice and pulse, instead of the unleavened bread or "auta-cake," there is a marked diminution of the sufferers from this complaint.

The intelligent mother of the European child (No. 69) mentioned that the symptoms of gravel which terminated in stone, ensued after a fit of indigestion produced by his having eaten guavas.

One cause of the great frequency of the disease in children may be owing to the comparative smallness of the urethra, so that a nucleus which would be avoided with facility in the adult, would be detained in the bladder in a young subject.

An obvious explanation on the same principle suggests itself for the comparative rareness of the disease in the female.

Stricture of the urethra and enlargement of the central lobe of the prostate gland are a frequent exciting cause of the complaint, especially in adults and old subjects predisposed to the diathesis, owing, partly, to the mechanical obstacle which they present to free evacuation of the contents of the bladder, and partly to the local irritation of these diseases, associated with that general derangement of the constitution which attends the severe forms of these affections. Calculi are sometimes formed around various extraneous bodies which have accidently found their way into the bladder, as needles or pieces of bougie, &c. Sir A. Cooper relates an instance of a piece of slate-pencil having formed the nucleus of a calculus of the triple phosphate, which is the kind of calculus which forms under great irritation. I met with an instance where a bullet formed the nucleus of a calculus, in the case of Surgeon Pilkington, H.M. 21st Fusiliers, after having passed through the ischiatic notch, and which he related to me whilst witnessing the operation of lithotomy in Fort William.

The great frequency of the disease in India is now well established. The late Mr. Burnard cut about forty patients for stone at the city of Benares. I have had occasion to operate on four patients in one day, all residing in the same village or its immediate neighbourhood, and 108 cases have occurred to myself during my abode in India.

Of the calculi which have been analysed in India, three-fourths have contained a large proportion of lithic acid. The nuclei have mostly consisted of this substance, and lithate of ammonia was also generally detected. Coatings of ammoniaco-magnesian phosphate have been rather common. Phosphate of lime in combination with the triple phosphate (fusible) has been found, as well as oxalate of lime and cystic oxide, exhibiting, therefore, a similar proportion of these varieties to what has been ascertained in Europe.

It would appear that lithic acid generally, in combination with ammonia, constitutes the basis of almost all the calculi, and that successive layers continue to be deposited of the same substance, until that high degree of local and constitutional irritation is produced which changes the diathesis and favours the production of the phosphates.

The lithate of ammonia deposition takes place during the intermediate stage. It may be urged, that in the case of all foreign bodies which have occasionally found an entrance into the bladder the phosphates have been deposited upon them. How is this difference accounted for, since the irritation, one would presume, is equal from a nucleus as from a foreign body? Perhaps the irritation is more sudden in the latter, whereas the constitution is more prepared in the former, and, moreover, has already the lithic acid diathesis pervading it in a high degree, which could not be so easily and immediately changed. The peculiar state of the assimilating functions is also to be taken into account.

Opinion of Magendie.—The theory of Magendie and others, that the lithic acid diathesis is more likely to be induced by animal food and such substances as contain a considerable quantity of azote, is not borne out by these cases, for with a very few exceptions these patients seldom or never partook of animal food. None of the Hindoos, and the few Mussulmauns but seldom. Yet, on analysis, almost all specimens from Hindoos contained lithic acid and lithate of ammonia. Their diet, with scarcely any exception, has been vegetable and farinaceous. Not but that certain articles of their food are to a certain degree azotified: the gluten of the wheat, the dâl (pulse), and especially the dhaee (sweet curds); but this does not invalidate the fact of their diet being by no means of a highly azotic kind. Neither is there any foundation for attributing the supposed rarity of calculi in hot climates to the vegetable food, to which the inhabitants are habituated. The frequency has already been proved, notwithstanding their vegetable diet.

Size and Figure of Calculi.—Calculi are liable to great variety in their size and figure. The largest I have had occasion to remove weighed about four ounces. Instances of very large ones are recorded, even to the extent of forty-four ounces; their extraction has generally been attended with fatal results.

Calculi are usually spherical, oval, or flat. Their number also varies. I have sometimes removed four from the bladder of the same individual. Their surfaces are always smooth from attrition. I once extracted no less than 221 calculi of small size from the interior of the prepuce, in a case of phymosis with complete closure; the calculi were lodged like a parcel of pebbles in a bag, between the glans and the prepuce.

Calculi are occasionally encysted, though fornately such a circumstance is exceedingly rare. An interesting case occurred to myself, which will be described elsewhere.

The symptoms and means of correcting the different diatheses, in order to prevent the formation of calculus, or its recurrence after an operation, is the next important point for consideration.

The lithic diathesis exhibited in the amorphous sediments is excited in dyspeptic individuals from simple errors in diet, from unusual and unnatural exercise, from cold and damp applied to the feet, and from various and debilitating causes. The deposits are of a yellow-red or pink colour, the lithic acid being combined with ammonia, and sometimes with phosphate of soda in the former—the second consisting essentially of the lithate of ammonia, or lithate of soda, tinged with the colouring matter of the urine, the last of lithate of ammonia without the yellow tint derived from the colouring matter. The crystalline sediments are nearly pure lithic acid. The symptoms attending this diathesis are, more or less, pain or uneasiness in the region of the kidney, with irritation and heat about the urethra and neck of the bladder, and frequent micturition. Children, especially the offspring of gouty and dyspeptic parents, are exceedingly liable to this affection. It frequently occurs in sedentary and luxurious individuals on the decline of life, especially in old Indians who have suffered from hepatic affections and led irregular lives. Organic disease of the right kidney is no uncommon result. European residents in India often induce a fit of the gravel by excess or irregularity, whether as to the quantity, quality, or time of receiving the ingesta. Champagne will produce it in some, claret in others, and beer or other indulgences in others. The remedial indications will be best fulfilled by attention to the primæ viæ, by the exhibition of alteratives, laxatives, tonics, and antacids of soda and potass, and in debilitated subjects by the carbonate of ammonia. These alkaline carbonates are best administered in the form of effervescing draughts with an excess of the alkali. Acescent drinks should be avoided, and exercise enjoined. Diuretics and demulcent drinks will co-operate in carrying off the deposit, and alleviating pain. Turpentine and squills are often recommended, and sometimes colchicum. Hard waters should be particularly avoided. A healthy action of the cutaneous surface should be favoured by the employment of the warm bath. In severe cases anodynes of hyoscyamus and opium should be employed.

The phosphatic diathesis is denoted by the pale colour and usual increase of the urine. It has a great tendency, from slight causes, to deposit the lithic amorphous sediment, intermixed with the phosphates. After standing for a few hours, it is covered with an iridescent pellicle, consisting principally of the triple phosphate of magnesia and ammonia. In warm weather it becomes putrid, assumes a yellowish opaque appearance, and frequently deposits large spicular crystals of the triple phosphate, of a perfectly white shining appearance. The amorphous sediments of the phosphate sometimes contain an intermixture of the phosphate of lime, which is produced from the mucus of the inflamed internal coat of the bladder. The irritability of the system must be allayed, and in severe cases opium will be requisite to allay irritation. When these symptoms have subsided, the opium and hyoscyamus should be combined with the mineral acids, quinine, uva ursi, and other tonics. Hydro-chloric acid is of particular service. The use of oranges and lemonade should be freely allowed. The saline aperients should be preferred, plasters to the loins are of advantage, and great attention should be paid to alleviate mental anxiety.

The oxalate of lime diathesis is extremely rare in the form of amorphous or crystalline sediment. It is not unfrequently associated with gout, and, as lithic acid frequently is, with a tendency to cutaneous affections. Professor Brand and Drs. Marcet and Prout consider this variety as generally taking place in individuals of sound constitution, and rarely occurring a second time. Its treatment is similar to that adapted for the lithic acid diathesis, with which it alternates. This form of disorder may be ascertained by the existence of pain in the kidneys, and other symptoms of gravel, without any appearance of gravel itself, by the urine being of a yellow tint and acid, with derangement of stomach and an inflammatory diathesis, either constitutional or local, especially if this be associated with suppressed gout, or cutaneous disease. Its treatment is similar to that of the lithic acid deposit, with which it alternates. The muriatic acid may also be given with advantage to change the diathesis to that of lithic acid.

The other varieties of urinary calculi are very seldom exhibited in the form of amorphous sediments; where they do occur they are treated on precisely similar principles, administering acids where the urine is alkaline, and alkaline carbonates where it is acid.

It is very important to test the various changes which the urine undergoes during the treatment, in order to enable us to regulate the doses of alkaline or acid remedies.

Renal calculi descending down the ureters are usually attended by violent pain in the course of these tubes, nausea and colicky pains, retraction of the testicle, and numbness and pain in the thighs. Instances have been known of their remaining in the pelvis of the kidney, occasioning inflammation and suppuration of that organ; but this circumstance is rare: they may likewise lodge in the ureters and obstruct the passage of urine. Venesection, cupping, and active doses of calomel and antimony should be the remedies employed, with the anodynes of hyoscyamus and opium already mentioned. On the subsidence of the paroxysm the patient should have recourse to the warm bath, warm fomentations, and to the remedies first indicated for the diathesis.

Calculus of the bladder may be recognised by the very acute symptoms which generally accompany it, chiefly during the evacuation of urine, which is very frequently voided, owing to the great irritation caused by the pressure of such a foreign body in contact with the mucous lining of the bladder. The pain is referred to those parts which derive their nerves from the same source as the bladder, and to the bladder itself. The pain extends along the course of the urethra to the extremity of the penis, and there is often pain in the thighs and loins. There is great variety in the degree of pain, depending upon the irritability of the patient's constitution, on the inequalities of the surface of the stone itself, its position in the bladder, and its size. Sometimes old subjects scarcely experience any pain at all; in others there are considerable intervals of ease. The paroxysms of pain in some are most excruciating. The pain is most severe on the whole of the urine having been voided, when the calculus falls in immediate contact with the neck of the bladder. There is frequently a discharge of mucus of a ropy consistence, which is sometimes accompanied with blood; especially after exercise causing the stone to be agitated within the bladder, so that it is impossible for the patient to take any exercise which is attended with jolting, either in a carriage or on horseback. Another very remarkable symptom is, that the patient is constantly rubbing and pulling the glans, with the view probably of deadening the sensation of pain which is referred to that part, the consequence of which is that the prepuce is frequently much elongated, and the whole organ often enlarged. The sufferer frequently forces his fingers up the rectum, and actually tears it during his agony. There is often procidentia of the rectum. Many natives of Hindoostan sit down on the ground and press their heels with great force against the perineum during the paroxysm, and remain in that position. Others roll themselves on the ground, dance round in a circle, or lean on their elbows or the top of their head, with the pelvis raised, in order to cause the stone to fall towards the fundus of the bladder. The flow of urine is often emitted in a full stream, and stops suddenly before the whole is evacuated, owing to the calculus falling on the cervix vesicæ: it again flows on change of position. There is often a great deal of straining and bearing down. Sympathetic pains extend to the testicle, to the back of the thigh, and to the hollow of one or both feet, with a burning sensation at the soles of the feet.

Sounding.—The symptoms are in many respects so pathognomonic that there can seldom be any difficulty in the diagnosis, nevertheless there are instances where some of these marked symptoms are not manifest, where the calculus is smooth, perhaps encysted, and the idiosyncrasy of the individual not irritable; it therefore becomes, in such instances, requisite to introduce a metallic instrument, which may strike the calculus, and communicate to the touch and to the ear a sound which immediately detects the existence of a foreign body. Again, there are instances of irritability in children from gravel, which simulate the stone, and which subside on the exhibition of mercurial purgatives, followed by a few doses of rhubarb and magnesia. But the operation of "sounding" should only be resorted to on these dubious occasions; for it is extremely painful in the irritable state attending calculus, and only aggravates the sufferings and excites the alarm of the patient; circumstances which are most unfavourable, previous to the patient undergoing the necessary operation for the radical cure of the disease, who requires to be soothed both mentally and bodily, whereby he is in a much better state of preparation to undergo so serious an operation. Cases are on record where patients have died solely from the irritation and inflammation excited by sounding, and there are many more not on record. In ordinary cases, the introduction of all instruments should be reserved until the moment of operation, when every prudent surgeon must then distinctly ascertain the presence of the stone, however clear the symptoms may have been; for operations have unfortunately been undertaken where no stone has been found. It is to be feared that this has arisen from the rashness and precipitancy of some surgeons desirous of operating. The instrument should have a curvature of the diameter of a smaller circle than

that ordinarily given to sounds; it ought to be large and smooth. It should be a quarter of a circle whose diameter is three inches. Where there is fluid in the bladder the calculus will be found at the lower part of the viscus, which will vary according to the posture of the patient. He should be first sounded in the horizontal position, reclining on his back. The instrument should be introduced completely, then partially withdrawn, the handle raised, directed laterally, and moved in various directions in search of the stone, which may be so small as to elude the point of the instrument. The projection of the inferior part of the prostate sometimes forms an obstacle by raising the point of the sound, the stone being lodged behind it, and escaping detection. The pelvis may then be raised so as to cause the fundus of the bladder to become the most depending part, the stone thus shifting its position. The utmost gentleness should be used, consistent with the most minute exploring. A dexterous employment of the instrument will enable us to ascertain, with tolerable accuracy, not only the size, but also whether there be a plurality of stones, measuring the stone as it were upwards, inferiorly, and laterally, with the extremity of the instrument. It is erroneous to suppose that the dimensions of calculi cannot be ascertained by examination through the rectum. The natives of India have from time immemorial been in the habit of bringing down the calculus by pressure above the pubic region, moulding, as it were, the hypogastrium, and causing the stone to descend towards the outlet of the pelvis; with two fingers in the rectum they then not only seize the stone but cause it to bulge in the perineum. This I have myself witnessed.

Calculi of small dimensions can be extracted by means of Weiss's forceps. The instrument is made of different sizes, and consists of two blades. It is introduced in the usual manner, and, on its reaching the stone, the blades are expanded, the convex part being pressed downwards. The blades are now permitted to close slowly, and the calculus is embraced. When the urethra is large, I have known a calculus to be brought away of the size of a filbert. The presence of the calculus between the blades of the forceps is ascertained by pushing the wire through the canula, when if it goes home the calculus is not there, and the manipulation must be repeated. The instrument must be withdrawn with great care and gentleness. It can be used both safely and successfully with care, and thus the necessity of a more serious operation will be obviated. Sir Benjamin Brodie's modification of the instrument is furnished with a silver spout, through which the urine may flow to facilitate the entrance of calculi between the blades as the water is flowing through.—Fig. 1.



Smaller Calculi, how to be got rid of.—Calculi which are not of greater diameter than that of the urethra are generally carried away through that passage by the impulse of the stream of of urine. Enlargement of the prostate, however, will prevent this, by acting as a valve, so that extremely small stones may be retained in the bladder. Thus individuals who have long been subject to the formation of renal calculi are, in advanced life, no longer capable of evacuating them, and they become lodged in the bladder. Sometimes these calculi can be got rid of by directing the patient to bend considerably forwards, when evacuating his urine, so as to render the anterior part of the bladder the most dependent.

Dilatation.—We may sometimes effect the extraction of calculi which are considerably larger than the urethra by dilatation. Indeed stones of extraordinary size have been got rid of in this manner. On one occasion I employed dilatation to a considerable extent by the largest sized sounds, and by the calculo-fractor of L'Estrange, intending to crush the calculus. The patient suffered all the more distressing symptoms attending the presence of a stone in the bladder, which had been distinctly detected by sounding. The consequence of this dilatation was, that a stone nearly an inch in its long diameter, and the third of an inch in its shorter diameter, was brought away, and the patient escaped the necessity of an operation for its extraction from the bladder.

Dilatation, and Incision in the Perineum.—From the knowledge of the great dilatability which the neck of the bladder is capable of undergoing, stones which can be brought through this part and into the perineum by Weiss's forceps, though too large to be advanced further along the urethra, may be cut down upon and extracted. Stones an inch in diameter have been got rid of in this manner by a simple operation seldom attended with serious results.

Dilatation may be accomplished in the following manner. Introduce a metallic bougie or sound of such dimensions as the urethra will admit without inducing inflammation. Let this be repeated, every day or every second day, according to circumstances, substituting each time one of larger size, thus dilating the urethra, until it is a good deal larger than its natural size. When this has been accomplished as far as practicable, let the patient drink copiously of diuretics and diluting drinks—the spirit of nitre or the compound spirit of juniper. The patient should retain his urine as long as possible, and, when he can no longer resist, the calculus may be carried along the dilated passage by the stream.

Should the above method be unsuccessful, we may facilitate the exit of the stone by the following plan. Introduce daily into the urethra and bladder a large bougie, and let it remain there. Let the patient drink freely of diluents, in order that the bladder may become distended, and when the patient is compelled to expel the urine, let him lean forward and suddenly withdraw the bougie. Stones which have for months lodged in the bladder may thus be extricated.

Method of using Weiss's Forceps.—When it becomes necessary to extract calculi from the bladder by means of the forceps, this viscus should always contain a moderate quantity of water. Should the patient have voided his urine, tepid water may be injected by means of a catheter. The position of the stone should first be ascertained by means of a sound. The forceps, previously warmed and oiled, should then be introduced, and directed towards the calculus, and when the forceps are felt resting on it, let the blades be cautiously opened, and the surgeon endeavour to seize it. Numbers of stones may in this manner be extracted. Sir Astley Cooper has removed as many as eight from the same individual.

Calculi in the urethra are found in various situations, causing obstruction or retention of urine. They can seldom be extracted with the forceps, because, on endeavouring to bring the forceps forward, the urethra is pulled back upon the stone, the mucous membrane is often lacerated, and the stone is not moved. They are generally found in the membranous portion in the perineum opposite the scrotum, or corresponding with the situation of the frenum. The treatment consists in prescribing opium, the warm bath, and fomentations. The mechanical measures consist in passing a large bougie down to the stone, taking great care not to press it against the stone, lest it should be forced into the bladder. The bougie must be tied to the urethra, and the patient prohibited from voiding urine until that fluid has accumulated, and the urgency is so great that the patient can no longer resist. The bougie is then to be detached and withdrawn, and the force of the current of accumulated urine will generally be effectual in shifting the position of the stone. Should this be ineffectual, the calculus is to be grasped with the fingers, and cut down upon by a free incision. If lodged posteriorly in the membranous portion, they are to be cut down upon by an incision on the left side of the perineum. Where the calculus is lodged opposite the scrotum, there is danger of the urethra bursting and extravasation taking place into the cellular tissue; the stone must then be pushed back from its position towards the perineum, and the same efforts made towards its removal as on the former occasion. If it is found impossible to remove it, or if it returns to the point and is again impeded, a free incision must be made, so that the urine may pass with greater freedom, and the calculus be taken out. Calculi opposite the frenum are to be removed by a bent probe, or the urethra may be enlarged by incision. When calculi are fixed behind strictures, and the symptoms are urgent, it will be necessary to cut down upon the stricture opposite the raphe, as recommended for retention of urine arising from the latter disease, laying the parts freely open, and advancing the finger towards the neck of the bladder.

Urinary calculi beyond the dimensions of an inch in diameter, when lodged in the cavity of the bladder, can only be removed by lithotomy or lithotrity.

Lithotomy by the Lateral Operation.—The primary circumstance for consideration is the state of the patient's constitution. The preparatory treatment, therefore, first presents itself to our notice. In most cases a vegetable diet for a few days, the administration of a saline purgative, and attention to the peculiar diathesis already fully referred to, is all that is requisite, and will generally succeed in alleviating constitutional and local irritation. It must always be remembered, however, that the presence of a foreign body is the source of irritation, and that the sooner this is removed the better. In the natives of India their systems are habitually prepared for operation, and the little advantage derivable from preparatory treatment is more than counterbalanced by fear and suspense. They come with confidence in the superiority of European skill, from hearing of our success on other sufferers, and they seek for speedy relief from agonizing pain. The patient is infinitely more pleased by immediate operation, which, when set about with the least possible ceremony, is not looked upon at all seriously by him; indeed, if the surgeon does not operate at once, but irritates and alarms him by the use of sounds, the patient almost invariably loses all confidence and leaves him. Speedy operation particularly refers to the lithic diathesis—a form of the disease the most common, and accompanied with very little constitutional irritation, excepting that which depends on the great degree of local irritation and pain of the disorder. To children, likewise, these principles still more uniformly apply.

I have often observed, after the frequent administration of the sulphate of magnesia, that the calculus has externally a recent and beautiful superficial crystallized coating of the triple phosphate, showing how certain salts which are known to appear very speedily in the urine can be made to predominate and soon to change the diathesis.

(To be continued.)

CLINICAL NOTES.

No. VI.

By RICHARD DE GUMBLETON DAUNT, Esq., M.D. (Edin.), Member of the Faculty of Physicians of Rio Janeiro, and Member of, and late Honorary Secretary to, the Parisian Medical Society.

To Doctor Antony Joseph Peixoto, a Brazilian surgeon practising in Rio de Janeiro, and graduate of the Faculty of Medicine of Paris, humanity owes the blessing which it has this year received in the scientific verification of the virtues of guano, as a means of cure of perhaps the most frightful scourge of the whole of known maladies—the lepra leonina, or tubercular elephantiasis of the Greeks, the leprosy of middle-age Europe. This disease, now historical in

Europe, except in a few rare instances in the extreme north, devastates whole populations in Brazil, principally in certain districts of the provinces of Minas Geraes and San Paulo; and not alone is to be viewed with all the dread inspired by a disease so loathsome and so disfiguring to the human form, and so ruinous to the development of the material progress of the nation from the check it gives to population, but also, and chiefly, with millionfold abhorrence on account of the deplorable moral depravation it causes in its victims, who are no sooner lazars than they appear to be suddenly brutalized and subjected to the dominion of the grossest animal instincts, and also imbued with a hatred of their race and a desire to reduce others to their own condition. Unfortunately the presence of indigent lazars is tolerated in many districts, where they appear in the public streets, and mix with the healthy population; so that the evil is still greater than it would be were the laws rigidly enforced which oblige these unfortunates to remain within the walls of the leper hospitals. With such a state of things, it will be conceded that it is impossible to exaggerate the satisfaction which all should entertain on knowing that already the power of guano over this disease has been tested by the perfect cure of several cases, in the hands of Dr. Peixoto, who was led to make experiments with this substance from knowing that, already in Peru, the chance residence for some time of a leper in a guano island had been succeeded by his perfect cure. Dr. Peixoto commenced his experiments at the beginning of this year, and at the end of six months had the gratification of witnessing the first cures obtained by art over this horrible disease. The guano hitherto employed has been American; and, while Dr. Peixoto gives internally the ammoniacal salts it contains, its chief mode of application, and that which in my opinion is the only efficacious, is the formation of an atmosphere highly charged with guano exhalations—as, *verbi gratiâ*, the leaving guano scattered on the floor of the apartment, the use of mattresses stuffed with guano, baths containing this substance, &c. It appears that none of the inconvenient physiological effects which guano is accused of producing on the crews of guano vessels have been found to appear in those who have undergone this treatment. About two hundredweight of guano are used in the treatment of each leper, when treated isolatedly; and six months appears to be the space of time in which a cure may be hoped for. It is said that, when the disease is decidedly hereditary, the efficacy of guano is much less—a fact to be kept in memory by all investigators, who should, in their first trials of guano, shun these cases. May we not presume that it is in such that the alteration of the nervous centres, noticed by Dr. Faivre, precedes the dermal development of the disease? Hence the difference in the power of guano over the several cases. I have not the means of describing at length the disease, or its pathogeny, but will confine myself to stating that the earliest indications of its presence are a thickening of the skin of the face, a coarser expression of features, a greatly increased development and injection of the capillaries of the face, a baldness of the eyebrows, and a want of sensibility in certain parts of the body, generally in small scattered points.

The class most liable to this disease are, not the slaves nor the higher orders (though it has its victims also among both these), but the free poor population—a race of mixed origin, part Portuguese and part Indian, which exists under the worst possible hygienic conditions. From a mistaken love of independence, and a too easily contented spirit, this class will not exert itself to labour beyond a degree necessary to avert starvation. Living a life of indolence in wretched habitations, its chief alimentation, in the districts where leprosy is chiefly endemic, is the farina obtained by grinding the nuclei of the turio of a species of pine which forms large forests in these districts, and which flour appears not dissimilar to that of the acorn; the flour of the Indian corn made into a parritch, like that made with oaten flour in Scotland; and such animals as the chase yields them, with, when they are somewhat more thrifty, pork. This uniform and ill-chosen diet enters, doubtless, for a large share in the casualty of the disease; and the reckless way in which this class continues to associate with those already affected is a still more efficient means of spreading it. It may, also, be remarked that in many districts goitre and cretinism are endemic, together with the Grecian elephantiasis, or tubercular leprosy. As this disease is also endemic in the interesting and valuable colony of the Cape of Good Hope, where two lazar hospitals exist, it is to be hoped that the English Government will depart from its usual apathy in all measures of public benefit, especially where the public health and the interests of the medical sciences are concerned, so far as to direct a full trial to be made of the guano by the medical officers of those institutions. Before concluding my statement it is well to add, that though Dr. Peixoto's success has not yet, for want of time, received a universal verification; he is a man of so high a grade in his profession that the most implicit reliance may be placed in every word he has published on this matter. Dr. Peixoto, as an operating surgeon, is, I believe, now, by the demise of the provincial surgeon, Francis Alvares, entitled to be called the most dexterous in Brazil.

The form I have given to these occasional papers relieves me from the necessity of making each a formal dissertation, and enables me to pass from one matter to another without incurring the charge of confusion; and of this privilege I now avail myself. It will be recollected, that some years back much was written of the effects of indigo in epilepsy; I believe it was chiefly tried in Northern Germany, for I am not aware of its ever having been much accredited in England or Ireland; and I remember to have heard Andral, while I attended his lectures, speak of it as equally uncertain with other boasted anti-epileptics. I had long been desirous of giving indigo a trial, when, nine months ago, I was asked to treat an African female slave, who had been, since a child, subject to epileptic fits. Her age was about thirty, and the epilepsy appeared purely idiopathic—at least I could detect no lesion of which it could be symptomatic. The fits were violent and frequent, generally two, and often four or five, daily; and she was much reduced in strength. I judged this a fair case for testing the powers of indigo, and, having first given a purge of turpentine, to satisfy myself that intestinal worms were not the cause, I commenced the exhibition of indigo, of which ten grains were given three times a day, united with a few grains of aromatic powder. In three weeks a decided amelioration was visible, and in a short time the fits ceased to appear oftener than once monthly. I obliged her to continue the use of the indigo for six months, when she presented an appearance of perfect health, and, having passed the last two months without a fit, I thought it needless to pursue the treatment further. I think it probable that the fits will at times recur in this patient; but, allowing that three or four times annually this should happen, considering the wide difference between such a state and that in which for many years she had been, and was in when I prescribed for her, I think I am fully justified in making public the case, as an encouragement to a more patient and multiplied use of indigo in idiopathic cases (viz., those connected with a faulty dynamisation or perverted mode of action of the nervous system) of epilepsy.

I lately had an instance of the value of fuligokali (which I mention as an incitement to its more general employment), in the cure of an impetiginous eruption of five or six years' duration, and covering the greater part of the body; by the application, during two months, of an ointment of fuligo-kali, of the strength of ℥ss., and afterwards of ℈ij., to the ounce of axunge, the annoying itching, which occurred nightly, was relieved by it in the first week of its use.

City of Campinas, Province of San Paulo,
Brazils, Oct., 1846.

OBSERVATIONS ON THE BEAD SUTURE.

By CHAS. BROOKE, F R.S., Surgeon to the Metropolitan Free Hospital.

[To the Editor of the Medical Times.]

SIR,—As the question, what mode of suture is capable of holding separated parts in apposition with the minimum of irritation, is one of some importance in surgery, especially as regards the issue of all plastic operations, I trust the following reply to some remarks, contained in a lecture delivered by Professor Fergusson, and published in your last number, may not be deemed unworthy of a place in your valuable periodical.

I have the honour to be, Sir,
Your obedient servant,
Keppel-street, March 15. CHAS. BROOKE.

After mentioning the common knot and its known inefficiency, the surgeon's knot, Sir P. Crampton's method, and my bead suture, Mr. Fergusson remarks:—"The common knot and the surgeon's I have used most frequently, for I have always supposed that the beads might increase the after irritation;" and after describing a knot, which will probably be more familiar, as being identical with the *Byron tie*, he further adds—"I advise you to think of this plan, which seems to me to embody the advantages of the beads, while the knots will from their size be less annoying to the patient, than the materials alluded to."

The best reply I can offer to the first remark is, that I have now had sufficiently ample experience in the application of the bead suture, not only to the common integument, but to the mucous surfaces of the palate and vagina (the details of which will shortly be made public), to warrant the statement that the beads not only do not increase the after irritation, as Mr. Fergusson has "always supposed," but, on the contrary, that they produce no sensible amount of irritation.

To the second remark, in which the slip knot is recommended as *seeming* "to embody the advantages of the beads," I must reply a little more at length. The bead suture (a description of which will be found in page 84 of the Abstracts of Communications, in the Report of the British Association for 1845) differs from all the other modes referred to in the lecture in this important point, namely, that the threads are *not* brought together over the wound (in which respect it resembles the old quill suture), and, consequently, the included portions of the edges, not being encircled or constricted by the ligature, are left free to undergo that degree of tumefaction which must necessarily precede the effusion of coagulable lymph, and the subsequent phases of the process of adhesive inflammation.

But this is not the only, or even perhaps the principal, advantage of the bead suture. It has been truly remarked, in the very instructive lecture on Staphyloraphy, that "hitherto the principal cause of failure has probably been the dragging on the stitches, from the action of the muscles, and the consequent disposition of the parts to be drawn asunder": and no doubt the ingenious device of Professor Fergusson will greatly obviate this inconvenience, but will not supersede the adoption of any subsequent measures which may be shown to be desirable.

It must be borne in mind, that in all the other modes of suture alluded to in the lecture the pressure arising from traction acts principally on the cellular tissue through which the thread passes, and on a surface equal only to the diameter of the thread; whereas in the bead suture the pressure is sustained by the mucous surface, and by a portion of it equal in extent to the opposed surface of the bead, the form of which is an oblate or flattened spheroid, the length of the axis not being more than half the transverse diameter.

The giving way of any suture manifestly depends partly on the yielding of the fibres to the mechanical force of pressure, and partly

owing to their removal by absorption or suppurative inflammation under the influence of the pressure, if it be not too forcible; and, as the vital yielding of soft parts will bear some proportion to the amount of pressure upon them, when a diminished pressure can be shown to exist, less tendency to irritation and ulceration may reasonably be inferred.

The capability of the bead suture in sustaining mechanical pressure, compared with that of any suture on which the soft parts are included in a loop, may be readily tested by the following experiment. Let an incision be made in any portion, either of the external or mucous surface in the dead subject; let two portions of the same ligature be passed through two similar parts of the cut edge, taking up as much as would be ordinarily taken up in a suture; let one of these be doubled by bringing the two ends together, and let the external end of the other be passed through a flat bead, and prevented by a knot from returning. If the two are now gradually but forcibly torn out in succession, the difference in the amounts of force necessary to effect this object will be immediately apparent.

Unless, therefore, Professor Fergusson is prepared to argue that any given amount of pressure concentrated on a very small space is not diminished in intensity when diffused over a comparatively large one, I must beg of him, in candour, to suspend the weight justly due to any opinion he may deliver *ex cathedrâ*, until he has either made trial of the bead suture himself, or ascertained the results of its *efficient* application, either by myself, or by any other surgeon who will take the trouble of acquiring, by a little necessary practice, the manipulation of my instruments.

PROGRESS OF MEDICAL SCIENCE.

France.

ACADEMY OF SCIENCES.

Meeting of March 8; M. Brongniart in the Chair.

ETHEREAL INHALATIONS.

The following melancholy case was related by Professor Roux:—

At the beginning of the month of March a man was brought into the professor's ward, at the Hôtel Dieu; he was affected with a wound of the scrotum, which had occasioned tetanus. Although it appeared evident that he would not live beyond thirty-six, or at most forty-eight, hours, still the hope was entertained of diminishing the violence of convulsions by the inspiration of ether. After a few minutes the subject became insensible, but half an hour after the experiment he expired: he would have die even if not submitted to the process; but M. Roux thought it his duty to say that, undoubtedly, death would have occurred in this case much earlier than if inhalation had not been performed.

DETECTION OF SIMULATED DISEASE BY ETHER.

The two following cases were forwarded by M. Baudens, Surgeon-in-Chief of the Military Hospital of the Val-de-Grâce:—

1. A soldier of the 25th Light Infantry had been eighteen months in the service; when he joined his regiment he presented a most striking spinal distortion; the ingenuity of several "conseils de révision" had, in this case—notwithstanding many trials, completely failed in detecting any imposition: the truth was revealed by the inhalation of ether. The soldier was placed on a table, lying on his back, and the incurvation was so considerable that the lumbar region alone bore upon the table. After four minutes' inhalation, unconsciousness was produced, and the head, shoulders, neck, and back were involuntarily restored to their natural rectitude.

2. A young soldier entered, on the 1st of March, the Hospital of Val-de-Grâce, with an ankylosis of the hip-joint, which M. Baudens had some reason to believe was simulated. Inhalation was resorted to, insensibility produced after eight minutes, and muscular relaxation in twelve; but the thigh remained immovable, and when raised, its movements were evidently and directly communicated to the entire pelvis.

Dr. Bouchut.—Signs of Death.—On the 22nd of February, a paper on this subject was read by Dr. Mandl, in which that gentleman stated that vesication by the application of heat was a certain sign which might serve to distinguish real from apparent death. M. Bouchut states that Dr. Mandl's opinion, which had already been professed by Prévot (of Padua), Louis, Duncan, Christison, Orfila, and Devergie, is one which Magendie and Leuret's experiments tend to disprove; and which experiments, altogether his own, and witnessed by Messrs. Andral and Rayer, also showed to be erroneous. In conclusion, Dr. Bouchut asserted that eight, twelve, and twenty-four hours after death, a blister may still be raised, though not constantly; the facility of its production depended upon the fineness of the skin, the absence of hairs, the quantity of blood and serum infiltrated, and the declivity of the part. Besides, it should be recollected that vesication did not invariably follow superficial burns in living bodies. M. Bouchut was of opinion that the formation of erythematous redness around burns (a fact already mentioned by Christison) was far more valuable in the diagnosis of real from apparent death, than the formation of a blister. But, although the erythema was impossible after death, it did not follow that it constantly appeared during life, particularly in those extraordinary cases of apparent death in which the capillary circulation is so much modified. Dr. Bouchut was also of opinion that a sufficiently prolonged auscultation of the chest was absolutely indispensable, and would furnish the most certain signs of the persistency of life, or of the reality of death.

ACADEMY OF MEDICINE.

Meeting of March 9; M. Begin in the Chair.

Election of a Member of the Academy.—(Section of Therapeutics.)—The candidates were Messrs. Gibert, Trousseau, Sandras, Martinet, Bayle, and Legroux. M. Gibert was elected by a majority of *one*.

Ethereal Inhalations.—M. Bouvier related a case of labour in which ether had been employed, and in which the uterine contractions had been arrested by the inhalation.

FACULTY OF MEDICINE.

Lectures on General Pathology, by Professor Andral.

The seat of the morbid element by which disease is constituted may be sought for in three different parts of the system: 1, in the alterations of nervous influence; 2, in the changes of the blood; 3, in the changes which have supervened in those substances which emanate from the blood. In these three great groups many subdivisions should be introduced; and all diseases may either naturally, or with a little allowable hypothesis, be referred to one or the other order. Practically, however, we do not consider this classification applicable, and we prefer the following:—

We recognise fourteen great classes of diseases, viz.: 1, pyrexia; 2, hyperemia; 3, phlegmasia; 4, anemia, or hypohemia; 5, hemorrhage; 6, fluxes; 7, dropsy; 8, pneumatosis; 9, alterations of nutrition, or trophopathies; 10, gangrene; 11, traumatic diseases; 12, hémopathies; 13, alterations of secreted fluids, or crinopathies; 14, neuropathies.

A few words on each.

1. *Pyrexia.*—In this class the increase of temperature of the body is the only constant symptom; and pyrexiæ are also characterized by the fact that it is impossible to trace them to any alteration of solid textures. When such alteration appears during the progress of fever, they are caused by the same morbid influence which first occasioned the febrile excitement. They are specially observed on the skin and mucous membranes, and consist in congestion, inflammation, or hemorrhage—either interstitial in the shape of petechiæ and ecchymosis, or discharged from the affected surface; fluxes, as in cholera, miliaria, &c., are also observed. In each pyrexia the local alterations not only may have a special form, but seem to affect a special seat; the cellular tissue sometimes; the lymphatic glands in syphilis; in other diseases the salivary glands; gangrenous inflammation of the cellular tissue and skin in the plague. The blood may be altered in its composition in pyrexia, and this alteration is always the same, consisting in a diminution of its natural amount of fibrine. In many pyrexiæ a virus or poison exists in the system.

Pyrexiæ are continuous or intermittent, hence a natural division into two orders: in the first we must form numerous genera, and amongst these we may name synocha, inflammatory fever, typhoid fever, miliaris, typhus castrensis, yellow fever, the plague, variola, rubeola, scarlatina, cholera, acute farcy, and carbuncular fever. These various maladies are connected with each other by their essential characters, and some arise spontaneously; others are developed by contagion or infection; and several are special to particular latitudes.

The second order is consituted by intermittent pyrexiæ, in some of which no other morbid phenomenon, besides the febrile excitement, can be detected; in others the febrile paroxysms are attended with various accidents, much the same as those which may be observed during the progress of continuous fever: fluxes, for instance, or losses of heat (which have not, however, been thermometrically proved), but which have been known to cause death, as in the algid fever; hence a subdivision of intermittent fevers into benignant and pernicious. Cullen perfectly understood the connections between the two orders of parexiæ, so much so that as a type, in his description of fever, that illustrious author takes the paroxysm of ague. In the various parts of the globe, according to the intensity of the producing cause, of the different degree of atmospheric heat, of the presence of marshes in mild or hot climates, we can observe the gradual transformation of intermittent into continuous fever, and reciprocally. They are different types of the same disease; but, like intermittent or continuous neuralgiæ, they are still the same malady.

Elevation of temperature is the only constant phenomenon which observation proves to exist in fever. Entering the field of hypothesis, may we not suppose this increase of heat to be the result of a more active combustion produced in the system by a temporary arrest of the nutritive movement? The removal from the system of a large quantity of nitrogen with the urine during fever, the production of an increased amount of water, carbonic acid, and bile in the same condition, for the separation of superabundant carbon and hydrogen, would seem to confirm our supposition. This arrest of the nutritive movement can occasionally be referred to the interference of a deleterious agent, external or internal, by which the vital properties are more or less interfered with, and the activity of nutrition slackened; or it may be attributed to an inflammation which calls to a limited part of the body an accumulation of blood, producing new secretions, a new mode of nutrition, a new and morbid elaboration of the elements of the blood; under the influence of a similar process, it is not impossible to admit that the general nutritive movement may be suspended, or at least rendered less active. All this is doubtless hypothetical; but a time comes when the mind, wearied with the dryness of the mere observation of facts, cannot resist the impulses of imagination; and such speculations, far from weakening its powers, serve, on the contrary, to enlarge its scope and to renovate its vigour.

2. *Hyperemia* is constituted by the accumu-

lation of the blood in a part, due to the arrest or the diminution of the speed of its circulation; hyperemia is always attended with redness, sometimes with tumefaction; the serum of the blood, containing some albumen but never any fibrine may be extravasated during congestion. According to the nature of its causes, we divide this class into three orders: hyperemia due to increased excitability; hyperemia due to diminution of the powers of circulation; and hyperemia referrible to mechanical causes, impeding the return of venous blood to the heart.

3. *Phlegmasia.*—When congestion has been gradually transformed into phlegmasia, as the disease no longer remains limited to its solid seat: the blood is modified in its composition, and one of its constituent elements, fibrine, is increased in quantity. This latter circumstance is invariably connected with phlegmasiæ, when they are accompanied with febrile excitement; and yet fever alone will not produce it. We have never met with increase of fibrine in pyrexiæ. In most cases it is the first order of hyperemia which passes into inflammation, but the two others may also terminate in a similar manner.

4. *Anemia, or Hypohemia.*—This class refers only to local anemia, a disease observed only in a small number of organs—the brain and gastric mucous membrane, for instance.

5. *Hemorrhage.*—Of this class we will say nothing, having on a former occasion treated the subject *in extenso*. Hemorrhages may, like congestions, be divided according to their cause.

6. *Fluxes* are in most cases the result of appreciable organic alterations; in others, on the contrary, the discharge is the only pathological fact which can be detected. They are characterized by the similarity of the fluid secreted with that of the fluid eliminated during health by the same organ. Fluxes have, according to their seat, been divided into three orders:—1, fluxes of the skin. 2, of the mucous membranes; in this order some authors place cholera, and not without some good reasons; we prefer, however, classing that disease with pyrexiæ. 3. Fluxes of glandular organs, primary or consecutive to congestion or phlegmasia.

7. *Dropsies.*—We mentioned on another occasion that all dropsies might be referred to one of two causes: an obstacle to the circulation of the blood, or a change in its composition. Dropsy in no case can, therefore, be considered as a primary fact—as anything but a symptom; but it is a symptom of such magnitude—it is a secondary fact of such immense practical importance—that we consider ourselves fully justified in forming for it a special class.

8. *Pneumatosis.*—In this class are placed all the gaseous accumulations within the cavities of our organs. We have reason to suppose that gases may even exist in the blood, and, whatever be their origin, they occasion symptoms and diseases which must have a place in all classifications.

We now come to the consideration of other diseases, in which the alterations of the solids is the primary pathological fact:—

9. *Trophopathies, or Diseases of Nutrition.*—These may be congenital or acquired; hypertrophy, atrophy, softening and accidental productions (subdivided into homologous, heterologous, and parasitical), and the various genera of acquired trophopathies.

10. *Gangrene* is in itself a disease which may be brought on by many causes besides congestion and inflammation. It may be produced by an obstacle to capillary or arterial circulation—by the introduction of miasmata or morbid poisons into the system, as in the plague. It is, therefore, something more than a termination of inflammation, and deserves to be separately studied in a class peculiar to itself.

11. *Traumatic affections* form, with the two preceding, the group of diseases in which alteration of the solids is primary.

12. *Hemopathics, or Diseases of the Blood.*—The first order contains the diseases resulting from changes of proportion of the natural elements of the blood, and in this order we find four genera:—The first of which refers to changes of proportion of the globules, which may be increased as in plethora, or diminished as in accidental or spontaneous anemia. In the second genus we place the changes of proportion of the fibrine—increased in inflammations attended with fever; diminished, on the contrary, and its diminution being a primary morbid fact, from which the other phenomena of disease may be derived—as in scurvy, or purpura;—or this diminution being, as in pyrexiæ, not a cause but one of the possible results of the malady. In the third genus of the first order we place changes of proportion of the albumen in the blood; increase of the albumen has not hitherto been ever observed: its diminution is constant in one variety of dropsy. The fourth contains the changes of quantity noticed in the saline elements of the blood—a subject which has hitherto yielded to investigation only results of a negative nature.

The second order of hemopathics refers to diseases resulting from the introduction into the blood of principles not habitually contained in that fluid. This order is subdivided into three genera. The first, that in which the elements of our various secretions are found in the blood—for instance, tetanus; diabetes mellitus will probably, at a future day, be classed here. The second genus, that in which morbid products—like pus—are introduced into the blood. The third, in which it contains toxic principles, which may be modified in its constitution, or not changed in any appreciable manner. Here we must place diseases resulting from the passage into the blood of venous miasmata, virus of various sorts (rabies, syphilis, &c.) or even of mineral poisons, such as mercurial or saturnine emanations.

The third order of hemopathics is consecrated to asphyxia, in which, under the influence of various causes, the blood receives no oxygen, or an insufficient quantity of that gas.

13. *Alterations of secreted fluids* are mostly the results of other maladies; sometimes, however, they can be traced to no organic alteration whatever. Calculous affections of the bladder, kidney, and liver belong to this class, in which we must also place, for the present at least, diabetes mellitus. Albuminuria, when not connected with organic diseases of the kidneys, also should be classed here.

14. Neuropathics are primary disturbances of nervous action. They may be subdivided into the modifications of intellect, of sensibility, of motility, and of that nervous power which presides over the accomplishment of the functions of organic life.

Such, at the present day, is the most complete classification of diseases. This grouping into classes we have already said to be indispensable to the science of diagnosis, and to that of therapeutics.

D. M'Carthy, M.D.P.

Great Britain and Ireland.

PHYSIOLOGY.—ON THE LAW OF THE MORPHOLOGY OF THE TEXTURES OF THE HUMAN BODY.

By Dr. Addison.

(Continued from p. 38.)

The process of nutrition, as ascertained both by observation and experiment, comprises three intelligible and visible stages:—1, the separation of the colourless cells and protoplasma of the blood from the red current; 2, the metamorphoses of these colourless elements in their progress through the walls of these vessels; and 3, the ultimate product which constitutes the permanent form of textural type. The first stage takes place within the vessels, along their interior boundary; the second takes place in, and gives the forms of, the elements of the walls of the vessels; and the third, or ultimate product, appears at the outer margin, and is in fact an extension, of the vascular wall.

Inflammation.—When the growth and nutrition of a texture of any kind, whether animal or vegetable, is normal, its elements are reproduced or multiplied, its form evolved, and its characteristic qualities and secretions established by a metamorphosis of the nutritive elements, supplied from without, in accordance with the law originally in force in the primary conformation of the parent organism from which it sprung. Every change, every metamorphosis, every action, and every product, yielding or conforming to the law, is an integral element of the complex phenomenon termed health; and every action or product deviating from it is an element of disease.

We have seen that any irritation of a vascular texture is productive of an increased amount of nutritive matter, which is deposited from the circulating blood, upon the walls or inner boundary of the vessels. The increased amount of matter so deposited is a deviation from the law of the texture, and therefore a phenomenon of disease; but the sensible or visible effects upon the texture depend upon the times, stages, and forms of the subsequent morphology, which may conform to the law of the texture, or deviate from it. For example—the fibrous textures are not secreting textures; they do not evolve a viscid mucus mixed with cells; this is not the law of their nutrition. These textures are, therefore, on this account, called serous textures. But there are other textures that do evolve a viscid mucus, mixed with numerous colourless cells, and these are, therefore, termed mucous textures. Now, an unusual amount of nutritive matter deposited upon the walls of the blood-vessels of a fibrous texture, and a conformable morphology, necessarily give rise to an increased amount of the elements of the texture, which becomes thickened by abnormal fibres; and, if adhesions are contracted between contiguous surfaces, it is by fibres; and the serous fluid, which naturally lubricates the texture, is increased in quantity. On the other hand, an unusual amount of nutritive matter, deposited upon the walls of the nutrient vessels of a mucous texture, and a conformable morphology, give rise to an increased quantity of mucus, mixed with a larger number of colourless cells. In either case, an unconformable morphology would produce different forms and qualities—fibrous forms, for instance, upon the mucous textures, and corpuscular forms upon the fibrous textures. If so complex a subject as normal and abnormal nutrition, of conservative and destructive inflammation, be susceptible of a short definition, it may be said, that simple healthy inflammation consists of an increased amount of protoplasma with a conformable morphology; and destructive unhealthy inflammation, of an increased amount of protoplasma, with an unconformable morphology.—*Provincial Medical and Surgical Journal.*

The Placenta.—The human placenta (according to M. Ernest Henri Weber) differs from that of the bitch:—1, the dense network of vessels which conveys the maternal blood, and traverses the entire placenta, consists in the human female of tubes of a much larger diameter, but with thinner walls; 2, the other constituent part of the placenta, the villosities of the chorion, which convey the fine network of embryonic capillaries, form in the bitch membranes and folds, and in the human species ramifications, which terminate in fine threads, interrupted here and there by nodular enlargements. In the perfectly formed placenta, both in the human female and the bitch, the vessels which convey the maternal and fœtal blood are in intimate apposition. This is effected in the bitch by the first-named vessels being closely enveloped by the villosities of the chorion; but in woman the reverse is the case, the ramifications and the filaments of the villosities being surrounded by the enlarged vessels which carry the maternal blood. If it should eventually be demonstrated that the villosities of the chorion penetrate into the cavities of the uterine glands in the human female as in the bitch, the opinion above given will not be interfered with, for it will still be necessary to prove that the terminal filaments of the villosities are inserted and, as it were, soldered to the walls of the uterine glands.—*Archives d'Anatomie*, Dec., 1846.

The Cure of Popliteal Aneurisms by Compression.—The improvement introduced by Dr. Harrison's patient, Hoey, of applying a number of clamps along the course of the artery, has afforded a very valuable hint. It would appear it is not necessary completely to arrest the pulsation of the tumour in order to produce a cure; the cure is effected by means of a coagulum formed in the sac, either by lessening the current of blood, or by some peculiar power of coagulation imparted to the blood, aided by the contraction of the sac. Galvanism appears to have favoured this coagulation. From dissections it appears that it is not necessary to obliterate the artery between the point of pressure and the sac, in order to produce the coagulum and effect a cure.—*Editor of Dublin Quarterly.*

Remedy for Facial Neuralgia.—Mr. Sibson, of Nottingham, has enumerated several cases of facial neuralgia treated by ethereal inhalation. The paroxysms of pain appear to have ceased under the influence of the ether. The period of freedom from suffering varies from a few hours to some days. Its employment is likely to be more beneficial in those cases of neuralgia due to a reflected morbid sensation in the facial nerves, excited either in the nerves of the deranged digestive organs, skin, or uterus, than in those cases of neuralgia depending on disease of, or pressure upon, the nerve.—*London Medical Gazette.*

Furor Etheralis!—In Paris, where there is always *une rage* for something to gratify the *gobemouches*, it is said to be quite the fashion for the ladies to supply themselves with an apparatus for inhaling ether, and nothing pleases a Parisian lady better than for gentlemen to submit to be experimented upon.—*Parisian Illustrated News.*—[Rather dangerous—we don't know what they might do to us during insensibility.]

Washed ether appears to be less irritating to the respiratory passages, and less nauseating to the patient, than the ordinary rectified ether.

Lithotomy.—It may be stated, as a general proposition, that that mode of performing the lateral operation is the best which effects the division of the prostate gland to the required extent by an incision which shall neither be so superficial as not to admit of the introduction of the forceps without causing laceration of the neck of the bladder, nor so deep as to divide the prostate gland through its entire thickness up to its base.—*Sir. P. Crampton.*—We would add that the lithotomist should stop the cutting movement the moment his *tactus eruditus* tells him that the dense structure of the prostate has been divided.

Lithotomic Division of the Prostate.—I then introduce a fresh sharp scalpel with a blunt back, which is pushed on through the groove obliquely upwards, in a direction towards the umbilicus. The prostate is completely divided on withdrawing the knife, cutting downwards and outwards with a *light pressure* in the same line as the former incisions, the fingers being still in the wound regulating the action of the knife.—*Brett on Surgical Diseases in India: Lithotomy*, p. 206.

Removal of Loose Cartilages from Joints.—The movable body is secured in the outer and upper part of the synovial bag, if possible, by the pressure of the points of the fingers and thumb of one hand. The knife, which is long, narrow, and slightly curved at the point, is made to penetrate the skin by directing its point perpendicularly to the surface, and at somewhat more than an inch below the substance to be acted on. By a lateral motion of its blade the integument is freely separated from the subjacent parts, so as to make a bed for the lodgement of the cartilage somewhere over the space between the tendon of the biceps and the vastus externus. The point of the instrument is then directed to the foreign body, and made to impinge upon it so as to divide all the interposed tissues and the synovial capsule freely, somewhat in the direction of the limb. The instrument is then withdrawn, and the assistant places the point of a finger on the minute opening. The knife is again introduced towards the outer side, and so managed as to complete a pretty large crucial incision of the the immediate coverings of the body to be removed. This done, nothing remains but to pass the point of the instrument under the mass, to disentangle it, to withdraw it from the joint, and to carry it into the bed previously prepared for it. A bit of plaster is put on each of the openings, and strict rest of the limb enjoined for a few days.—*Liston, in the Dublin Quarterly Journal.*

REVIEWS.

On Tumours of the Uterus and its Appendages. (Jacksonian Prize Dissertation.) By THOMAS SAFFORD LEE, M.R.C.S.E.; Fellow of the Medico-Chirurgical Society; formerly House-Surgeon of University College Hospital, and the Hospital of Women, Red Lion-square; Member of the Royal Medical Society of Edinburgh, &c. &c.

The great objects to be kept in view in medical science are, to acquire an extensive collection of well-authenticated facts; to arrange, classify, combine, or separate; to trace among the facts, sequences or relations, and thence deduce general principles. The author of the volume under review has taken evident pains to conform to these rules.

The first part of the work is devoted to the consideration of benign tumours. Under this head the author treats of fibrous growths. In all tumours of this particular class, affecting the generative organs of the male or female, we are struck with the apparent universality of the fact that they grow to an *enormous size*. We would illustrate this in the fibrous tumours of the scrotum in the male, and the fibrous growths in the uterus and its appendages in the female. They are essentially benign, and seldom, if ever, degenerate. "Uterine fibrous tumours KILL by the obstruction of contiguous organs, *not* by the extension of disease."

"When situated in the walls of the uterus, these tumours appear to occupy a space between its fibres, and are enclosed in a cyst, to which they are very loosely connected, so that without the slightest force they can be turned out of their bed by the handle of the scalpel. These cysts appear to be thicker in some cases and thinner in others; but they are always present and distinct: and this is an important fact, from the knowledge of which an operation has been proposed to enucleate, or turn out the tumor, by the aid of the scalpel."

"Dr. Hooper and Lisfranc think, that in all uterine tumors the tissue of the uterus is increased—but the former makes an exception: he says, 'This is not the case, however, in all instances: for it is no unusual thing to have large masses of the disease surrounded by very thin and extended uterine fibres.' From the difference of opinion that exists on this point, I have examined many preparations to endeavour to ascertain the truth: I find that the increase of uterine tissue is not always constant. In Guy's Hospital Museum there are several preparations; in some of which the increase of uterine substance is very great, while in others there is a thinning of the fibre over the tumour. In Dr. Reid's case the walls were an inch thick; and in the University College Museum there is an extremely large tumour surrounded by very thin uterine walls. When the tumour projects into the cavity of the uterus, its walls are generally increase in thickness; but when it is situated in its substance, the uterine tissue is most frequently lessened."

The following is quite the character of fibrous growths:—

"It is of a pale ash colour, intersected and interlaced by shining white lines, producing interspaces, which are filled with a dirty white matter: M. Lisfranc believes this to be plastic lymph—Leveret compares it to the baked teat of a cow—M. Roux thinks it resembles the intervertebral cartilages of old men."

The treatment recommended by the author is as follows:—Leeches to the tumour *itself;* the hip-bath, mercury or iodine to the womb, and the mildest cathartics.

"A good form is that of combining a tonic with a cathartic—as the equal parts of the infusion of gentian and senna—two or three times a day, as the case may require; and, if the appetite is failing, a few drops of the nitric acid dil. is a good addition."

Polypoid tumours, cauliflower excrescences, and encephaloid polypi are the next subjects treated of.

The *second part* of the volume is devoted to Diseases of the Ovary; and the third to Tumours of the Vagina, and the external organs of generation.

The statistical reports which the author has collected from a vast number of sources is anything but flattering to the operation of tapping ovarian tumours.

The tabular statements of the results of *extirpation* is more favourable; but the *character* of the tumour is of great importance as regards the prognosis of a successful termination:—

"Of the one hundred and fourteen cases,

65	cases were	encysted tumours of the ovary.
16	"	solid tumours.
6	"	uterine tumours.
1	"	omental tumour.
1	"	the cyst of an abscess of ovary.
6	"	no tumour found.
19	"	the particular disease not mentioned.
114		

"Of the sixty-five cases of encysted dropsy,
44 recovered.
21 died.

65 or 1 in 3.

"Of the sixteen cases of hard tumour,
9 recovered.
7 died (or nearly half).

16

"Of the six cases of tumours of the uterus,
2 recovered.
4 died.

6."

Coincident organic disease, therefore, must altogether prohibit an operation. The *small* incision is the least dangerous. "Dr. F. Bird has been successful in six (viz., *all*) of his operations by the small incision," evacuating the fluid contents, and then removing the tumour. If the incision be sufficiently large to allow of the introduction of the hand of the surgeon into the abdomen, and thus enable him to apply the necessary ligatures, or remove any abdominal attachments to the pelvic viscera, every indication is fulfilled. The mortality by the large incision is 1 to $2\frac{1}{2}$; in the minor operation, 1 in 6.

After-treatment.—The plan which Dr. F. Bird pursues is a very simple but efficacious one:—

"Its object is to place the skin in such a position, as to be able at any period after the operation to cause profuse sweating. This is accomplished by elevating the temperature, and making the patient eat a considerable quantity of ice; this at once produces profuse sweating, and the patient is placed in comparative safety. If, however, pain in the abdomen comes on, the pulse become very quick, and the moisture of the skin be less, he again produces a higher temperature, and continues to do so until the perspirations return. The patient then requires *constant watching*, and she ought not to be left for many days."

We strongly recommend the work of Mr. Lee as full of valuable information.

Outlines of Structural and Physiological Botany. By ARTHUR HENFREY, F.L.S., &c., Lecturer on Botany at St. George's and the Middlesex Hospitals, late Botanist to the Geological Survey of the United Kingdom. With eighteen plates. John Van Voorst, 1847. Pp. 246.

At the return of the vernal season, when Nature is again about to put on her gayest attire, when the botanist is tempted forth to range the fields in search of wild flowers, and when the medical

student is about to commence or resume his botanical studies, we have a highly valuable treatise on structural and physiological botany presented to our notice under this modest title. Botany has, at all times, from the days of Dioscorides to those of Linnæus, Jussieu, Decandolle, Brown, Hooker, and Lindley, claimed the attention of medical men in an especial manner. As we draw a very large proportion of active medicinal agents from the vegetable kingdom, it has been deemed necessary that physicians should be instructed to a certain extent in the natural history of the agents they continually employ. In so far, botany is important to the medical profession. We are not prepared to concede that it is merely in furnishing the sources and properties of vegetable remedies, and the plants that produce them, that botany is of importance to the physician. Since physiology forms the basis on which modern medicine is founded, botany, or rather one department of that extensive science—vegetable physiology—has played an important, although indirect, part in relation to medicine. When we reflect on the intimate connection which subsists among all terrestrial productions, —the web woven by Nature which brings all the objects around us into relation with each other, and renders each subservient to the well-being of the whole; we cannot deny that a general—knowledge of the system of Nature is necessary to the full appreciation of any one of the departments into which science has been divided for the convenience of learning and teaching. The physiology of plants bears a close relation to that of animals. The progress of investigation has demonstrated more and more clearly the bonds of connection and mutual dependence of these two classes of living beings. It has shown that the process of generation and development are essentially the same; that all organized beings commence with the cell, and that all the young parts go through phases of development which have their origin in the cell. When so close a relationship is established, the study of the development in one class of beings must throw a vivid light on the same study in the other class; and we may with confidence affirm that a man cannot be a good animal physiologist who does not possess a competent knowledge of the structure and physiology of plants. We would therefore give our most strenuous recommendation, to those who are about to enter on their botanical studies for the first time in the approaching summer session, to devote themselves with ardour to this most interesting department of the study of Nature. Should they in future life be placed in the country, they will derive a considerable source of pleasure from a competent acquaintance with this science. With these preliminary observations, we address ourselves to the examination of the work before us. The limits to which we are confined will oblige us to be brief, and will prevent our indulging in extracts.

The unexampled rapidity with which facts are accumulated, and old facts re-examined, in the present age, furnishes a sufficient apology for the production of the multiplicity of elementary works with which we are at present inundated. Modifications, sometimes of great extent, are thus produced even in the fundamental doctrines of science; and this has been more especially the case in those of animal and vegetable physiology. The proposition, that all animal and vegetable tissues are evolved from cells, is the most striking of the present day. The author has, himself, paid considerable attention to the cell-theory: we can speak of him, from personal knowledge, as a careful and accurate microscopic observer; and we can, therefore, place greater reliance on his opinions on this particular point. The minute structures of which plants are composed are described with clearness and freedom, and accompanied by numerous illustrations, of which we shall speak more particularly hereafter. Having described the minute structures, cells, spiral vessels, woody fibre, &c., he next enters on some general considerations of the physiology of these elementary structures; and here he follows the Liebigian school. We are not about to enter on a general review of these doctrines, although we think it necessary to caution our young friends against an implicit reliance on the long rows of symbols and equations which are so profusely distributed through the celebrated work of Baron Liebig. The acetous fermentation is brought forward as an example of the chemical changes occurring in nutrition. The changes of alcohol into acetic acid during the acetous fermentation is intimately connected with the production and growth of a fungus, to which the name *mycodermi vini* is applied, but which is really formed of the undeveloped plants of one or other of the com- moulds (*mucors*). The production of these moulds is thus explained:—

	C.	H.	N.	O.
74 of water (H. O.)	..	74	..	74
94 of carbonic acid (C.O.²)	94	..	..	188
2 of carbonate of ammonia N.H.³ C.O.²)	2	2	6	4
	96	76	6	266
From which are formed—				
1 proteine	48	36	6	14
4 cellulose	48	40	..	40
212 oxygen	..	..	..	212
	96	76	6	266

And, as four equivalents of oxygen must combine with one of alcohol to form acetic acid, fifty-three equivalents of alcohol are changed into vinegar. These figures look very pretty on paper, and afford at first sight a very plausible explanation; but they give a totally and entirely false representation of the phenomenon of acetous fermentation. The elements here employed are not those which enter into the acetous fermentation. If water, carbonic acid, and carbonate of ammonia, are the active principles of the acetous fermentation, the fermentation should proceed with as great freedom in an atmosphere of carbonic acid as in contact with common air. Our wine and beer would be quite as liable to be converted into vinegar while in the cask as when freely exposed to the atmosphere, and would, for that reason, be incapable of preservation. The air contained in the upper part of a cask is strongly impregnated with carbonic acid; the putrefaction of the nitrogenized matter contained in beer and wine, and their conversion into carbonate of ammonia, may go on without any considerable supply of oxygen, and thus all the conditions for the acetous fermentation would be supplied. Facts are opposed to this view; for acetous fermentation does not usually take place, and, when it does, it is small in extent, and may be in most cases referred to exposure to air. According to the explanation given above, a larger quantity of oxygen is set free. Now, we well know that, during the whole progress of the acetous fermentation, oxygen is absorbed from the atmosphere. Alcohol having the composition $C^4 H^6 O^2$, if we take from it three of hydrogen and add one of oxygen, acetic acid, $C^4 H^3 O^3$, will be formed. Thus each equivalent of alcohol requires four of oxygen to convert it into acetic acid, which is absorbed from the air; three of this equivalent combining with three of hydrogen to form water, the remaining equivalent being employed to oxidize the aldehydic acid, and convert it into acetic acid. Other explanations may be given of this series of chemical changes, equally correct as regards the atomic numbers involved in the conversion of alcohol into acetic acid. We conceive that we have sufficiently demonstrated that the explanation given in the work before us is incorrect. With regard to the production of proteine, we have no evidence that carbonate of ammonia is ever produced; for the pressure of a large quantity of alcohol and acetic acid in the fluid would suffice to prevent the putrefactive fermentation from proceeding to its full extent. Our author, with becoming caution, subsequently warns us from placing too great a reliance on these explanations.

The plant, as an individual, and the modifications of the parts of which it is composed, occupy the fourth chapter; the axis and its appendages the fifth; ramification, the sixth; the physiology of vegetation, absorption, circulation, respiration, assimilation, and secretion, the seventh; the eighth and ninth are devoted to reproduction, while the tenth contains some miscellaneous general observations.

Such are the contents of a volume, which does great credit to the science and industry of its author, and brings our knowledge of botanical science down to the present period. After a careful perusal, we can confidently affirm that it may be placed on the same shelf with the well-known elementary works of Lindley; in saying which we accord no small praise to the work. We have only one fault to find, and that is with the plates, which are not so distinct as they might have been made. Zincographed and lithographed plates are always less distinct in outline than engravings on copper, steel, or wood. They are, however, much less expensive, and we presume that the object of the author was to afford abundant illustration in the most economical form. The eighteen plates contain several hundred illustrations of structure, and we can safely say that Mr. Henfrey has succeeded in furnishing the student with one of the cheapest and best manuals of structural and physiological botany.

An Inquiry into the Sanatory State of the Town of Lynn Regis. By George Sayle, M.R.C.S., &c. &c. 8vo., pp. 22.

This pamphlet is rather of local than of general interest, but it nevertheless claims our notice, on account of the active spirit of hygienic good intention contained in it. Mr. Sayle, as an intelligent, judicious practitioner, cannot see the opportunities of fever and pestilence lying in his every-day course, without communicating the appalling fact to the authorities, and bidding them see that such human nuisances are forthwith cleared away. Whether the stolid local functionaries have sense enough to profit by Mr. Sayle's suggestions, time must prove; that they need do, is pretty evident from the following passage, concerning a certain locality of the town in question:—

"Immediately joining the boundary wall is a stagnant gutter, the carrier of refuse matter from the infirmary to another large drain, which ought to empty itself into the adjoining fleet. Contiguous to this wall are three or four piggeries.

"On the east side of the road to the rope-walk, are from fifteen to twenty more piggeries, slaughter-houses, and carrion-dens, with a pit in their centre, full of refuse matter, far advanced to a decomposed state." (P. 18.)

Such facts are powerful enough to plead for themselves; but there are some people whom the naked truth will not reach. Mr. Sayle backs his truths by reasoning, which no rational mind can be proof against.

Letters to the Right Hon. Lord John Russell, M.P., on the Subject of the Drainage of the Metropolis; State of the Thames; and the Waste of Fertilising Substances. 8vo., pp. 15. London, 1846.

The author of this able and well-timed pamphlet deserves the best thanks of the public at large, and of the London public in particular, for the judicious views he has taken of the several important subjects embraced in its title. These he has investigated, in their various relations, with much deliberateness, and with the nice calculation of a man at home in such business. He has not only adventured in the spirit of trying and testing it thoroughly, but he has produced many items and calculations, and *proofs* of a better system of drainage and sewerage of the metropolis than at present exists. These are questions of the highest import in large towns, where congregated, crowded people cannot but feel, most disastrously, the effects of bad street and sewer management. Communications of the

nature of the one lying before us must be regarded by philanthropists in the light of substantial services: this is our view of the pamphlet in questi n; and, though our space does not permit us the opportunity of quotation, we gladly commend it to the notice of the very many who must be interested in it.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct from the Office of the Medical Times *to Annual Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.*

A HANDSOME PORTFOLIO *for holding the* "MEDICAL TIMES" *—very desirable to those who would keep the numbers clean for binding, and easy of reference—may be had, by order of any Bookseller, or at the Office, price 5s. An allowance is made to the trade.*

X. Y.—*An appointed vaccinator cannot receive the union payment in addition to private remuneration for the same l bour.*

Mr. T. B. Smith *writes us a long letter, insisting that there should be two examinations of the student—one somewhat elementary, the other in the highest range of medicine and surgery.*

Machaon, *who treats Brodie's lectures as some people, according to Falstaff, would treat kittens, is informed that they were delivered this session, and were announced, by advertisement of the Hospital School, as "important." From the disparaging way in which our correspondent speaks of Brodie, Guthrie, Tyrrell, Abernethy, Cooper, &c., we suppose him to be some unknown prodigy of surgical skill; or, what is perhaps equally possible, surgical impudence. The disparaging diathesis, so common in some parts of the profession, is not, we fear, a demonstrative proof of genius. As for the course of lectures we have announced, we shall publish them* all *in rapid succession. It is impossible, as our correspondent must feel on reflection, to give them* all *simultaneously.*

We have no space for the communication of Truthseeker, *which is sent to us anonymously.*

Mr. Owen Richards's *suggestions will be borne in mind.*

Dr. John Thompson's *reply to our article of last week is inadmissible. It would be neither instructive nor useful, nor scarcely amusing, to publish demonstrations that every man is a quack, although we might be so assured by a subscriber who is a medical man himself.*

A Medical Student's *defence of the Edinburgh Infirmary forgets its object in wordy abuse of Dr. Thompson. Either no defence was necessary, or our correspondent has wholly failed in his design.*

We quite agree with our correspondent that the abuse of the Coroner's Court requires speedy correction. We are maturing a plan which will, we hope, effectually protect the profession from injustice in every part of the country.

It is impossible that we can publish many of the communications with which we are honoured. Our correspondents must content themselves with the assurance that our discretion is carefully exercised in the selection.

W. Y.—*We propose concluding each series of lectures as rapidly as possible, and commencing fresh courses as the ground is cleared for their going on without intermission.*

We regret to say that the extensive claims on our space preclude our entering, with Dr. Collyer, into the contest about his prior claims to the discovery of ether inhalations. There is nothing less interesting to us than intervention between gentlemen and the injustice of our contemporaries.

We have no leisure to examine the value of Mr. Woolcott's suggestion.

Medicus *is thanked for directing our attention to the cases of gross neglect he names. There can be no doubt that the guilty party can be indicted under the Apothecaries' Act.*

M. D.'s *case should have been authenticated.*

Mr. Henderson's *note has been received.*

The Third Part of Mr. Hilles's Views on Sudden Death will be in our next.

A Military Surgeon.—*We have in no way interposed about the subscription—nor shall we. Our expenses in the Hounslow inquest affair have been much exaggerated. They were under two hundred pounds.*

In answer to numerous inquiries about Sir B. Brodie's lectures, published by us in the last and present volumes of the Medical Times, *we have again to notify that they are the lectures delivered at St. George's Hospital,* during the present session, *by the learned baronet. The course being short, and addressed more particularly to students, we have published them in the most modest form, and without any attempt to invest them with an extrinsic importance. They have been announced, we perceive, in other quarters more ostentatiously, and, as usual, not given.*

Blue Jacket!—*Order "Williams's Lectures on Plethora," through a bookseller. We have no time to find out the numbers of the* Medical Times *containing the lectures on the subject. 2. We do not give "advice gratis." 3. The camphorated dentifrice is as good as any other.*

*** *Our readers and the public are reminded that the fourth lecture (containing twenty-six beautiful engravings) of Muller's superb work on Physic appears in the* Pharmaceutical Times *of to-day. Vol. 1 of the* Pharmaceutical Times *is now ready, in half cloth, 10s.; half-bound, 11s.*

An Old Army Officer's *letter should be sent to one of the Army and Navy Clubs or journals. We will have nothing to do with promoting any such subscription.*

A General Practitioner, *who has secured us, by personal canvass, three new subscribers to the new volume, is desired to receive our best thanks. Such efforts are, indeed, encouraging.*

We are unable to answer Mr. Copley's questions.

Mr. Crooke *cannot do better than take his degree where he is.*

E. D. D.—*We must decline to name any one book as the best. The duty is too invidious.*

Mr. Poffle.—*We have received the beautifully-illustrated copy of the New Testament, published at the office of our Illustrated contemporary; but it is not our custom to publish lists of the books sent to us.*

We have some communications in type, which will appear in our next number.

We have also to acknowledge communications and letters from Mr. Shawe, Coldfield; Mr. Hutchinson, Bridlington; Mr. Lacy, Poole; Mr. Butler, Guildford; Mr. Beedell, Tiverton; Dr. Lee, Northwich; Mr. Medd, Stockport; Mr. Green, Wellington; Dr. Hamilton, Leamington; Mr. Barton, Ulverstone; Mr. Maclay. Glasgow; Mr. Counsellor, Gateshead; Mr. Nolan, Wicklow; Mr. Butcher, Ware; Mr. Campbell, Liverpool; Mr. Morris, Banbury; Mr. Hanning, Halton on-the-Hill; Mr. Ricketts, Droitwich; Mr. Nicholson, Stilton; Mr. Patts, Cranbourne; Dr. Healy, Dublin; Mr. Johnson, Watlington; Mr. Sutton, Langdon; Mr. Pade, Plympton; Mr. Joy, Northwold; Mr. Ritchie, Tean; Mr. Walford, Blackheath; Mr. Morgan, Newtown; Mr. Kinsgton, Harpenden; Mr. Newland, Dublin; Mr. Magee, Rotherfields; Mr. Cormack, Putney; Mr. Brady, Watford; Mr. Beale, Driffield; Dr. Murray, Monaghan; Dr. Lees, Ashton-under-Lyne; Mr. Leake, Pontefract; Mr. Patten, Keying-lane; Mr. Jordan, Manchester; Mr. Pye, Runcorne; Mr. Essex, Pontypoole; Mr. Clifton, Welwyn; Mr. Pennington, Liverpool; Mr. Newman, York; Dr. Probart, Bury; Mr. Hine, Coventry; Mr. North, Brecon; Mr Coates, Salisbury; Mr. Fletcher, Bury; Mr. Harrison, Deptford; Dr. Steadman, Wellington; Mr. Stephens, North Shields; Mr. Wilkins, Mullingar; Mr. Turner, Deddington; Mr. M'Intire, Coleraine; Mr. Croome, Banbury; Mr. Clarke, Aldboro'; Mr. Phillips, Sapen Palden-hill; Mr. Williams, South Brent; Mr. Gill, Liverpool; Dr. Finlay, Rackcorry; Mr. Watling, Leominster; Mr. Harmer, Wrentham; Dr. Brown, Dunfermline; Mr. Robinson, Newbury; Mr. Pile, Taunton; Dr. Sykes, Cleckheaton; Mr. ——, New Shoreham; Dr. Garlick, Halifax; Mr. Brown, Castle Donnington; Dr. Davis, Outerarde, Disby; Dr. Robertson, Manchester; Dr. Taylor, Bradford; Mr. Turner, Manchester; Mr. Harrison, Braintree; Dr. Little, Sligo; Mr. Meredith, Tutbury; Mr. Stamp, Seaton; Dr. Christie, Sealaw; Dr. Taylor, Askeaton; Mr. Stevens. St. Keveans; Mr. Guyan, Freshfords; Mr. Christie, Ashdeen; Mr. Mullin, New Ross; Mr. Spenser, Shilton; Dr. Sandiford, Carrigaline; Dr. Keagh, Dublin; Mr. Maclean, Elgin; Mr. Bownas, Mr. Braddon, Upton-on-Severn; Mr. Heale, Luton; Mr. Kent, Upton-on-Severn; Mr. Dawse, Albany Barracks; Mr. Jones, Milford; Mr. Payne, Abergavenny; Mr. Corfield, Camden-town; Dr. Gelston, Limerick; Mr. Price, Cardiff; Mr. Adamthwaite, Stanhope; Mr. Chapnell. Maddox-sereet.

THE MEDICAL TIMES' PRIZES FOR THE BEST REPORTS OF MEDICAL AND SURGICAL CASES.

The results of our last Prizes have been so far encouraging that we propose for Professional Competition, for the year 1847, the following Prizes:—

Twenty-five Guineas for the twelve best reports of original cases in hospital or dispensary practice.

Ten Guineas for the twelve reports of original cases, as above, second in merit.

Five Guineas for twelve reports of original cases, as above, third in merit.

In offering these prizes we repeat that our aim in this, as in other matters, is to promote the SCIENCE of our Profession. The groundwork of the best part of our *practical* science and of most of our subsequent Professional worth is laid down in our studentship; and the great and the only true teacher of the student must ever be—hospital practice. Lectures and books have their uses; but it is by the bed which holds a human being, with the joy of health or the pain of disease, the chance of life or the peril of death, depending on the aids of science, that we acquire our true knowledge. There is there for the student no listless ear, no dull eye of the lecture-room; it is not the memory alone that is appealed to, or some abstract love of a pedantic and inapplicable lore. Every power of his mind is engaged: he is forced by the sympathies of his nature to hear and see, to observe, to reason, to prognosticate, to be EXPERIENCED: each patient's case is a volume of medical science in its most practical aspect, forced on his acquaintance for life!

The authors must be students who shall not have received any medical diplomas or licenses.

Six of the cases are to be medical, and six surgical.

The cases must have occurred during the year; and the names of the gentlemen under whose treatment they may have principally come must be distinctly mentioned.

Three arbitrators will be appointed—one surgeon, one physician, and one general practitioner—whose names will be duly announced. The decision will be on the 1st of July.

The Prize Reports will be published in succession in the "Medical Times" with the names of their authors.

They are to be sent to the Editor of the "Medical Times" on or before May 1, 1847, accompanied by a certificate from a surgeon or physician to a hospital, declaring that the writer is *bonâ fide* a medical student. A motto or device must be inscribed on each report, to identify the author, whose name, with a duplicate of the motto or device, must be mentioned in a private note, which will be opened when the award shall have been made.

THE MEDICAL TIMES.

SATURDAY, MARCH 20, 1847.

THE JUDGMENT.

WE direct our readers' attention to a meeting reported in another page. The West Middlesex Coroner has been twenty years or more in active political life; and, when we take into account with that circumstance his high respectability of character and remarkable eminence of intellect, we ought, perhaps, not to be surprised that the wide public advertisement and placarding of his name in connection with an anti-flogging meeting should secure him a metropolitan attendance of as many as—*thirty hearers!* In the Angel Inn, Finsbury, a *donation* of tickets, even in these days of dietic

generosity, will attract to him as many as sixty dinner companions; and, in the pugilistic establishment of Drury-lane, the attractions of the house, if aided by a clever and energetic system of advertising, and a popular grievance, will actually bring about him an auditory of thrice ten! Undoubtedly, the honourable gentleman is entitled to our compliments on the magic extent of his political influence! Well might he say that he looked on such an attendance with pleasure and no grief. Truly he has not laboured in vain. How we envy him the reflections which such a result of a whole life's ceaseless activity must inspire! Yet, with all our admiration at the success of the Coroner's career, we must be pardoned an expression of regret that he again compels us to make our belief in his judicial equity and fair dealing dependent on the disbelief of those qualities in the Court of Queen's Bench. This is a severe trial to our feelings of partisanship and admiration of the honourable member. It, of course, costs us nothing to believe him a paragon of magisterial perfections; but, if that belief be inconsistent with giving Lord Denman and the other Judges of the Court of Queen's Bench credit for something like a love of justice and a knowledge of law, we must fain put up with a few doubts slightly—very slightly—to the disadvantage of the inferior functionary.

As might have been expected from the known benignity and kindness of heart of the West Middlesex Coroner, the rejection of Dr. Warren's testimony was all for Dr. Warren's good. Dr. Warren, if by any chance the evidence could trace death to the flogging, might have been tried for murder; and, therefore, Dr. Warren's evidence — voluntarily tendered — which would have proved that the death was *not* caused by flogging, was not taken *on oath*. True, it was kindly taken verbally and unsworn; and in this way Dr. Warren received two advantages: his statements would have no weight with the jury, and would tell against him on any future possible proceedings quite as much as if they had been sworn. Dr. Warren ought to be grateful for a kindness all the more real as it was difficult to make it discernible to him.

Considering that a brother medical man's life was in peril for a merely perfunctory duty, we don't wonder that the benignant magistrate sanctioned a few inquest irregularities, and we are prepared beforehand to find them leaning to the side of his exculpation. Hence was it that the statute was put aside, that Dr. Warren might not be heard: hence was it that as the Queen's Bench declare, injustice was done in not taking down his testimony on oath: hence was it that Mr. Day was now illegally appointed, and now illegally refused a hearing: hence was it that Drs. Reid and Hall had their evidence kept back from delivery and publication for fourteen days or more: hence was it that they were excluded from the inquest room on one occasion and the *post-mortem* examination on another: hence was it that they were treated, as three witnesses *swear*, with rudeness, discourtesy, partiality, and worse: hence was it that Mr. Wilson, a private associate and friend, was brought in, in direct contravention of the statute: hence was it that his evidence took on so favourable a character to Dr. Warren: hence was it that Dr. M'Kinlay, who was known to have attended one of the *post-mortem* examinations, was never called: and hence, finally, all the other irregularities which have given the inquest so extraordinary a notoriety, and won for its honourable president *and his journal* so deep a gratitude, expressed in every possible form, on the part of all medical men!

Agreeing on so many points with this worthy magistrate, we may be charged with a hyper-critical fastidiousness when we declare that we do not quite like the attempt, in his speech, to cast disrepute on Lord Denman as a "denier of justice," or the promise "to correct" as "an inferior coroner," "the mistakes of that chief coroner;" or his assertion that Drs. Reid and Hall, in obeying special orders, in accordance with military regulations, and making an autopsy of a deceased soldier, "acted against their duty;" or the argument, that because a small bruise or burn may be speedily followed by death, every man flogged must be killed; or the principle that coroners should reward pecuniarily their own witnesses; or, in short, any other part of the speech delivered to the visitors of "The Craven Head" public-house, Drury-lane, London.

"Fortes creantur fortibus."—HORACE.

ON the authority of the Provincial Medical Association, and its organ, we last week gave our readers some important facts. The Association had seen Sir George Grey. This was undoubtedly something. Some people can go geese to Hanover and come back geese; and the ill-natured may surmise that the Provincial Committee might have hob-nobbed for a quarter of an hour with all the metropolitan intellectuality of Grey, and returned a very Provincial Committee still. There could be no greater mistake. The council, by their visit to London and their interview with Sir George, were enabled to go away laden with—we use the magnificence of their own description—"*hopes*"! "From the result of this interview," say they, "strong hopes are entertained that a settlement of the questions *connected with* Medical Reform, satisfactory to all branches of the profession, *may* be obtained." Sir George Grey is so magnificent in his promises that the provincial deputation return with "*hopes*;" not *of* a settlement indeed, but of—what is almost as much—its *possibility*; and the worthy deputies are so proudly elate at the important news that they lose no time to communicate it by sound of trumpet to the whole profession. They have actually seen the great Minister, and a "settlement may be obtained"; no—not quite that—there are "strong hopes that it may"! We can appreciate the emotions of the less favoured members when this pregnant assurance of good news is conveyed to them; and we would that the official newsman was not obliged by truth to damp the ardour of their exuberant gratitude, or impair the excesses of their unspeakable delight, by such disheartening reservations or conditions as the following:—"These hopes are, however, *dependent* upon some approach to unanimity in the concession of minor points being manifested by the different sections of the profession." Is it not heartbreaking, and enough to put a saint out of temper, that these magnificent "hopes" of a delightful possibility—a most enchanting "*may*-be"—shall be made dependent on the "manifestation of an approach"—an approach utterly unapproachable—a possibility, in fact, dependent on an impossibility?

The cup of Tantalus was bliss itself to the "strong hopes" that the Provincial Council now handsomely commend to our lips, now so cruelly dash to the earth. After a laborious and costly mission to the metropolis—at a time, too, when the season was hardly commenced, the Italian Opera but just opened—and after an actual interview with a real, live Minister—to find ourselves blessed with a hoped "*may-be*," which, we are told, *may not be!* Is it not intolerable?

Alas! we wanted no ghost, still less a Provincial Council's interview with the Home Secretary, to inform us that Medical Reform might be settled if the different sections of the profession would "concede" and become "unanimous." The world has long known that there is a capital dish in that said "unanimity"; but the work has been on Mrs. Glasses' prudent principle—how *first* to catch it? *Hoc opus—hic labor est.* Still let us not be ungrateful. A thankful heart will be hard put to it for the relief of its emotions, if it will not disburden itself on small mercies. The Provincial Council has existed about the sixth of a century; it has consumed, probably, from £20,000 to £30,000 of professional taxes; and that it has not spent its life or cash wholly in vain is demonstrated by the fact that, in 1847, they can announce on the highest authority—their own—that we may have "*hopes*" that there "*may be* a settlement," provided, in the first place, that *all sections* of the profession will only be "unanimous" on it! With such an achievement in the cause of Medical Reform before us, we might well be called slanderers if we could breathe a syllable against the way in which the Provincial Council has discharged its onerous *trust* to its many confiding and worthy constituents. "Scurrility," "personality," "libel," would be the least striking of the imputations our hardy injustice would merit!

A sad thing, be it said in conclusion, is that same word "unanimity." It sounds on our ear as the enchanted land vision looks to the eye of the sea-worn mariner. It is a "strong"—a very "strong," but at the same time a very illusory, "hope." There is nothing of it in any part of the professional system. It is not in us nor of us. Complete ignorance or consummate knowledge—either may beget uniformity: it cannot come of a profession like ours, in which all degrees of talent are met in unison with all variations of information; and wherein every man is his own lawgiver and guide, alike incredulous and self-confiding. Our unanimity is in dissent—our combination is each man to be his own leader. As in nature our functions are for reparation; in politics they are for destruction. United to *recognise* a social disease—we are never so to cure it. How vain, then, the "hope" of "unanimity":—above all, how vain the "hope" of "unanimity" in *conceding!*

ROYAL COLLEGE OF SURGEONS.—Gentlemen admitted members on Friday, March 12th—G. Allbut, C. M. Empson, H. Barnett, H. Green, W. Faithfull, J. M. Birom, J. Rice, and C. S. Hugo.

ETHER OPERATIONS.

The kind interest you have taken, and continue to manifest, in the apparatus ("*Startin's Pneumatic Inhaler*") I have contrived for introducing into the lungs any medicinal substance, which can be converted into gas or vapour, and thus mingled with a proper proportion of air or steam, or both, to render it respirable, induces me to request your insertion of a few remarks on the subject of ethereal inhalations.

The approving notices with which the instrument referred to has been honoured in the pages of your journal, by directing the attention of nine-tenths of the profession to it, has afforded me unusual opportunities, not only of testing its efficacy under all the circumstances for which it was designed, but also becoming practically acquainted with the effects of ethereal vapours in the human economy, whether these may have been administered to produce insensibility to pain in surgical cases, or as remedial medical agents. In addition to which sources of experience, I have personally breathed etherized air until the advent of unconsciousness, not less than twelve or fifteen times, and have administered the same to numerous members of my own family and others, both in a state of health and indisposition, more than a hundred times; besides, scarcely a day passes that is not marked by some novel point of suggestion from the numerous correspondents your advocacy has originated; on which account, indeed, I now appeal to your well-known liberality for the insertion of the little I know on this subject, as you will thus supply my answers to the different queries that have been addressed to me; at the same time giving rise to extended research on the subject. I may also mention, as a second inducement for the intrusion of my remarks upon you at this moment, the fact of a few sinister accidents, and even deaths, from the effects of ether in vapour, having come to my knowledge; *not*, however, I am truly happy to say, under the use of the pneumatic inhaler, which, as yet, has encountered no such unfavourable results, nor, indeed, is it likely to do so, as I believe it possesses the power, when judiciously employed, of materially lessening, if not of entirely obviating, such unhappy occurrences.

The inhalation of ether for producing "insensibility to the pain of surgical operations" is a new discovery that will confer immortality on the name of Dr. Morton, of Boston, United States, although it may be hereafter determined that some one else shall share with him the merit of having suggested a remedy he has so successfully applied and carried out. Yet ethereal vapour as a remedial agent has been known and employed nearly as long since as the date of the introduction of ether as an article of *materia medica*. Ether in vapour has even been publicly breathed after the manner of nitrous oxide gas, to produce analogous effects to this agent, in certain chemical lecture-rooms in London, for some years past. (a) Yet it must be recollected that the pure vapour of ether is not respirable for many seconds, so that in all these experiments there must have been a greater or less admixture of air: a circumstance never to be forgotten in the construction of any instrument employed for inhalation of this vapour, as to such omission alone the deaths, accidents alluded to, are to be ascribed in every instance which has hitherto come under my notice.

To facilitate the consideration of the subject, I will arrange it under the three following divisions:—

1. As to the qualities of the ether itself.
2. As to its effects on the healthy or sick, in its simple or combined forms.
3. As to the qualities necessary to constitute a complete, serviceable, and innocuous apparatus.

With regard to the first division, the sulphuric ether used for inhalations should be perfectly pure, free from acid or alcohol, of the specific gravity of ·730; and a quantity, not exceeding *half a drachm*, of ether of this purity, should be converted into vapour and mingled with three pints of air for each single separate inspiration. And the supply of ether and air should be so regulated as to furnish this proportion at each successive inhalation, taking care that the whole quantity consumed do not exceed two ounces at the most.

Admixtures of sulphovinic acid, (ethereal oil as it was formerly called) with the ether, or of free sulphuric or sulphurous acid, or of alcohol, have the effect of modifying the action of the remedy, either by causing irritation in the air passages, and thereby producing cough; or, in the case of alcohol, of substituting intoxicating for narcotic qualities.

I have found no ether of equal efficacy with the sulphuric, nor can any be breathed which produces so slight a degree of pulmonary irritation. The effects of the vapour of ether on the system, forming the second division of the subject, I need scarcely add, will materially differ according to the application and the purity of the spirit.

With regard to the effects of inhaling ethereal vapour properly mixed with air: they vary according to the state of the patient, the disposition his mind may be in prior to his commencing the operation, and the mode in which the vapour has been administered; but in a large majority of cases, with the ordinary class of instruments and in my early experiments, I found a few inspirations have been followed by much irritation of the bronchial membrane, inducing feelings of constriction in the throat, with sensations of suffocation almost as great as though carbonic acid were inhaled. It is thus after numerous trials I discovered that one part ethereal vapour and two parts air constitute the highest admixture which can generally be inhaled, without defeating much of the effect of the remedy by irritating the lungs. If a proportion of steam be added to the extent 1-10 to 1-6, the remedy is rendered so much milder that it scarcely disturbs the natural freedom of inspiration, even in irritable cases; a further addition of steam would appear to render the action of the ether comparatively impotent as an agent for producing insensibility to pain, but very efficacious against many affections of the respiratory organs, as catarrh, certain stages of bronchial affection, and spasmodic asthma—the paroxysm of which it seldom fails to suspend.

It has been stated, with much truth, that the effects of ethereal inhalation are marked by three principal stages, which gradually lapse or blend into each other. The first has been regarded as the stage of excitation, evidenced by redness or flushing of the face, slight increase of pulse, and actions, looks, gestures, or speech, which betray excitement. The second stage is marked by unconsciousness and sensibility, depressed pulse, long inspirations, and general relaxation of the muscular system, commonly so complete as to prevent speech and motion. The third stage is manifested by faintness or complete syncope, attended with stupor and unconsciousness, small or imperceptible pulse, collapse of all the vital functions, coldness of the surface, palor of the face and lips, clammy perspiration, loss of muscular power and action, even in the muscles of respiration, and finally by death itself.

It can scarcely be necessary to observe that this stage of collapse results either from the administration of the ethereal vapour in too concentrated a form, or in too large a quantity, or too great a length of time, or, lastly, from peculiar idiosyncrasy in the patient; and that happily it is very rarely witnessed, if common prudence be observed, and an apparatus employed in which *the exact quantity of ether used and proportions of it inhaled* can be measured both by the hand and eye: therefore, on the latter account, the apparatus should be of glass.

With regard to the third part of my subject, "*the necessary qualities of the apparatus to be employed*," it will be perceived, from what has been said regarding the purity of the ether, that if such apparatus could contain within itself the means of correcting any accidental impurity, it would constitute a great advantage; for instance, if warm water, or an alkaline liquid, were in the receiver, not only would the evaporation of the ether be ensured, but any alcohol or free acid would be dissolved, whilst, if the temperature of such liquid were above 100° Faht., the conversion of the ether into vapour would be accelerated; and, as it would seem advisable to be enabled to regulate accurately the quantity of ether in vapour taken into the lungs at a single inspiration, the means of accomplishing such an end must be a *sine qua non* in the perfection of the apparatus. The next point requiring our attention is the fact that a single inspiration requires from three to four pints of aëriform fluid for its accomplishment; consequently the apparatus must hold so much, which must be in a manner confined to ensure its admixture with the ether when vapourized, whilst there shall be a free communication between it and the lungs, so that the trachea shall have a supply of etherized air fully equal to its calibre. Finally, some substitute a second pair of lips; and a second glottis will be required to enable the vapour to be inspired and expired, without being returned again into that part of the apparatus wherein it was generated; and all this should be so managed as to interfere as little as possible with the natural freedom of respiration.

Such are the requisites for a perfect apparatus, which would be farther improved by being rendered portable, inexpensive, and readily repaired in case of accident. I can assure you I have laboured in this field, and I believe, in common with all inventors, have had to deplore many omissions and commissions over which I have had no control. In the firm of Messrs. Maw and Son, I hope to have discovered the object of my search, so that my professional brethren may be supplied with an instrument which shall satisfy them both in its workmanship and cost, and which shall contain all the requirements before mentioned, in addition to being applicable to all kinds of inhalations, of which, with your permission, I purpose rendering an account on some future occasion.

I am, dear Sir, your obedient servant,

JAMES STARTIN.

3, Finsbury-place South, March 17,
17th March, 1847.

(a) Under the eye and by the direction of Dr. A. T. Thompson and others.

EXTENSIVE FRACTURE OF THE SKULL, AND RECOVERY THEREFROM.

By I. R. TORBOCK, M.D., Kirkby Stephen.

Thomas Thistlethwaite, a youth about thirteen years of age, whilst engaged attending a mason, in the employ of Messrs. Burdes, of Carley-hill Limeworks, near Sunderland, had the misfortune to have a stone of considerable magnitude, fall upon his head whilst in the kiln bottom. He was taken up in a state of insensibility, and conveyed home. On my arrival, accompanied with my friend, Mr. H. H. Taylor, surgeon, we found him stretched upon a table and apparently in *articulo mortis*; no pulse, either at the wrist or temples—indeed there were no visible signs of life. The symptoms were those of compression of the brain, the pupils were much dilated and immovable, and there existed a total loss of all consciousness. Notwithstanding, we proceeded in our examination, when we found an extensive lacerated and contused wound of the scalp, extending from the front to the back of the head, in a line corresponding with the frontal sinus. On removal of the scalp, so as to ascertain the nature and extent of the injury, we found a fracture extending in a direct line from the frontal through a portion of the occipital bones, above six inches in length, attended with considerable depression. On applying the elevator, it was evident that injury had been done to the longitudinal sinus, not less than from five to six ounces of dark venous blood escaping; we also found the dura mater

lacerated and covered with bloody serum. At this stage of our proceedings I was requested to desist as "the boy was dead." Nothing daunted, we persevered, elevating the fractured portions, and removing others; the brain was now freed from pressure, and after a short interval, to the astonishment of all present, the sufferer heaved a faint sigh; the region of the heart was now subjected to friction, with warm stimulants, and every means followed out to procure reaction. This was at last accomplished, after considerable perseverance; suitable diet was enjoined, with quietness, attention to the bladder and bowels, and, as symptoms of an untoward character manifested themselves, depletion by the lancet, leeches, &c., but with great caution. He continued in a state of insensibility for several days, voiding his motions involuntarily; the pulse was never quick, but, on the contrary, slow and very irregular, and any one not conversant with the case from its commencement would have been led to conclude that each successive beat of the pulse was the last and closing operation of the heart's action, such was its peculiarity: he was not able to speak for some time, and, when he became conscious, complained of great pain in his head, not bearing the least noise, the inquiries having to be made in a whisper. Every symptom was narrowly watched; mercurial preparations were given to induce gentle ptyalism; blisters to the back of the neck and extremities; due attention to the bowels—viz., mild aperients, enemata, &c., the nourishment being varied according to circumstances. He continued thus to linger for two months, when he gradually recovered; the scalp was healed, and there remained a longitudinal furrow, in which the thickness of a finger might be imbedded. Notwithstanding, he is now entirely recovered, and enjoying robust health, and has been for some time engaged in the business of a ship-carpenter, which is a very laborious calling. Three years have now elapsed, during which interval he has never complained in the least of pain in the head, and the normal functions of the brain have never been interrupted.

THE MATTHEWSON AND COOKE SUBSCRIPTION.

Pursuant to public announcement, a meeting was held on Wednesday, the 10th instant, at the Craven's Head, the well-known sporting house in Drury-lane, for the purpose of completing a subscription, begun at the meeting at Exeter-hall last August, for procuring the discharge from the army of two privates of the 7th Hussars, whose evidence was found so useful at the memorable Hounslow inquest. At seven o'clock, the hour named for the chair to be taken, the room might perhaps have held ten persons, the number steadily increasing till at eight o'clock it reached the maximum of thirty individuals. The audience, who till this time had in silence supported an exemplary equanimity, began to leave the room, and the treasurer and secretary appeared not a little uneasy at the absurdity of the position into which they had brought the persons present, including themselves; ominous shrugs and significant whispers were rife: "can't get the steam up," "must tell them something," "better adjourn," "awkward fix," were the expressions interchanged between the two gentlemen. At last, some time after eight, the chair was taken by the treasurer, who called on the secretary to read his report. This document, after alluding to the commencement of the subscription in Exter-hall, and the enthusiastic exertions which had extended from London over the country, stated that this feeling had been of brief duration, and, although the sum proposed to be raised did not exceed £50, £35 only had been gained—a sum which included certain doubtful sums, the receipt of which might be speculated upon.

This decadence of the public sentiment gave occasion to some very appropriate remarks on the fickleness of the national character, followed by an imploring appeal to the generosity of the meeting. The secretary stated that, in order to give the greatest publicity to the announcement of the meeting, the most approved methods of advertising had been put in requisition; the result was thus rendered still more unaccountable. After some ineffectual endeavours to create a sensation in the assembled few, Mr. Wakley put an end to the difficulty, as will be seen in the subjoined report of his speech, by undertaking himself the completion of the subscription.

Mr. Wakley said—Mr. Chairman, I do not see any reason for so much grief as has been expressed at the small attendance of this evening, or the scarcity of the subscription; on the contrary, I think that the manner in which the contributions have been raised, by penny subscriptions, gives us evidence that, in the prosecution of the great object which we all have at heart, we carry with us the sympathies of the public. It would indeed be discreditable to the public if, knowing the circumstances in which Mathewson and Cook stand, they had not contributed their mites. It is monstrous that a man who comes forward and gives his honest testimony upon oath—that such a man should be compelled to feel that in doing so he may place himself in a situation of difficulty and danger; and it is of the greatest importance that over such a man the shield of public protection should be thrown. Now, in this case, the private Mathewson appeared to me to give honest testimony, and I must say the same also of Cook, without anything of an exaggerative character; and every statement was supported by other evidence. Is it not monstrous that men who had only honestly discharged their duty should be allowed by their fellow-citizens to be exposed to suffering on that account? I say, it is in the highest degree discreditable that these men should be allowed to remain in the position of danger in which their honest testimony has placed them: they have by their manly conduct incurred the ill-will and displeasure of their superior officers. A short time after the evidence of Cook had been given, he was singled out from the rest, and the whole battalion was ordered to fall back and leave him alone to stand forth as a man who had done wrong, though his only offence was that he had spoken the truth on oath. Cook is a member of a most respectable family, and was held in esteem, as was shown by the privilege which was awarded to him of having a room exempt from the presence of a corporal; but shortly after his evidence had been fearlessly given his room was taken away and a corporal placed over him. I believe the Hounslow inquest has achieved a great public good; as to myself, I have only done my duty. I set out on the inquiry with that determination from which nothing could induce me to flinch. I held the inquest under suspicions, shared in by gentlemen and magistrates, that the unfortunate man White had died in consequence of the flogging, and I conducted the inquiry with reference to that suspicion; it was a duty which I owed to the crown and to the public. The clergyman of the district, himself a magistrate, was told that the man had died of diseased liver; and from the multiplicity of the reports in circulation there was the greatest difficulty in getting at the truth; and, having commenced the inquest, I determined to take no evidence till the body had been well examined, both externally and internally. It has been a troublesome and painful thing to me; but a man never feels pain when he knows he is doing his duty; and the results give me the greatest satisfaction. No feeling that I had with reference to the practice of flogging influenced me; but I merely did what I thought, by the oath of my office, I was bound to do. The conduct I pursued has led Lord Denman to deny me justice. A calumnious public writer had charged me with having participated in the fees of the inquest with one of the medical witnesses, and I moved for a criminal information. Shortly after the publication of this calumnious statement, I was attacked in the House of Commons, and I defended myself. But what does the Court of Queen's Bench do? It alleges as the chief reason for denying me its protection that I had taken the law into my own hands by this defence which I made in the House of Commons, so that, because I would not hear a foul libel against me repeated without a word in reply, I am denied justice in the highest court in the kingdom. Well, the Chief Justice complains that I did not call the medical witness who had attended White. Now, White had been flogged twenty-six days before his death, and had been taken into the surgical ward of the hospital, and very properly, because it was a surgical case—they had made it so by inflicting a wound; he was taken into the ward, and kept there for twenty-five days; but when his legs and bladder were paralysed, he was taken in that helpless state, against his own wishes, into the medical ward, to make it appear that he had died, not from a wound, but from internal disease. No attempt was made to deny this at the inquest, and I could not call that witness safely who had attended the deceased under the circumstances. What did Lord Denman say? He said that that medical officer was placed in a most perilous position. Lord Denman stated that, if that witness had stood by and seen too much punishment inflicted on White so as to cause his death, he would have been responsible for such loss of life; and yet that is the witness whom I should have first put into the box! A man who may be liable to a charge of murder is to be put into the witness-box, to give his testimony to the jury! I consider that for the sake of truth, for the sake of the jury, and for his own sake, I ought not to have placed him in such a position. I am satisfied that no one could have more misstated the law than Lord Denman has done in this case, and it remains the duty of an inferior coroner to correct the mistakes of the chief coroner of this kingdom.

Then there are two other medical witnesses, officers who had come down from London to examine the body. And now, observe, the law provides that, if any medical witness examines the body without the authority of the coroner, he shall not be paid the customary fee—implying that it is against their duty to make such examination. But they did examine in a certain way: not having cut down on the muscles of the back and examined the spine, they came to a final conclusion and made their report, having made only a partial examination of the body. Theirs was not evidence on which the jury could rely: having made a *post-mortem* examination, proceeding on an assumption which they did not wish to disturb—that the deceased died of internal disease. I know that in the course I pursued I gave great offence, but it was not the first time, nor has it been the last. I gave offence because I adopted a line of conduct which led to the truth. It was disagreeable to some to hear the truth, and hence abuse and misrepresentation; but if I had not received that abuse I should have believed that I had not done my duty. Now, one of the medical witnesses said that he had never known a man die in consequence of a flogging; and if I showed abruptness to any one it was to that man. I speak as a medical man, when I state it as my conviction, that more have died from flogging in the British army than have perished in the whole country by the halter. I have asked, again and again, in the House of Commons, for returns of the names of the soldiers who have been flogged in the preceding year, and of the places where they might be found twelvemonths afterwards, but could never get them. The fact is, they know that the men have perished under the system. It is not long since a man was flogged at Brighton and died; the jury returned a verdict that the man had died of the flogging; it was taken no notice of, but passed off. There is nothing more dangerous to the constitution than an injury of the skin. At the very time the inquest was sitting, a footman in Russell-square received a slight injury, by burning his finger in attempting to extinguish a fire; he went to the hospital,

had it dressed, and returned to his duty; in forty-eight hours he returned, and in forty-eight hours after that was dead. This man, before receiving this injury, was in perfect health.

I remember holding an inquest on a child who was scalded by about half a tea-spoonful of hot water, which spirted out on her breast, producing a blister about the size of a half-crown, and from this slight cause she died in thirty hours. And, if such are the results of causes comparatively trifling, what may we not expect from the lashing, the pounding, and the excoriation of the skin by flogging? The only wonder is, that more have not died than we suspect; and it is astounding that any man should have ever recovered the consequences of the injury; and it may well be characterized as a bloody, brutal, and disgraceful practice, and we must feel the utmost disgust for every one who upholds it. As I have argued on another occasion, they who would maintain it, as part of a wholesome discipline for the men, are bound, in justice to the junior officers, to see that they do not lose the advantage of it. The report which has been read shows that much good has been done by the inquest. During the last two years before this was held, 38,000 lashes were inflicted; and after it only 155 lashes in six months, or only five more for the whole army than on poor White. It is impossible that any one can reflect on these results without rejoicing; but I shall not deem the work complete until both these men are released from a service which they detest, and restored to us in the free exercise of their rights as citizens. As I have before said, the inquest was very troublesome. On the last day of its sitting I left my house at eight in the morning, and could not be home before five the next morning. It has been very expensive also: the law proceedings have involved very heavy expenses; but if not another shilling is subscribed for the liberation of these men, I will take care that the money shall be found. I have heard from persons who can, if necessary, employ their authority, that £50 will be sufficient to liberate both; and I trust that we shall soon have the pleasure of seeing both amongst us.

GOSSIP OF THE WEEK.

ALLEGED MISCONDUCT OF THE FACULTY IN BIRKENHEAD.

On Wednesday last, an inquest was held at Mr. Harwood's, Market Inn, before H. Churton, Esq., coroner, and a highly respectable jury, to inquire "how and by what means" the deceased, Caroline Gray, came by her death. From rumours as to alleged neglect by certain medical gentlemen, an unusual interest was excited; and, during the whole of the investigation, a great number of the profession were present.

The first witness called was Myre Tyrell, who stated that she had been in attendance on the deceased up to the time of her death. She was first called in by the deceased on Monday, February 22nd, to attend her, as she was very ill, and fancied that the pains of labour were coming on. I then advised her to send for a medical man. I afterwards left her in the hands of a midwife, at about nine o'clock the same evening. Mr. Foulkes, surgeon, visited her. I saw him in the room: he had examined her. He immediatly said to me, "You see that this woman's time is come; but I can't attend unless I am paid one guinea. She will be delivered in about two or three hours, if she has proper attention." He then immediately left; at the time of his doing so the pains were strong upon her. I saw her again between four and five o'clock the next morning. The midwife had also gone out for a short time. The deceased desired me to examine her. I did so, and found her in strong labour. The midwife told me that she had been so since three o'clock. The deceased urged me to go for a doctor, or she should be lost. I then went for Dr. Vaughan. This was about five o'clock. Dr. Vaughan stated, that having a violent cold, he could not attend, but he sent me to Dr. Schofield, who, after some parley with his servant, at the door of his room, discovered that he also had a sore throat, and could not go. I afterwards went to Dr. Vaughan, and stated that Dr. Schofield could not go; but the only answer I got was from a person from the upper story, saying it was all well. I then called upon several other medical men, but could not get any one to attend. I then went to the Townhall, and was referred by the policemen on duty to the parish doctor; but, having been there before, I did not go again. It was about half-past six when I returned. The deceased was very much excited and disappointed at my not bringing a medical man. Her husband then sallied out, and brought Mr. Steele with him. They arrived about nine o'clock. After Mr. Steele had examined her, he stated that she was in a very bad state: "the child ought to have been born hours ago." He also stated that his charge was "one guinea," and that he must be paid before he could do anything. When this was stated there were other persons present. I then went to fetch the husband, and upon my return I found Mr. Steele on the outside of the house apparently with the intention of leaving. He (Dr. Steele) remonstrated strongly with the husband for fetching him from home, without being able to pay him. After some delay an arrangement was made about the fee. He returned into the house, and used the necessary exertions to relieve the patient. Finding he was not able to effect this, he went for Mr. Stevenson, with whom he held a consultation, after which Dr. Stevenson delivered her. The child was dead. She appeared to be doing well. Mr. Steele again called upon the Wednesday, and saw the deceased who had been rambling in the morning. He also asked the husband for his fee, but got none, upon which he stated that he should not attend again, although there was danger, unless he was paid. He then left. There was no medical man from Wednesday until Saturday, neither had she any medicine except a little castor oil. She was delirious at times. On Saturday I succeeded in getting a ticket for the Dispensary, but was told by Mr. Steele that there was no relief of that sort there, but he recommended me to the parish doctor, who was out of town. I afterwards got his assistant, who called and administered some medicines as well as relief. Dr. Vaughan called upon Sunday; she was then in a rambling state. He stated that there was no danger, and ordered me to go on with the medicine. About ten o'clock, the same evening, she slept. On the Monday I again saw her, when she was delirious. I sent for Dr. Vaughan, who came about ten o'clock, and requested, above all things, to keep her quiet. He also appointed a nurse to attend her. About six o'clock, I observed a great change; her pulse was very feeble, and a cold perspiration broke out upon her. Shortly after she died.

Dr. Steele and Dr. Foulkes then put several questions to the witnesses as to there having pointed out where gratuitous relief was to be had, but it did not appear that they had at all given them distinct information.

Dr. Stevenson was then called. He confirmed the evidence of the midwife as to the state of the patient, and also stated, in answer to a juror, "that he thought if medical aid had been properly rendered on the previous night there would not have been any difficulty." In answer to a question, he also stated that if he had found her in the state as first described he would not have left her.

This closed the evidence.

Dr. Steele here stated, that after attending the deceased up to Wednesday, and giving her friends all instructions necessary to get the assistance of the parish officers, he left her going on in as favourable a way as could be desired, but from some cause or other this advice was not acted upon until Saturday.

The jury then retired, and brought in the following verdict:—"That the deceased died from puerperal mania, or childbirth; but the jury cannot separate without expressing their regret that more prompt and efficient aid was not rendered by the medical men in attendance on the deceased; at the same time they beg to thank Mr. Stevenson for his prompt attention to the deceased when called upon to do so."—*Liverpool Journal.*

Medical Reform.—In a letter addressed to the local secretaries the National Institute make the following statement:—"It affords us much pleasure to enclose you a copy of a memorial, addressed by the Council of the National Institute to the Right Honourable the Secretary of State for the Home Department, and to inform you that, since that memorial was presented, a deputation from the council has been favoured with an interview by the Right Honourable Sir George Grey, and we feel justified in stating that the result of the conference between the deputation and the representative of the Government was highly satisfactory to the claims and prospects of the general practitioners of this country. * * * In the year 1844, when the agitation induced by the Government bill of that date commenced, the general practitioners of this country, as a class, were in a totally unorganized state:—associated with the physicians and with the fellows of the College of Surgeons in the various local societies throughout the kingdom, they were in danger of becoming parties to a measure which, so far as their own class was concerned, would have been most inimical to their interests and derogatory to their position as a scientific body. The tendency of the bill in question was fortunately discovered; the manifesto issued by the Medical and Surgical Society of the borough of Marylebone placed it in a clear point of view, and the National Association of General Practitioners was commenced and most effectually organized. Between four and five thousand members of the profession could but obtain a hearing on the part of the Government. The result was an abandonment of the first Government bill, and various attempts to overcome the difficulties by a compromise. The representatives of the National Association adhered to the interests of their class, and to the public interests as identified with those of the general practitioners; the Government would not proceed without the concurrence of the colleges; the bill was amended three times successively, and was ultimately withdrawn. Thus, Sir, the general practitioners, by their representatives at the seat of Government, successfully opposed, the power and influence of the colleges. The bill of Sir James Graham was originally intended as part and parcel of a system of legislation which commenced with the unjust charter granted to the College of Surgeons, and was to have been followed by a charter to the College of Physicians having a similar tendency as respects the general practitioners,—thus rendering complete the two first portions of this legislative scheme. These events have proved that the general practitioners united, when they have justice and truth on their side, are strong enough to make an efficient stand against all their opponents. They have prevented aggressive legislation, and they might probably force upon the Government and the Legislature such a reform as the circumstances of the profession and the public now demand—but for this end they must be united as one body. Disunited, and without an authoritative head, they would assuredly sooner or later lose their present social and professional position, and be assimilated, in the eyes of the public, with uneducated pretenders to the healing art. The National Association was essentially ephemeral in its character. It took its rise during the excitement of the period, and it ceased to progress when that excitement subsided. Hence the necessity of forming the National Institute of Medicine, Surgery, and Midwifery. The great aim of the promoters of that Institute is permanency—that the general

practitioners may have a representative head continually at its post, until the legitimate objects of the class thus represented are fulfilled—willing and prepared to perform those duties—active and passive—for any period, and under every emergency which may arise in the progress of a great public cause. It was the desire of the Committee of the National Association that we should thus briefly remind you of the present position of the general practitioners; and, if you concur in the views of the committee, that we should request you, in their name, to use your best exertions to further the efforts of the committee in establishing the National Institute upon a solid and permanent basis; and as the association can only be brought together upon some great emergency, similar to that from which it took its rise, we are also requested, through you, to state to the Members of the National Association, that their committee have every confidence that the objects of the association will be kept steadily in view and actively promoted by the Council of the Institute—the power and influence of which must, however, necessarily depend upon the support which it meets with from the great body of general practitioners of the kingdom. We beg further to inform you, that by a resolution of the committee, the balance of the funds of the association, amounting to £67 17s. 7d., has been handed over to the treasurers of the Institute, for general purposes, and that, all liabilities having been discharged, the donation list of the Association is at present closed."

In an action tried at Swansea, Mr. Chilton, Q.C., in his address to the jury, spoke as follows, according to the *Cambrian*:—"Now, he would tell them a signal instance of the evil resulting from giving inadequate damages. In an action brought by Mr. Wakley against the *Medical Times* for a libel, the jury gave £150 damages; and it was calculated that, in reporting the trial, the libel was reprinted in a greater number of papers than £150 would pay for, if the same libel was advertised."

The Royal Medical and Chirurgical Society.—The officers for 1847 are as follows:—President—James Moncrieff Arnott, F.R.S. Vice-Presidents—Robert Ferguson, M.D.; Jonathan Pereira, M.D., F.R.S.; Robert Liston, F.R.S.; Richard Partridge, F.R.S. Treasurers—George Burrows, M.D.; Benjamin Phillips, F.R.S. Secretaries—George Cursham, M.D.; Fred. Le Gros Clark. Librarians—William Baly, M.D.; Richard Quain, F.R.S. Other members of Council—George Budd, M.D., F.R.S.; W. F. Chambers, K.C.H., M.D., F.R.S.; P. N. Kingston, M.D.; Thomas Mayo, M.D., F.R.S.; James Arthur Wilson, M.D.; Henry Ancell; Richard Blagden; George Busk; Charles Hawkins; Benjamin Travers, F.R.S.

Mr. Hodgson, of Northallerton, suggests to us another form of portable inhaler:—"The inhaler is a quadrangular vessel, made of tin, divided into three compartments by two partitions, which are covered upon their upper surface with flannel, and are soldered (air-tight) along their sides and one end only; between the other end of each and the inhaler there is a space large enough to allow of a free passage to the air during respiration. The position of the spaces is shown in the diagram. Upon the top of the inhaler, and at opposite ends, are two stopcocks, marked A and B; through A is poured the ether, which, in passing to the bottom of the vessel, passes over and completely saturates the flannel, the surplus remaining in the lower compartment. The ordinary flexible tube, furnished with the respiratory valves, is screwed into the stopcock marked B in the drawing. When used the two cocks are opened; the course of the current of air during each inspiration is pointed out by the direction of the arrows. The ether easily passes into the upper part of the apparatus; and again, by its descent, flows over the flannel."

Mr. [illegible], the secretary of the Patent Epithem Company, contradicts the statement of [illegible] Brixton correspondent by informing us that "the spongio-piline has never been sold at 21s. per yard; [illegible] price is [illegible] with a deduction to those desirous of paying [illegible]. The numerous opinions," he adds, "the company continue to receive from men of the greatest professional eminence"—a fact to which we can bear witness—"is highly satisfactory."

Simple and Efficient Inhalation.—Dr. [illegible], of Tewkesbury, sends us this suggestion:—"Fix, by means of a cork, the socket of a Read's enema pump in the orifice of a Mudge's inhaler, and then, fixing the tube of the Mudge's inhaler in the upper orifice of the enema pump socket, use it as an inhaler. If it be found that the leaden valve of the pump is too heavy, it may be taken out and replaced by one of sealing-wax. A couple of ounces of ether may be put into the inhaler, and the inhaler placed in hot water, the nose being closed, if required, by a small napkin, but not at the commencement of the operation. The slight access of air which the inhaler allows diminishes irritation and renders respiration easy, whilst the side valve carries off the expired air and preserves the vapour pure."

Dr. Merriman, having resigned the office of physician to the Westminster General Dispensary, has been appointed consulting physician to the charity; and Dr. Wegg, of Maddox-street, has been elected to the vacancy.

Dr. Hilbers having written—"There is not a civilized country under heaven that is not illuminated by its beams, and even on the inhospitable western coasts of Africa it has extracted the sting from that *fatal fever* which has hitherto defied all human means which have been tried to conquer it,"—a correspondent wishes, through your columns, to ask where he may obtain information confirmatory of the paragraph alluded to. Having for a quarter of a century resided in climes where fever rages with the direst effects, he naturally feel interested in the subject. [We must add that our own interest in the question is not less than that of our correspondent's.]

Apothecaries' Hall.—Gentlemen admitted members March 11:—John Shepherd Fletcher, Thomas Oldacres, Thomas Binford Eyne, Nathaniel Best Gill, George Booker, Edward Mawthill Tearne, Horatio Sillifant, Charles Henry Holman, and Edward Hancock.

Ellis Flitcroft, agent for the sale of "Dr. Coffin's medicines," was charged at the Borough Court, Bolton, recently, under the statute 55 George III. A penalty of £20 is enacted against persons infringing the provisions of this act. The offence is also indictable at common law as a misdemeanor. It was proved that the defendant had sold medicines, particularly in the case of George Greenhalgh, upon whom an inquest had been held; and the defendant was ordered to find sureties to answer the charge at the quarter sessions.

The number of students in the French schools of medicine is about 1800, 800 of whom are in Paris.

Measles and Smallpox in Belgium.—Measles and smallpox are at present committing great ravages in some of the towns of Belgium. In Liége, during the month of January, there were 300 deaths.

In the Bengal Presidency, in 1844, the ratio of ordinary deaths to the strength of the corps was—as regards Europeans, 5·76 per cent., and, as regards natives, 1·17 per cent.

War-office, March 6.—3rd West India Regiment; Henry Shearly Sanders, gentleman, to be Assistant-Surgeon, vice Woodman, appointed to the 45th Foot.—48th Foot: Assistant-Surgeon George Thomas Woodman, M.D., from the 3rd West India Regiment, to be Assistant-Surgeon, vice Dickson, promoted on the Staff.—Hospital Staff: Assistant-Surgeon James Dickson, from 48th Foot, to be Staff-Surgeon of the Second Class, vice Godwin, deceased.

Obituary.—On the 3rd inst., at his residence in Piccadilly, Dr. Adam Black, formerly of Sloane-street.—Dr. Cattereau, the associate of Raspail, has recently died in Paris.—In December last, at Rio Janeiro, M. Felix [illegible], one of the commissioners appointed by the French Government to examine and report on the plague of Egypt, died by burns, arising from the accidental explosion of gas in his apartment.—Feb. 12, at [illegible] of fever, John R. [illegible], Esq., M.D., F.R.C.S. of Ireland, &c. &c.—Feb. 25, aged 58, of angina pectoris, George G. Bompas, Esq., M.D., of Fishponds, Bristol, long a member of the Provincial Medical and Surgical Association, and president-elect of the Bath and Bristol branch. Dr. Bompas was possessed of considerable scientific attainments, especially in his own branch of the profession—the relief of mental disease.—The late Dr. Lubbock, of Norwich, was the youngest son of R. Lubbock, Esq., M.D., who practised with celebrity in that city. His early education was received at a free grammar-school, under the late Rev. Edward Valpy. He commenced his medical studies under the late Dr. Skrimshire, of Peterborough, and subsequently became a student at Guy's Hospital. He afterwards went to Edinburgh, where he became a dresser for two years to Mr. Liston. After passing his degree as M.D. there, he became a member of the Royal College of Surgeons, London, and commenced practising in Norwich as a physician. Upon the resignation of Dr. Yelloly, as one of the physicians to the Norfolk and Norwich Hospital, Dr. Lubbock was elected to that situation; and, on the death of Dr. Wright, Dr. Lubbock was elected as the physician to the Norwich Bethel. During the last twelve or fifteen years, of more than 300 important cases in surgery were treated by him, from eighty to a hundred of which were for lithotomy, an operation which he performed with a success equal to that of the late Mr. Martineau, whose name stands, at the present day, as the most successful of lithotomists. He was only forty-four years of age when he died.—On Wednesday, the 3rd inst., at St. Helens, aged forty-nine, William Garton, Esq., M.R.C.S.—On Friday, the 12th inst., at Lea-park, Blackheath, Lawrence Hay Fyffe, Esq., M.D.—March 7, at Elm-cottage, Torpoint, in the twenty-eighth year of his age, from disease contracted after more than three years' service on the coast of Africa, N. Barrie Alexander, Esq., Assistant Surgeon R.N.

MORTALITY TABLE.

For the Week ending Saturday, March 13, 1847.

Causes of Death.	Total.	Average of 5 Winters.
All Causes	1026	1068
Specified Causes	1024	1061
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	128	183
Sporadic Diseases.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	[illegible]	112
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	178	170
Diseases of the Lungs, and of the other Organs of Respiration	368	354
Diseases of the Heart and Blood-vessels	48	[illegible]
Diseases of the Stomach, Liver, and other organs of Digestion	76	70
Diseases of the Kidneys, &c.	11	8
Childbirth, Diseases of the Uterus, &c.	12	12
Rheumatism, Diseases of the Bones, Joints, &c.	[illegible]	7
Diseases of the Skin, Cellular Tissue, &c.	..	2
Old Age	64	81
Violence, Privation, Cold, and Intemperance	18	[illegible]

A

COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the THEATRE of QUEEN'S COLLEGE, Birmingham.

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Fever; two classes of theorists upon it—organic and functional; of the former, various examples, inflammation of the brain or its membranes; congestion of the brain; subacute gastritis; gastro-enteritis; biliary disorder, other organic causes; opinions of the symptomatologists; reflections upon the two parties, prejudices and hasty conclusions, errors of investigation; examples; applications of these, unprejudiced investigations, varieties of organic lesion observed in fever; absence of this in other cases of fever; reflections upon these subjects; tendency of simple fever to derive a specific character from the state of health of individuals at the time of their seizure by it, comments thereon; cases, gastro-intestinal fever, fever with congestion of the brain; bilious fever.

GENTLEMEN,—In my last lecture, I gave you the general features and treatment of the fever of 1816, according to the simplest forms in which this occurred. I mentioned, also, certain complications which were occasionally met with, from the supervention of active organic ailment upon the feverish state, and the particular indications which required to be fulfilled under these circumstances.

It does not consist with the duties of this chair that I should enter into a consideration of the pathology of fever, abstractedly speaking: my business is to remind you of the several cases you have seen in the hospital, and give you particular reasons for the diagnoses that have been formed of them, and the remedial management they have had. I may venture, however, so far out of the direct line of practical discourse, as to inform you that the subject of fever has been treated of by speculatists, differing very widely in the principles they have attempted to establish. The one class has maintained that fever has essentially a local origin, in some organic functional and structural derangement; the other contending, that there is no local lesion whatever—that the disorder is general, and that no organic alteration in particular has any share in it. The first class, or pure pathologists, as they claim to be called, are amusingly divided amongst themselves, concerning the particular organ which shall be the *fons et origo* of fever. One man brings forward a certain number of *post-mortem* proofs that the source of all fever is local inflammation, and that the seat of its mischief is in the membranes of the brain. These, he says, are injected, thickened, and coated with lymphy effusion. Another says that not the meninges, but the substance, of the brain is the *locale* of the inflammation of fever; he finds this said organ harder or softer than natural, red upon its surface, and its superficial as well as deep vessels filled with blood. A third says that the brain is the particular situation of mischief in fever, but he denies that the action is inflammatory; and he adduces numerous cases and autopsies to show that the immediate investments of the brain are not altered, nor is its substance, beyond congestion of the vessels, which he considers to be chiefly passive in its kind. A fourth says the brain has nothing at all to do in the matter; that the stomach is at fault; its specific function is perverted, and its mucous membrane is in a state of subacute inflammation: he adduces many cases in point, and his museum is rich in preparations to prove all he says. A fifth says it is not so much the mucous membrane of the bowels, as of the intestines, in a state of mild inflammation, that constitutes the sole essence and source of fever; and he has drawings and specimens, showing the mucous tissue in various degrees of inflammatory redness, with, here and there, a spot of softening or ulceration, and a prodigious enlargement and vascularity of the aggregated and solitary glands. A sixth will tell us that the liver is the offending organ in fever: there is a heavy aching pain (according to his testimony) in the right hypochondrium, with dulness on percussion, over a larger space than natural; the complexion is sallow, the tongue yellowish-brown, and the fæces pale. "Are these not proofs of congestion of the liver," he asks you? You are further informed that he has met with many examples in point; that the local uneasiness, with its concomitant signs, was of recent occurrence, and the fever followed as a matter of course. Other authorities, equally creditable, entertain the belief that the great sympathetic nerve, the nervous system in general, the blood, or the skin, by being in some state in which it ought not to be, is the grand cause of fever.

The symptomatologists, on the other hand, contend against the local origin of fever, and bring *post-mortem* evidences, and of these not a few, in support of their doctrine. In all this confusion and contradiction of opinion, the question which naturally suggests itself to the unbiassed mind is—who is right? There is no reason why we should doubt the honesty or ability of these several authorities, and yet how strangely they differ! And they not only differ in opinion, but each, in maintaining his own ground, laughs at every other, whose position he considers untenable. They are all aiming at establishing a grand principle in a certain department of pathology, and not one of them but thinks his own right, and all the others wrong. If fever have but one origin, and that local, many of the authorities whom I have alluded to, have investigated to no purpose, and have deceived themselves, and others, by vain imaginings and very false doctrine. If fever have no local origin, then is all our pathological research profitless and void of truth. In such an unsettled state of things, how must we exercise our belief? Which is true evidence, and which false? Perhaps all the parties involved in the controversy in question are to blame for the positiveness with which they have expressed their views. The matter has never been once reduced to unexceptionable demonstration, and yet each theorist has maintained his opinion as though nothing could contradict it. In all this, it is impossible not to see that *prejudice* has been busy with men's minds. A series of morbid appearances have been found by one individual in several cases of fever which he has examined, and he has therefore concluded that these appearances are constant, and that the pathological condition they indicate is the essential source of fever. Other lesions of organs have been found by other inquirers, and forthwith each has contended that his particular one is the real one, and that all the rest are pathological mistakes. Now, there are some minds that are satisfied with a very small amount of evidence for generalization. They have a love of leaping at conclusions: give them only a starting-point, and they make a grand spring at an inference, not caring a tittle for those accumulated facts which wiser men consider to be the authorities of induction. Writers on physic are seemingly prone to this infirmity: it is a very grave one, and the father of the many fallacies that beset the literature of our profession. Other minds, again, can receive only one form of evidence upon any particular subject, and they are the victims, so to speak, of first impressions. An individual thus constituted would localize the origin of fever in the brain, stomach, bowels, or liver, according as one of these organs happened, *in the first few cases of fever he inspected*, to exhibit to him a sameness of morbid aspect. His attention would become riveted to these facts; and, though their number might not exceed half

a dozen, their novelty would make up for numerical deficiency, and they would form the basis of a pathological law. Any exceptions to this he would consider to weigh nothing against the grand point his first observations had tended to establish.

I cannot help thinking that some such mental infirmity as this, or the above I mentioned, must have possessed the prejudiced contenders for the local origin of fever. At any rate they cannot all be right, though each is ready to make oath that he is; if the truth be amongst them, only one can claim it, and that claim must be established at the expense either of the integrity or the intelligence of all the others.

It has always been to me a mystery that the individuals in question should never be able to meet with proofs against their particular doctrines. The man who has determined that fever shall arise from a morbid condition of none other organ than the brain, can never see anything in the bowels to indicate that the origin might have been there; the patron of *gastro-enteritis* never finds, within the cranium of one who has died of fever, any cause for this; and the lover of liver complaints is astonished that other pathologists cannot discover what has always been revealed to his visual sagacity—that the biliary organ is alone at fault in all cases of fever.

It happens, on the contrary, that pathologists who go to the bedside, and into the dead-house—divested of idle prejudices and conceits, prepared to search for the truth, and to take its several evidences as they may be manifested, whether uniformly or variously—discover no constancy of organic lesion in cases of fever. In one series of these, the cranial contents are seen to be exclusively morbid—in other series, the pulmonary apparatus is found to be chiefly abnormal—in other, the gastric—in other, the gastro-intestinal—in other, the biliary, and so on. But whether in these several examples, the fever were a *cause* of the organic alteration, or a *consequence* of it, is a point only to be determined by each individual case being minutely investigated and studied in all its bearings. But, assuredly, the most likely man to arrive at the *truth* of these things, would be he who had no prepossessions or prejudices to gratify, who was really a *truth-seeker*, contented with whatever *facts* might fall before him, and with whatever conclusions such facts might favour.

It not unfrequently happens, again, that fever runs a fatal course without any particular function being much deranged during life, or any organic lesion being discoverable after death. In your practice of last year you saw several examples. These are cases with which the symptomatologist contends against the doctrines of the exclusive pathological school. Now, it is more than probable, that there is *never any alteration of function without alteration of structure, also*; and that, in the instances above referred to, there was some organic change not cognizable to the unaided senses. The late researches of the microscope and of organic chemistry are suggestive of this opinion. Nevertheless, the symptomatologist is perfectly right in refusing to lend his credence to this assumption, or the other, of the pathological school, and in maintaining his own belief, until *demonstrative evidence* shall prove that he is wrong. And the success of his simple, unspecific form of practice proves that he can afford to wait, without detriment to his patients, until the pathologist shall bring undeniable proofs of organic lesion being the origin of simple fever. As I have said, my own reflections incline me to the belief that such proofs will one day be given; but at least we do not possess them at present; we must not permit them to be assumed; and it will be time enough to substitute a new form of practice for the old one, when it can be shown that, in making such exchange, we are incurring no sacrifice.

I have dwelt thus far upon this topic, to show you the absurdities of undue theorizing in medicine; and to suggest to you how much wiser and better it is to accumulate and apply useful facts, than to indulge an inclination for idle fancies.

To turn, now, to the practical part of our subject. You will always find, during the prevalence of epidemic fever, in even the simple form in which it occurred in this neighbourhood last year, that certain cases of it will exhibit peculiarities dependent upon the particular condition of the subjects at the time of their attack. The fever is apt to derive some *character* from the state of health of the individual at the period of seizure. If any organ be the subject of disorder, this is likely to be increased by the supervention of the fresh ailment, and to impart to the feverish symptoms a more specific character than they would otherwise have possessed. This was especially the case with the fever of last year. Amongst the poor who suffered from the effects of starvation, and were in a state of cachexia, the fever presented chiefly typhoid features; in others, reduced from insufficiency of food, but still with impoverished, rather than depraved, states of body, a gastro-enteritic condition was the leading organic trouble; in others, dyspeptic from over indulgence, or the use of indigestible food, the stomach alone suffered, the bowels being comparatively easy; in plethoric subjects, liable to determination of blood to the head, cerebral congestion and stupor marked the progress of the fever; in such as had previously laboured under bronchitis, pulmonary congestion became the concomitant of the febrile state; in those suffering from liver disorder or disease, the fever had a striking bilious type; when it occurred to people in average health, it presented the symptoms I described in my last lecture; when to others of vigorous constitutions and active habits, and in florid health, its symptoms were chiefly those of inflammatory fever. We really had, then, prevailing at about the same time, what some authorities, fond of localizing fever, would consider the following forms of it—typhoid; gastro-enteritic; gastric; cerebral-congestive; pulmonary-congestive; bilious; low nervous; and inflammatory. There can be no doubt of each being both symptomatologically and pathologically different from every other; but this difference was owing, as I have said, to the particular condition of the patients at the time the fever attacked them. The fever did not wander about, here typhoid, there gastric, and elsewhere bilious, and so on; it was the same, the town and neighbourhood through, except in so far as it received a modification in certain of the subjects it visited. I will give you some illustrations, corroborative of what I say.

Eliza Scandret was admitted into the hospital, under my care, at the latter end of December last. She had been the subject of fever, three or four days prior to admission. When I first saw her, she complained of excessive lassitude, and of a sense of aching all over. She was very thirsty; had no appetite except indifferently, and started in her sleep; had alternate fits of heat and chilliness; constant nausea, and occasional vomiting; tenderness, on pressure, over the epigastrium and superior part of the abdomen; tongue furred and dry in the middle, and very red at the edges and tip; pulse 106, hard, and rather full. I learned that she had been the subject of indigestion, probably occasioned by confinement and indifferent food, during the three weeks prior to her entrance into the hospital.

This form of fever, you will perceive, differed from that in general, in the gastro-intestinal trouble that accompanied it, and that, in a minor form, had been its precedent. She was ordered the following:—℞. Sodæ bicarbonatis, tinct. hyoscyami, aa. ʒj.; acidi hydrocy. (Sch.), *m.* x.; mist. camph., ℥viij.; *m.* ft. mist. cujus cap. coch. ampla duo tertiis horis. The bowels were confined, and I prescribed this sharp mercurial purge:—℞. Hydrarg. chloridi, pulv. scammonii, aa. gr. iv.; *m.* ft. pulv. cap. stat. To have a mustard-plaster six inches square to the epigastrium, and the feet to be immersed in hot mustard and water at bedtime. On the following morning, she was somewhat improved, and this improvement continued during several following days, except that occasionally we had an increase of fever or of gastro-intestinal irritation, which called for frequent febrifuge and counter-irritant treatment. At the expiration of the fifteenth day, she was only troubled with a sense of sinking at the pit of the stomach, in common with a feeling of general debility; she had no symptoms of fever; her appetite was regular but not good—that is, too little food satisfied her, though she wanted it at stated times. Her tongue was covered with a pale fur, moist, flabby, and indented at the edges. It was surmised that her chief ailment at this time was gastric debility. She was ordered the sixteenth of a grain of strichnine in solution three times a day, an occasional aperient, and nutritive food. She improved most satisfactorily under this treatment, and in a fortnight left the hospital well.

On the 4th of December last, we had a *post-mortem* of a girl named Morriss. On the 3rd of the previous month, she was first attended by Mr. Carter, as a patient of the General Dispensary. Her chief symptoms then were lassitude, general aching pains, thirst, loss of appetite, and throbbing pain in the head. The pulse was hard and full, but not frequent; tongue furred; pupils slightly dilated; obscure pains about her bowels, which were not affected by pressure. Febrifuges every three hours, leeching to the temples, with mercurials twice a day, and aperients when needed, constituted her treatment. She improved for some few days, and then relapsed, and seemed to become hysterical, when Mr. Carter gave her ammonia, under which she rallied for a time, but again relapsed, and then I was requested to see her. I found her pale, but not emaciated; pupils dilated, and not sufficiently sensible to light; tongue coated with a brownish fur; pulse 104, thick, but not hard; skin soft, and bedewed with plentiful perspiration; excessive languor; bowels costive and tumid; great feeling of weight and throbbing in the head; occasional incoherence.

I learned that, for some years past, she had suffered from frequent pains in the head, unconnected with any obvious disturbance in the digestive or uterine function. She was in the habit of sleeping very soundly and snoring at night, and of often falling asleep during the day.

Considering this cerebral oppression, therefore, as not a recent occurrence, and judging from her pulse and feeling of prostration, I thought it not expedient to order even local bleeding. A blister was applied to the back of the neck; a dose of calomel and scammony was administered, followed, shortly, by a turpentine enema. I suspected passive congestion of the brain, and preferred to treat it, for the reasons I have mentioned, by counter-irritant, purgative, and derivative means, rather than by direct depletive ones. I was not able to visit her the next day, but she was reported to me as somewhat improved. I saw her the day following, and found her in so unsatisfactory a state, and surrounded by so few domestic comforts, that I advised her removal to the hospital. It was not until the day after this, that she was conveyed thither, and then she appeared to me to be sinking. Her surface was pale, cold, and clammy; pulse 80, full and soft; she was only sensible when roused. Hot-water bottles were kept constantly applied to her feet; a mustard-plaster was laid over the epigastrium and region of the heart; and ammonia and camphor with wine were administered at due intervals. She gradually sunk, and died in twenty-four hours after her entry.

Post-mortem.—The lungs were quite natural in aspect and feel. The heart was, curiously enough, *quite empty throughout*. You remember my remarking to you, as I opened its cavities, that each one was as clean as though it had been washed and dried. I never saw such an appearance before. The left ventricle of the heart was very firm, red when incised, and hypertrophied; its walls were nearly an inch in thickness. The right ventricle and auricle were pale and thin, and considerably dilated; the auriculo-

ventricular opening was more patent than natural. There was a little fluid effusion into the superior portion of the spinal cavity. The surface of the brain was congested throughout, and in some places there was a very small quantity of lymph effused. About two ounces and a half of clear serum were found in the left ventricle of the brain, and about half an ounce in the right. The substance of the organ was generally more vascular than natural, and in spots was very slightly softened. The peritoneum was quite free from vascularity, but was adherent to the intestines in places, and covered with minute granulations, bearing somewhat of a tubercular appearance. The other viscera were natural.

The condition of the peritoneum was evidently not recent, and therefore had nothing to do with her immediate illness. The peculiarity of her heart was particularly favourable to congestion of the brain. There was the hypertrophied left ventricle, driving its blood with unusual impulse, and, as a matter of course, the current along the carotids would be proportionately strong, and the arterial condition of the brain would correspond; then, there was the dilated state of the right side of the heart, with patency of its auriculo-ventricular opening, favouring regurgitation by the superior cava, and thus causing venous congestion of the brain. There were two sources, then, whereby this organ suffered from too much blood: one increasing the quantity *sent*, the other preventing a due *return*. Hence the oppressive headache, sleepiness, and stupidity, under which the poor girl had for some time laboured. Fever, occurring under such circumstances, would be most likely to mark itself by an increased disturbance of the already suffering organ. It did so; and she died from congestion of the brain, and the serous effusion consequent upon it.

You remember the man who left the middle male ward, convalescent, about a fortnight ago. I forget his name at this moment. He came in the subject of simple fever, supervening upon liver disorder. I remarked to you, particularly, the state of his complexion, urine, and fæces. Additionally to all the ordinary symptoms of fever, he had a dingy-yellow complexion, tenderness of the right hypochondrium, and, dulness on percussion over a larger extent than natural. He vomited bile and frothy mucus frequently, and occasionally dark matter like coffee-grounds. He had suffered from fever for about a fortnight; his liver disorder had existed several weeks. Off the African coast, he would have passed very well as the subject of a mild form of yellow fever. He was very prostrate, and, therefore, we gave him ammonia, with carbonate of soda and nitric ether, in camphor mixture, every three hours; a calomel and rhubarb purge at once; and moderate doses of grey powder, night and morning; also, counter-irritation over the region of the liver. We had some little trouble with this man, and for a few days I felt apprehensive about him. At last, however, his motions became of a proper colour, he made plenty of water, perspired freely, and lost his sickness and pain in his side; his complexion also became much clearer. We then suspended the mercury, gave him vegetable bitters, with soda and hydriodate of potash, and put an ammoniaco-mercurial plaster upon his right side. He continued thus for a fortnight, and was then dismissed well.

DUMAS ON ORGANIC CHEMISTRY.
No. XV.

ON THE URINE.
(Continued from p. 72.)

Pathological Urine.—In most diseases, the urinary secretion is more or less modified. It may be augmented in quantity, or it may be diminished. Its density, its odour, its colour, the materials which it contains, and the sediments which it throws down, may all vary to a greater or less extent. We know that the ancients attached great value to the examination of these variations, which formed a very important element in the appreciation of the symptoms, and more especially of the progress, of certain diseases. But since more positive symptoms, based upon a better knowledge of the laws of physiology, have succeeded to that empiricism with which medicine used to be so much encumbered, the appreciation of the characters of the urine has, in a great number of maladies, lost that exaggerated importance with which it used to be invested. In truth, both numerous and extended researches have been made as to the composition of the urine in disease; but these analyses have, in but very few cases, led to decisive consequences, or to such as possess any real value for the physician and the physiologist. There is nothing astonishing in this result.

The study of the alterations of the urine is beset with difficulties. When the system is once imbued with the malady, so many circumstances may arise to influence the urinary secretion, that it is in many cases extremely difficult to allot to each its just value. Thus, the augmented or diminished activity of the respiration, the abstinence from food, the drinks and medicines administered, the perspiration which may be developed, are all so many conditions capable of modifying the qualities of the urine. Observers have not always made due allowance for these facts, and hence, probably, the reason of their researches remaining so imperfect and sterile in general results which could be of value to science. We will, however, here briefly indicate the results of the most careful analyses, and point out the best drawn characters of pathological urine.

In inflammatory diseases, the urine is in general of a deep colour, sometimes of a brownish red or perfectly brown, and possesses considerable density. The proportion of urea varies: most frequently it is augmented; sometimes, however, it is diminished, as invariably happens after copious venesection. The uric acid, on the contrary, appears always to augment, and in some cases is found as high as 3 per cent., or even, according to M. Becquerel, 6·9 per cent., when compared to the weight of the solid materials; whilst, in normal urine, it only attains the proportion of 1·5 per cent. As to the salts, they are always diminished—a fact which is explained by the influence of the diet imposed on persons in a state of disease. According to the observations of M. Simon, however, the sulphates form an exception to this rule,—being rather augmented than diminished,—which is readily accounted for, inasmuch as the sulphuric acid of the urine results in great part from the oxidation effected on the sulphur of the albuminoid matters, under the influence of respiration, which, as we know, is rendered very active in inflammatory diseases. The existence of sulphates in the urine is then, up to a certain point, independent of the quantity of solid aliments introduced into the system.

In the last stage of inflammations, as in a great number of other diseases, and especially in intermittent fevers, the urine throws down a sediment. Most frequently these deposits are of a dark yellowish colour, and are formed in part by uric acid or by the urates; sometimes they consist of mucus, and more rarely still of the insoluble phosphates. In the latter case, the urine is invariably ammoniacal.

This reaction appears to be occasionally manifested in the urine of patients affected with low fevers, as typhus, &c., and is perhaps owing to a too-prolonged stay of the urine in the bladder. However this may be, the other characters of the urine are remarkably modified under the influence of these grave affections: it is usually found to be of a brown colour, and is specifically lighter than normal urine; its urea is always diminished; so also, with regard to the salts, without excepting even the sulphates. The uric acid, alone, is often augmented in proportion.

In the first stage of phthisis, the urine frequently presents the same characters as in inflammatory affections; it is more coloured and denser than in the normal condition; and this state of concentration augments still further, when, towards the end of the disease, the nocturnal sweats and colliquative diarrhœa become established. According to the observation of M. Becquerel, the quantity of urea secreted in a given time diminishes greatly, whilst the proportion of uric acid is very notably augmented, sometimes rising as high as five per cent. compared to the solid residue. This circumstance is easily explained. For, sanguification no longer being perfectly accomplished, the formation of products, less oxidized than urea, becomes as a consequence more abundant.

In dropsy, the composition of the urine undergoes remarkable changes: it generally contains large quantities of albumen, which may be discovered with ease by adding to the urine a few drops of nitric acid. In albuminous nephritis, or Bright's disease, the urine becomes charged with so large a quantity of albumen that it coagulates in one mass by heat. The urea is greatly diminished in the urine, in these cases, whereas its presence may be with facility recognised in the blood. In the active stage of this disease the urine acquires a red or brownish-red colour, and by rest throws down a deposit of brown flakes formed of fibrine and of blood-globules. This fluid presents an analogous alteration in inflammations of the bladder, and under the influence of copious hemorrhages. Should the blood-globules exist in their natural state in the urine, they will usually be found deposited at the bottom of the vessel. In this case, they may be easily perceived by the aid of the microscope. But it often happens that these globules have become so altered as not to be recognisable, or else that the colouring matter of the blood exists in the urine in a state of solution; we must then endeavour to effect the isolation of this principle by causing its coagulation by heat; under these circumstances, it separates in the form of brown flakes, which are subsequently to be treated by sulphuric acid and alcohol.

In some cases of hematuria, the urine is found to be so loaded with the principles of the blood, that, when abandoned to itself, it coagulates spontaneously and forms a true blood-clot.

In the last stage of inflammation of the urinary organs, and especially towards the end of albuminous nephritis, when the kidneys begin to be disorganized, we often meet with pus in the urine. The puriform globules may be readily distinguished by means of the microscope.

In icterus, the urine always presents a brown colour of more or less intensity, which is owing to the presence of the colouring matter of the bile. Nitric acid causes in this urine some characteristic changes of colour, of which we shall have occasion to speak when treating of the nature of the bile.

The composition of the urine undergoes a remarkable alteration in the disease, known as diabetes mellitus. This change consists in the presence of a greater or less amount of glucose. The patients are tormented by an inextinguishable thirst, and go on passing quantities of urine proportioned to the amount of drink which they take. Generally speaking, the quantity of urine excreted varies from 5 to 10 *litres* (a) in the day; but, in some cases, it has reached as high as 25 *litres*. Numerous researches have been made upon diabetic urine; but observers are not all agreed as to the results. Some have affirmed that the absolute amount of urea and of uric acid is diminished, and that these principles may even altogether disappear. On the other hand, it would seem to result from the experiments of MM. Gregor and Kane, that the total quantity of urea excreted, during twenty-four hours, is not inferior to the normal proportion, and in some cases may even exceed it. Only, as it is found diluted with a larger quantity of water, the richness of the liquid in urea must diminish, according to the quantity of urine voided in a given time.

M. Lehmann was the first to point out the

(a) The *litre* is equal to a French pint, or about one English quart.

existence of hippuric acid in diabetic urine. It appears that, at the commencement as well as at the termination of this disease, the urine contains a certain quantity of albumen. It has, moreover, a lightish colour, and is frequently thick, and denser than ordinary urine: it is, as already stated, characterized by the presence of glucose, which communicates to it the property of deviating the plane of the polarization of the light towards the right. The apparatus of M. Biot is a very convenient one for proving the presence of this principle, and is certainly capable of rendering great service in the diagnosis of diabetes.

To isolate the sugar from the urine, we commence by evaporating this liquid in a water-bath to a syrupy consistence. The residue is treated by boiling alcohol, of a specific gravity of 0·833, until nothing further is taken up by this menstruum. The alcoholic solutions, being in their turn evaporated to a thickish consistence, and left to themselves in a cool place, crystallize in the course of a few days. These crystals are to be purified by the ordinary methods, when they will be found to possess all the characters of glucose. Diabetic urine owes to the sugar which it contains the property of fermenting on the addition of yeast. Globules of ferment are even spontaneously developed in it. Fermentation offers then a good means for discovering the presence of sugar in the urine; but, when we make use of beer-yeast to excite this action, we must be careful that the latter does not ferment of its own accord; to guard against this, we have merely to wash it several times in water. By heating the urine of diabetic patients after adding to it a few drops of potass, it becomes of a more or less deep brown colour, in consequence of the alteration of the sugar which it contains. This mode of proceeding was proposed by M. Mialhe, and is both a quick and easy way of valuing the proportion of sugar.

Annexed are some analyses of diabetic urine made by MM. Simon and Bouchardat:

	Simon. I.	Simon. II.	Bouchardat.
Density	1·018	1·016	
Water	957·00	960·90	837·58
Solid materials	43·00	40·00	162·42
Urea	traces	7·99	8·27
Uric acid	traces	traces	
Sugar	39·80	25·00	134·42
Alcoholic extract, Aqueous extract	2·10	6·50	5.27
Salts			8·69
Phosphates and mucus	0·52	0·80	0·24
Albumen	traces	traces	
Oxide of iron (?)			0.14

What is the origin of sugar in diabetic urine? MM. Thenard and Dupuytren were the first to draw attention to this important question. M. Berzélius thinks that the neutral azotized matters of the economy become transformed into sugar. He believes that it is the same with the ingested azotized matters, and, according to him, patients fed on animal substances void an equally saccharine urine, as those who adopt a different diet. M. Bouchardat has arrived at totally opposite conclusions. He has shown that sugar is found in the blood, but not until some time after a meal, and that blood, when drawn in the morning, is perfectly free from it. He is led to attribute the presence of sugar in the urine to the amylaceous matters introduced into the economy: for, after a purely animal diet, he has constantly found the quantity of sugar diminish. His researches on this subject have led to the happy idea of compounding a bread almost entirely composed of gluten, the employment of which seems to have been attended with considerable advantage in several of the Parisian hospitals.

The name of *diabetes insipidus* has been given to a pathological state, characterized by an abundant discharge of urine, which is exceedingly poor in solid matters. This alteration of the urinary secretion is distinguished from diabetes, properly so called, by the absence of glucose, and by the urine being perfectly insipid.

We will now proceed to the study of some other alterations of the urine. Various observers have remarked a bluish coloration of this fluid, which has in some cases been attributed to Prussian blue. This appears to me, at the least, doubtful. Still, I have been able to verify the fact that cyanurets are occasionally formed in the economy. Thus, in the treatment of a wound formed by caustic potass, I have seen the linen which was used for dressing become quite blue: this was produced by the cyanurets, which escaped from the wound, coming in contact with iron, with which the linen had been accidentally soiled, and which thus gave rise to the formation of Prussian blue. I do not, however, believe that analogous phenomena can take place in the urine.

Braconnot has given the name of *cyanourine* to the blue matter of the urine of which we have been speaking. Cyanourine is a powder of an intense blue, without odour or taste; it is slightly soluble in water, to which it gives a brown colour by ebullition. The acids change this colour to a rose-red. It is somewhat soluble in boiling alcohol, from which, on cooling, it is deposited as a blue powder. The alcoholic solution possesses a greenish tint. The dilute acids dissolve it; the alkalis precipitate it from these solutions in the form of a blue powder. Nitric acid destroys it, and transforms it into *carbazotic* acid. When heated in a closed tube, it is in like manner decomposed, and gives out carbonate of ammonia, together with some empyreumatic oil, leaving a carbonaceous residue behind. This blue matter does not always appear to offer the same properties. Spangenberg found it to be insoluble in hot water, boiling alcohol, boiling hydrochloric acid, and the carbonated or caustic alkalis. Boiling alcohol and ether do, however, dissolve it and colour it blue. So also with concentrated sulphuric acid; when dilute, it dissolves it but very sparingly. According to Granier and Delens, it should be soluble in water.

Granier, Delens, Proust, Braconnot, Spangenberg, Marcet, and others, have described a black kind of urine, more or less deep in colour. Proust has given the name of *mélanic* acid to the black matter which he found in the urine. This matter is soluble in the alkalis, from which it is precipitated by acids. These solutions give brown precipitates with most of the metallic salts. Braconnot has denominated as *mélanourine* a matter which he has found in the urine, after having separated the cyanourine from it by filtration; by heating the urine in this state, it precipitates a substance of so deep a colour that it appears black. Its properties are very similar to those of cyanourine.

Seminal fluid is sometimes met with in the human urine: whether it be that it is poured into the urethra in consequence of some involuntary seminal emission, or that it may arrive there by the efforts which often accompany the escape of the fæcal matters, &c.; it may even flow back towards the bladder, and so become mixed with the urine, where there exists a stricture or narrowing of the passage below the orifices of the ejaculatory ducts. It is always easy to recognise the presence of seminal fluid by the animalculæ which it contains: for this purpose, we have merely to receive the urine into a long and narrow glass tube: the animalculæ, being specifically heavier than the urine, sink to the bottom; the fluid should then be decanted, and the deposit examined by the microscope; or else, the urine is to be passed through a filter, when we shall find the animalculæ in the last drops of the liquid at the very point of the strainer. The absence of animalculæ in the urine is, however, not always a proof of the absence of seminal fluid: for, in some affections of the genital organs, they are no longer met with in the semen. In old men, for instance, in place of animalculæ we sometimes find shining globules, which have been mistaken for imperfect animalcules. The prostatic fluid may also be accidentally mixed with in the urine.

Normal urine always contains a small quantity of fatty matters. It appears that, in certain diseases, and especially in phthisis, the proportion of fat in the urine may be augmented, and globules of this matter are sometimes found floating on the liquid. This is a species of alteration which may with facility be recognised by means of the microscope.

When urine, however, beyond the fatty matter, contains a certain quantity of albumen, it is denominated *chylous*. This urine is ordinarily thick, or even milky, and beneath the microscope it exhibits globules of fatty matter. The secretion of chylous urine almost always coincides with a peculiar alteration of the blood, characterized by the presence of a great excess of fat in this liquid.

Some observers have even insisted on the existence of milk in the urine. But, to remove all doubts on this head, it is essential that the materials of the milk should be clearly pointed out in this secretion, and demonstrated by precise experiments. The urine should, moreover, be so collected that there cannot be the slightest suspicion of fraud in the matter.

ORIGINAL CONTRIBUTIONS.

OBSERVATIONS ON URINARY CALCULI, AND ON LITHOTOMY.

By F. H. BRETT, Esq., M.D., F.R.C.S.,
Member of the Royal Asiatic Society; late Surgeon to the Governor-General of India's Body Guard, and Government Ophthalmic Hospital, Calcutta.

(Continued from 77.)

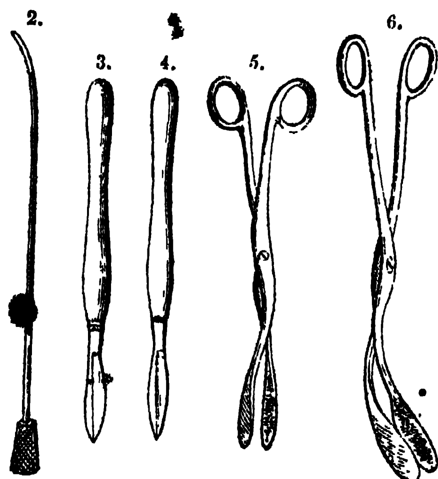
Preparatory Treatment and Prognosis, &c.—Very different is the case often with the phosphatic diathesis, the attendant on a high degree of irritation, and sometimes connected with organic disease. It is truly distressing to witness the peculiarly severe suffering attending this form of the disease, the emaciation, the exhausted expression of countenance, the loss of appetite, and high degree of constitutional and local irritation, which, together with the appearance of the urine and sediment, so readily indicate this form of the disease; indeed, the looks of the patient in the severe forms are alone pathognomonic. These patients cannot be operated upon with safety until the treatment formerly detailed has been employed so as to allay the irritation. After the employment of muriatic acid, opiates, with hyoscyamus, suppositories, &c., have ameliorated the severe sufferings of the patient, and, where the system is not completely exhausted, it is truly delightful to witness the effects of the operation. The pain attending it is a matter of comparative insignificance to such subjects, and the instantaneous cessation from all suffering acts like a charm on the late unhappy patient, who generally convalesces with rapidity.

We cannot be too minute in this diathesis in inquiring after the existence of organic disease in the kidneys, or an ulcerated state of the bladder. Some unfortunate cases have presented themselves, in which it would be the height of impropriety to attempt an operation. A patient presented himself at the Central Hospital, in Calcutta, labouring under all the worst symptoms of irritation and the phosphatic diathesis, there was likewise purulent discharge from the bladder. I declined operating, for which he was importunate, and adopted palliative treatment. The patient died shortly afterwards, and on examination there were extensive abscesses in the kidneys contained in cyst; the right one contained two large calculi of the triple phosphate in its pelvis. There was also another found in the bladder. The parenchyma of the right kidney was completely disorganized and adhering extensively to the surrounding textures. It was thrice its natural size. Both the ureters were distended with purulent matter. The coats of the bladder were thickened, and its external surface extensively ulcerated. A purulent discharge from the bladder alone is not, however, a sufficient objection to the operation, as successful cases have occurred where it existed; but it should not be attempted until the patient has undergone a careful preparatory treatment.

In the higher ranks of society, Europeans es-

pecially, in India, and among those who have lived luxuriously, or drank freely, and in the plethoric children of Europeans in tropical climates, the preparatory treatment must be particularly attended to in this, as, indeed, in all capital surgical operations; but here also the introduction of sounds, to accustom the parts to the irritation of instruments, as it is termed, is to be reprobated.

Mode of Operating.—Considering simplicity of instruments one of the first axioms in surgery, I generally employ nothing but a sharp scalpel, a straight staff, and forceps. A dose of castor oil should be administered on the previous night, with Europeans an enema in the morning. In natives of India the rectum is almost invariably evacuated early in the morning, and, therefore, this precaution is not absolutely requisite. The circumstance should be ascertained by inquiry, and the empty state of the rectum clearly known by examination *per anum*, which also excites contraction. The vapour of ether obviates the necessity for an opiate previous to operating. The existence of the calculus, by sounding, is, in all ordinary cases, to be ascertained immediately previous to operation, both by the surgeon and assistants. Figures 2, 3, 4, 5, 6, are the instruments I always prefer.



The necessary apparatus, in addition to the instruments above mentioned, consists of a scoop, two or three sharp scalpels, a spring tenaculum, and several curved and straight forceps, of different lengths—bandage, lint, sponge, warm water, and oil. A Reed's syringe may be occasionally required, should the stone be soft and break under the forceps. If the operator anticipates a very large calculus, he ought also to furnish himself with a long, narrow, probe-pointed knife, and forceps capable of crushing the stone, if requisite. These are to be placed on a chair, to the right of the operator, and covered with a towel.

The patient is placed on a firm table, about two feet and a half high, with his head and shoulders well raised by pillars; and a low chair should be in readiness for the operator, whose breast should be in a line with the patient's abdomen.

The staff being introduced before the patient is secured, it is to be held steadily by an attentive assistant against the arch of the pubes, giving its handle such a degree of inclination towards the right side as shall cause the staff to be parallel with the ascending ramus of the left ischium. The hands and ankles being now secured by lithotomy garters of broad worsted tape, a bandage passed round the neck and under the hams, and the thighs separated and pelvis fixed by able assistants, the scrotum is raised by the other hand of the assistant who holds the staff, and the skin of the perineum is to be made tense by the surgeon's left thumb.

These preliminaries being completed, the first incision is to be effected with a very sharp double-edge scalpel, by a free bold incision, commencing near the raphe on the left side; on a full-grown man, an inch and a quarter anterior to the anus, and, therefore, below or posterior to the arch of the pubis, terminating midway between the ischiatic tuberosity and anus, and below the inferior margin of that outlet, penetrating through the integuments, fat, and superficial fascia of the perineum. The second incision immediately following divides the transverse muscle of the perineum and levator ani, in the same direction. The finger is now introduced, and the groove of the staff felt for, immediately behind the bulb, which part is to be carefully avoided, as it is exposed by the first bold incision, for the artery of the bulb, when wounded, sometimes pours forth alarming hemorrhage. The point of the knife is introduced into the urethra guided on the back of the forefinger, and is to be moved forwards so as to reach the membranous portion, and is withdrawn by cutting any remaining resisting fibres downwards in the line of the former incisions. I then substitute a fresh scalpel with a blunt back, which is pushed on through the groove to the prostate gland obliquely upwards in a direction towards the umbilicus. The prostate is completely divided on withdrawing the knife, cutting downwards and outwards with a light pressure in the same line as the former incisions, the finger being still in the wound, regulating the action of the knife. So soon as the resistance of the prostate gland has given way before the edge of the knife, Scarpa and many other eminent surgeons recommend that great care should be taken not to carry the incisions through the coats of the bladder, which would endanger infiltration into the loose cellular tissue behind the neck of the bladder; in adults especially is this precaution requisite, as, by too free incisions at this period of the operation, the most profuse venous hemorrhage may be produced. If the stone is particularly large, safety will depend on gradual dilatation of the neck of the bladder as the stone advances in the blades, and an additional cut of any resisting muscular fibres, should that appear to be requisite. Some surgeons recommend dilatation with the blunt gorget, but I have never had occasion to employ it. The extent to which this dilatation of the neck of the bladder may be accomplished is very considerable, and, if the external incisions have been bold and dependent, stones of considerable magnitude can be extracted by caution and patience, which on such occasions are the greatest indications of skill.

Introduction of the Forceps.—The finger is now pushed on through the opening in the bladder, and the stone generally felt: the staff is now withdrawn. As soon as the stone is felt by the forefinger of the left hand, the closed forceps is introduced, which should be long, and guided on the finger. On being insinuated into the bladder, and the finger withdrawn, the handles are raised; one blade is passed under the stone, and the other above, and the instrument closed. The finger is again introduced to ascertain whether the stone is grasped in its smallest diameter, and to know that the coats of the bladder are not caught by the forceps; and, if the stone is not in its proper diameter, it may be shifted, by relaxing the hold of the forceps for that purpose. The operation is completed, by giving the forceps a quarter turn, so as to cause the short diameter of the stone to correspond with the short diameter of the wound, and *vice versâ*. The stone must be drawn towards the lower angle of the wound, pressing the forceps at the same time downwards with the left hand, if that should seem necessary, so as to obviate resistance from the bones in the anterior part of the pelvis. A lateral undulating motion should be given, using at the same time no violence. The parts will be found gradually to dilate, and yield to the exit of the stone. Should the stone be particularly large, and considerable resistance be offered by any muscular fibres at the lower part of the wound, I invariably give the handles of the forceps to an assistant, whilst, with a scalpel guided on the left forefinger, I freely divide the opposing muscular textures, and every interposing obstacle

In cases of enlarged prostate, it is expedient that, in passing that part, the convexity of one blade of the forceps should be directed upwards, and the other downwards, whereby its smooth surface it glides better over the projection, and the stone is less liable to be entangled by the tumour.

The advantage of long forceps is, that stones of considerable size can be extricated with a more powerful lever, and a more secure grasp.

Bilateral Section, and Management of the large Calculi.—Should the stone be so very large as not to be extracted except by unjustifiable violence, Dupuytren's bilateral section is to be effected; for this purpose the blunt-pointed bistoury may be introduced by the original wound, and the prostate freely divided on the opposite side, to the same extent as on the left, without any additional external incision. Thus almost any calculus which the bones of the pelvis are capable of admitting can be removed without laceration. The dangerous consequences of such an operation may be compared to the danger of difficult parturition, where the assistance of the obstetric is required with the forceps; being lessened by dexterity, gentleness and skill, and increased greatly by violence and laceration.

Treatment of the Fragments.—Where stones are friable, the detritus and small fragments easily find their exit with the urine, through the free wound which has been made; but it will be as well to use the scoop, and to inject warm water by means of Reed's syringe. The scoop is also useful for removing small calculi, using it as a lever, the lower part of the stone being held by the forefinger to facilitate the passage of the stone.

Before removing the patient, the finger should be introduced to ascertain that there are no remaining stones. In adults an instrument called a searcher may be of use, which is a straight bulbous staff.

Method of crushing the Stone when large.—I have never had occasion to break the stone, for the purpose of facilitating its extraction, but such a necessity may occur from its great size. It is expedient, therefore, to be prepared with a suitable instrument for that purpose. It should consist of strong forceps of considerable length, with sharp wedge-shaped teeth. The handles should be strong, and fixed by a screw and nut, by the approximation of which the stone, when included within the blades, is crushed.

After-treatment.—The bandages are immediately removed. The wound washed with warm water, and all coagula detached, oiled lint may be introduced. The patient is to be placed on a bed, previously brought close at hand for that purpose, so that, with the smallest degree possible of disturbance, he may be shifted from the operating-table to it; his shoulders should be well raised, the knees elevated by a bolster, and kept slightly apart.

Diluting drinks are to be copiously administered; half a drachm of bicarbonate of soda may be dissolved in a quart bottle of barley-water, from which the patient should partake whenever inclined. The more freely the urine flows, the better. Great tranquillity should be enjoyed, and none but light farinaceous food allowed. Some patients require to be supported, who have been much exhausted by disease and irritation.

A dose of castor oil may be administered on the second day.

A large elastic gum tube is recommended by many excellent surgeons to be kept in the wound, but I have never adopted such a measure, though in cases of a very large calculus, the extraction of which has been attended with any degree of tearing of the parts beyond the boundaries of the prostate, this may be useful.

In cases of inflammation of the mucous surface, either following the operation or previously existing, attended with deposition of the phosphate of lime, the administration of opium, mineral or vegetable acids, and a decoction of the "Pareira Brava" will be indicated; and, if

the s[illegible] of the wound is encrusted with this white [illegible]sit, stimulating applications are useful, for which purpose a lotion of the decoction of bark and tincture of myrrh may be employed. The nitric acid or nitrate of silver, in solution, may be employed, with a view to promote the separation of the deposit, and the production of healthy granulation.

Observations.—There appears to me to be an important advantage resulting from the employment of the straight staff, which is that of lowering the prostate gland and the neck of the bladder towards the perineum, when its handle is only slightly inclined towards the operator, and consequently he has not to cut so deep as when the curved staff is employed, the gland being distinctly seen on completing the incision.

I confess my predilection for the lateral operation on the above principle, as applicable for almost the largest sized stones which are likely to occur in the practice of most surgeons, in preference to any other measures which have been advocated. The opening can be enlarged to a great extent in the same direction; indeed the bolder and freer the incisions on all occasions, the better; and with the "bilateral section" we have an additional resource; and beyond this, for stones of the very largest dimensions, we have the choice of the recto-vesical operation, in which the incision of the perineum is made to extend through the tunics of the rectum and sphincter ani muscle. There is less danger to the patient in these instances from division of the neck of the bladder beyond the boundaries of the prostate, owing to the freeness of the incisions, and consequently the dependent opening obviating infiltration of urine. There are some extraordinary instances in which the "high operation" above the pubes may be expedient; but it can only be then justifiable where the patient is very thin, and the stone so enormous as to be inextricable by any other measure.

The result of the above principles is the best proof of their correctness, and is therefore annexed in the notes, wherein the average number of the fatal cases is one in fifteen. My last seventy cases have all been successful.

The wound must be left entirely open, and permitted to granulate from the bottom. All attempts to promote union would only endanger infiltration of urine into the cellular tissue. A small piece of oiled lint may be introduced into the wound to facilitate the current of urine; but I usually adopt nothing of the kind.

The urine generally commences to flow by the natural passage on the eighth day, sometimes in children on the fourth or fifth. In adults it may not occur till the fifteenth or twentieth day.

Encysted Calculi.—The only instances which I have met with were two: one in which a small appendix or neck was lodged in the anterior pubic portion of the bladder, where the portion broke off and ulcerated its way out, on the fourth day (see fig. 7), and one in which it was necessary to perform what is termed, "l'operation à deux temps" (Nos. 49 and 69). Both recovered. I would strongly reprobate all forcible attempts to remove these encysted calculi, when we are so unfortunate as to meet with them.

Fig. 7.



Case.—James Diggs, aged four, a remarkably fine European child, of very fair complexion. His parents brought him to me from Delhi to Meerut, when he was only three years old; but, apprehending convulsions by so serious an operation, from the highly nervous irritability in a child of that tender age, I advised them to defer the operation, which they did till the following cold season, when they brought him to me at Cawnpore.

The pain attacked him in paroxysms of intense agony which would last two or three days, during which his mother feared convulsions. Intervals of complete absence of pain would occur for a fortnight. Though a remarkably plethoric child, these attacks would, in the course of forty-eight hours, reduce him so considerably as greatly to alter his appearance. In the intervals, the natural resiliency and strength of his constitution almost as rapidly restored him to flesh and high colour. The alternate states of acute suffering and complete ease continued for two years. Nothing further was remarkable; all the ordinary symptoms of stone were manifest in a high degree.

The operation was attended with no difficulty or delay. The stone was seized lying towards the pubic region, and with a slight resistance yielded with a snap as though some slender point had been broken off. Introducing my finger, and directing it towards the situation from whence the stone was extracted, the pubic region, I distinctly felt a point of calculus sticking in the coats of the bladder. I immediately stated to the professional men present my conviction that a neck or peduncle was encysted, being enveloped in the mucous coat, and become insinuated between the muscular fibres of the bladder, forming a cyst. I requested Dr. Lightfoot to satisfy himself on the point, which he did. I then observed that we must suspend all further interference for the present; to attempt to extricate the encysted portion would be fraught with danger; "l'operation à deux temps" might be requisite, but that I should be disposed rather to leave the result more to the effects of nature, anticipating that the remaining portion might not improbably be extricated, by the natural process of ulceration, and drop into the cavity of the bladder.

The child was immediately removed from the table. The operation, and consultation on the case, had occupied about four minutes. The circumstances were fully explained to the friends by the professional gentlemen present.

The result fully corroborated our expectations in this interesting case. The encysted portion dropped on the bed on the third day, having been carried out by a jet of urine through the wound.

The child recovered without any unfavourable symptom, and on the eighth day I found him playing on the verandah with his brother. A few days afterwards he was able to return to Delhi, from whence his mother wrote to inform me of his arrival; adding that "he was in the most perfect and robust health." I have recently seen the child, in passing through Delhi; he was in excellent health. It is now some years since he was operated upon.

The expediency of avoiding any attempts to complete the operation in all cases of accidental difficulty is, I imagine, fully established, and I think illustrated in the above case. There is no harm in waiting, but much hazard in attempts to overcome the difficulty. There is no operation in surgery in which more unforeseen, and consequently unavoidable, difficulties may sometimes arise than in lithotomy.

The case was a fortunate one, for the mucous coat of the bladder was decidedly injured; I felt the edges jagged at the point of fracture; cystitis was therefore more likely to have occurred, which Baron Boyer states, "est la cause de la mort des trois quarts des malades, qui succombent à la suite de l'operation de la taille." Surgeons, however, in the present day refer the death in most cases after lithotomy to inflammation set up in the deep-seated cellular tissue round the neck of the bladder and rectum, between the levator ani and deep perineal fascia, and communicating with the peritoneum.

Figure 4 represents the form and dimensions of the calculus.

"L'operation à deux temps," as it has been called, can only be undertaken where the stone is found to be partially encysted, and where it cannot be removed at the time without violence. The only occasion on which this mode of procedure occurred to me was the following, where indeed it became a matter of necessity.

Case.—Jhoomloo, Moosulman child, aged seven years, in a delicate and irritable state, brought on by unusually severe suffering from the stone for about two years: whereby he had been so greatly reduced that his parents for the last ten days had despaired of his life, as he had become quite helpless: they came to me for relief in November, 1834. The operation was undertaken as a last alternative, and at the earnest solicitation of his father. The straight staff and scalpel were the only instruments employed, and there was no difficulty until the introduction of the forceps. The lower end of the stone was repeatedly seized, and as often escaped from the grasp of the forceps, being evidently retained, either by the firm contraction of the bladder, or by a portion of it being encysted. Finding all prudential efforts unavailing, and the child becoming much exhausted, I desisted; administered a full dose of tincture of opium combined with aromatic spirit of ammonia, and sent him to bed. Constant fomentations were applied. These measures had the most happy effect. The child rallied, the anodyne and soothing treatment was persevered in, and on the ensuing morning the stone was removed in the following manner. An assistant, seated on a chair, placed the patient on his lap with his back towards him, bent and raised the knees by introducing his arms under his hams, the perineum being lowered as much as possible, and the body kept in the erect position, so that the stone might gravitate as much as possible towards the lower part of the wound. Introducing my finger, I felt the calculus, which was immediately seized by the forceps and withdrawn. One extremity of the stone had been lodged in a "cul de sac" of the bladder, as was evident by the form of the calculus, that extremity being of smaller diameter than the other, and having a clearly defined neck, and rough extremity where it had been compressed, apparently by the separated fibres of the muscular coat of the bladder; which satisfactorily accounts for the impediment. I have not the slightest doubt that, had I persisted in my efforts to remove the stone, the child would have expired on the table; and the expediency of procrastination on the occasion is thus exemplified. Difficulties in lithotomy do sometimes occur when least anticipated, requiring all our self-possession and deliberate reflection. There is a natural reluctance in the surgeon, on whom the credit and responsibility of the operation depend, to allow it to remain incomplete, and hence, the moment of hesitation once having passed, some of our most celebrated surgeons occasionally, and young surgeons frequently, have involved themselves and patient in the most lamentable consequences.

Arterial Hemorrhage.—Three instances of alarming hemorrhage have occurred to myself, one of which proved fatal. Pressure should be immediately applied with the finger on the internal pudic artery, against the ramus of the ischium, and if possible the vessel should be secured. This will be more practicable in a thin subject. Should that be impracticable, a large gum-elastic tube should be introduced through the wound to the bladder. Several slips of lint are to be passed along it to a sufficient depth, and retained, if requisite, by compress and bandage. Carefully avoiding the bulb of the urethra, never cutting beyond the prostate, and keeping as far as possible from the ascending ramus of the ischium, are the great preventives of hemorrhage.

In No. 28, the patient was deluged with blood. Immediately after completing the incisions, the stone was extracted, which when accomplished, the hemorrhage had ceased. The wound was plugged, and the internal pubic artery compressed with the finger for a long time; but, on removing the finger, the hemorrhage returned—syncope, and alarming symptoms came on. The patient sunk during the night. There was apparently an irregular distribution of the internal pudic. *Post-mortem* dissection was not permitted.

No. 71 was another severe hemorrhage, from a large branch given off close to the internal pudic. So near was it to the artery that Mr. Evans, who assisted me, thought it was that

vessel. We seized it immediately with Weiss's spring ligature forceps, and secured the vessel. The other portion of the artery retracted and did not require ligature. This patient did extremely well.

A third, and similar case, occurred to a sirdar named Runjeet Sing, at Lahore (No. 91), and which also did well, on securing the bleeding vessel.

Venous hemorrhage was very profuse in an old man who was operated on at Meerut, assisted by Dr. Bell, 11th Dragoons, and Drs. Sievright and Pine of the Cameronians. Alarming syncope and convulsions were the consequence. The latter, perhaps, from the shock of the operation. The blood was evidently venous. This patient, however, recovered.

Fatal Case in an old Subject.—The patient (No. 3) may be said to have been seventy in constitution, though he stated his age as thirty-seven, for he had the appearance of an old man; this is fully accounted for by his having laboured under the disease thirty years. He never properly rallied from the first, though he lingered for a month. In short he died, as many old patients do, without reaction.

Curiously-formed Calculus.—There was an instance in which the calculus had a long appendix projecting a considerable distance into the membranous portion of the urethra, having on its upper surface a smooth groove along which the stream of urine had flowed. The sufferings of this patient were very acute.

Tetanus.—Two of my patients fell victims to this dreadful disease: they occurred about the same time, during the unhealthy season of May, when the hot winds had subsided and easterly winds prevailed. The rains had not set in; the heat at that time was suffocatingly great. This particular period is unfavourable for operating. They occurred in the early part of my career, and may prove a valuable suggestion to my younger professional brethren to avoid this season. Another child also laboured under tetanus, yet recovered. The administration of hemp now promises to be a valuable remedy in this disease.

Peritonitis.—This formidable disease is liable to occur, especially in children. One or two of the cases have happily recovered among my patients.

(To be continued.)

THE CAUSES OF SUDDEN DEATH.

By MALCOLM HILLES, Esq.

(Continued from p. 58.)

What a deep but painful interest has been added to the part of our subject at present under consideration, namely, the *modus operandi* of carbonic acid gas on the human subject especially, and animal life generally, by the recent coal-pit explosion at Barnsley, by which seventy-three fellow-creatures have been in an instant deprived of health and life, and their wives and families left unprotected.

I little expected, when I first entered upon the discussion of this matter, that such a melancholy opportunity should be afforded me of illustrating its effects, and of endeavouring to arouse public attention to the occurrence of these periodical explosions, one of which is far more extensively fatal than all the railway accidents that occur annually in the United Kingdom, and yet are passed over in comparative silence.

The coal-mines of this country, more especially those of the north-eastern district, afford, unhappily, numerous instances of *sudden death* being caused by the agency of carbonic acid gas.

It is generally supposed that, in the dreadful explosions of fire-damp which occur so frequently, the destruction of life is caused by the explosion itself, and that many of the individuals are burned to death. This is not the case: most of the deaths which occur in such unhappy accidents are produced by the inhalation, by the workmen, of the carbonic acid, which is formed at the period of, or immediately after, the explosion.

The *fire-damp*, as it is usually termed by the workmen, consists chiefly of carburetted hydrogen gas. On the explosion of this gas, the carbon unites with the oxygen of the atmospheric air, and thus carbonic acid is formed; this fills the pit or mine, and, being inhaled by the workmen who have escaped the immediate effects of the explosion, produces a rapidly fatal result.

In corroboration of these assertions, Dr. Fife, in his evidence before the Parliamentary Committee on Accidents in Mines (a) states, that the persons he examined had died from suffocation occasioned by the "choke-damp," or carbonic acid gas. Other witnesses depose to the same fact; indeed the appearance of the bodies, few of which present any trace of injury, places the matter beyond doubt.

NOTE.—Having paid a good deal of attention to this subject, after the explosion which took place in the Jarrow colliery, a few years since, when upwards of one hundred lives were lost, and having had a somewhat lengthened correspondence on the matter with the Coal-trade Committee of the north, then sitting in Newcastle, I trust I may be excused for entering more largely into the question than I otherwise should, especially when it is recollected that seventy human beings have been hurried into eternity, without a moment's warning, by the concurrence of circumstances which, it is my opinion, might have been prevented without any very serious outlay on the part of the proprietors of the mine, and which should be prevented in all similar instances.

It will be sufficient for our purpose at present to state that, in the working of all coal mines, especially those where bituminous coal abounds, a large quantity of carburetted hydrogen gas is constantly being given out from the beds, or broken masses of coal. This gas, in its pure state, is simply inflammable, and burns freely, but, when mixed with a certain proportion of atmospheric air, forms a compound which explodes on being exposed to the light of a candle, lamp, or other similar agent.

When mixed with a larger quantity of atmospheric air, the gas loses both the sequalities, and becomes comparatively innocuous.

In the ventilation of coal-mines the object is, therefore, to introduce a sufficient quantity of atmospheric air into the mines, so as to mingle with the carburetted hydrogen gas in the proportion necessary to destroy its explosive nature, and at the same time to remove it, thus diluted, from the mine, and to supply its place with pure atmospheric air for the support of the workmen and horses engaged in the removal of the coal.

This object is attempted to be attained by the establishment of a strong draught of air through the various parts of the mine, which descends by an open shaft toward the *downcast shaft*, and ascends by a similar open shaft, namely, the *upcast shaft*.

In some instances there is but a single shaft, which is divided into two by a partition or *brattice*, by which means the descending and ascending currents of air are maintained.

In order to establish the current of air, a fire is usually lighted in some part of the upcast shaft, which causes the expansion of the air in this part, and consequently the rapid ascent from the mine of all air contained therein.

The current of air thus established is in some cases so strong as to blow out the candles and otherwise inconvenience the workmen. For the purpose of ventilating all parts of the mine, this is divided by partitions of various kinds, provided with doors and other contrivances, by the opening or closing of which the current of air may be changed in its course.

This mode, however, effects only an incomplete ventilation of the mine, as the air cannot be directed sufficiently into the recesses of the mine, nor to any part which does not lie between the two shafts as already described.

(a) See Report, Session 1835. Questions 1430 to 1442.

As many of these recesses are ne[illegible]ly formed by the men in the working of t[illegible] [illegible]oal, it results that the parts of the mine occupied by the workmen are frequently the least ventilated. Hence, indeed, the apparently anomalous cases of explosions occurring in what are considered the best ventilated mines.

Another situation where the carburetted hydrogen gas collects is in the *waste*, which is the extreme part of the mine, where the coal has been worked out, and the roof is allowed to fall.

It follows, therefore, that the use of an open light in these situations—and occasionally, it is supposed, even of a Davy lamp—causes an instantaneous explosion.

The strong current of air, already stated as being established in the mine, contributes to an accumulation of the carburetted hydrogen gas, or fire-damp, in these places; as the motion of this fluid, and its density caused by the rapidity of its motion, confine the gas to the recesses, and prevents that admixture so necessary to destroy its combustibility, establishing, in some cases, that insufficient mixture only which renders the gas explosive. In these cases the introduction of an open light is alone wanting to produce the unhappy result—a want that is too often supplied by the rashness, or ignorance, or neglect, of some one of the workmen or boys in the mine.

That the air and gases generated in the mine, and brought into contact under these circumstances, will not unite, is sufficiently known. Indeed, the workmen themselves are aware of this fact, and adopt several contrivances to remedy the evil by forcing the gases into more immediate contact.

Let us say, then, that an explosion takes place; the effects are almost instantaneously produced; from the expansion of the gas at the moment of explosion, many of the articles contained in the mine or shafts are driven upwards into the air, to the height of some hundred feet, parts of the mine, or its works, are destroyed, and some lives sacrificed. But, the explosion having ceased, there results, as in all cases of combustion, the formation of carbonic acid gas, which fills a large portion of the mine, the remainder being filled by water, and the atmospheric air which rushes in to supply the place of the carburetted hydrogen gas previously destroyed.

It is now that the great work of destruction begins: all living beings—men, boys, and horses—fall victims to the gas, which, entering the lungs at the moment of inspiration, produces its usual deadly effects; some of the former endeavour to prevent this by pressing their caps, jackets, &c., against their mouths, or by throwing themselves on the ground. Vain efforts! they must breathe: to breathe is to die—they breathe and perish!

Most of the bodies are found without any marks of injury, evidently proving the cause of their death to be the inhalation of the carbonic acid gas.

A few years since, I submitted a plan of effectually ventilating coal-mines to the Coal-trade Committee, but was not so fortunate as to induce them to adopt it. The plan is, by the use of iron, copper, zinc, or brass tubes, to convey the carburetted hydrogen gas from all parts of the mine, through the upcast shaft, into the air. These tubes could be so arranged as that a smaller or short tube might be attached to them, and conveyed to the farthest recess of the mine, so as to carry off the gas from the mine as it escapes from the coal.

The details of, and other circumstances connected with, this plan would be out of place here. I trust, however, that an opportunity may be embraced of putting it to the test of a trial, at no distant period.

Few of the persons in the mine at the time of the accident escape, as it is extremely difficult and dangerous to attempt their relief before the carbonic acid has been withdrawn from the pit. Many have perished in the humane effort to rescue their fellow-workmen.

It is much to be regretted that public atten-

tion has not been more effectually awakened to this subject; the voices and efforts of a few individuals are impotent. When we reflect on the rapid strides that Art is now making, in conjunction with her sister, Science, surely it is not too much to hope that Science might shed a ray of light on this question, and assist in preserving so many valuable lives to their country, their wives, and their families.

Carbonic acid is not the only gas which is rapidly destructive of animal life. All the *irritant* (a) gases, namely, nitric oxide, nitrous acid vapour, muriatic acid, chlorine, ammonia, sulphurous acid, and some others less important, are poisonous.

These act destructively by causing a spasm of the glottis, and, in my opinion, of the muscular fibres of the air-cells of the lungs, so as to exclude the atmospheric air, and by inducing an inflamed state of the mucous membrane lining the air-tubes.

It is seldom, however, that *sudden death* is produced by any of these gases, as the irritation produced by their inhalation precludes the possibility of their being taken in when highly concentrated, or in large quantities. None are so immediately fatal as the carbonic acid gas.

Of the *narcotic* gases the most fatal are the carbonic acid already spoken of, and the sulphuretted hydrogen. Carburetted hydrogen, so extensively found in coal-mines, and so much used for the purposes of lighting, though less suddenly fatal than either of these, is extremely injurious to animal life (b). An experiment on the inhaling of this gas had nearly proved fatal to Sir Humphry Davy.

Sulphuretted hydrogen gas, in a concentrated state, is equally fatal as carbonic acid. As this gas is naturally produced by the decomposition of animal and vegetable substances, and is especially disengaged from common sewers and receptacles of excrementitious matter—and therefore abounds in our metropolis and all large cities—the effects produced by it cannot be too generally known, particularly as our authorities have of late adopted the peculiar method of ventilating the sewers of London at the expense of the streets and dwellings of the inhabitants, and have thus converted the thoroughfares into so many overground sewers for carrying off the noxious gases from the underground sewers(c) a species of reciprocal advantage, which, however beneficial in other respects, can be of but little service to the inhabitants.

The following extract (d) is most instructive on this head:—"The gases formed in the 'fosses d'aisance' of Paris consist chiefly of combinations of ammonia, sulphuretted hydrogen, and nitrogen. These exhalations produce the most fatal effect. Often the individual exposed to them perishes in a moment: his head and arms falling, and the trunk being doubled up, from the instant loss of muscular power. If death does not immediately occur, the victim, when he recovers from the first effects of this exposure, is affected with pains in the head, nausea, fainting fits, severe pains in the stomach and limbs, constriction of the throat; sometimes he utters involuntary cries, or lapses into delirium, accompanied with the sardonic laugh and convulsions: or tetanus ensues."

Mr. Hallé (e) has given an interesting narrative of an attempt made to empty one of these pits, in presence of the Duc de Rochefoucault, the Abbé Tessier, himself, and other members of the Academy of Sciences, who were appointed by the French Government to examine into the merits of a pretended discovery for destroying the noxious vapours.

The pit chosen was ten feet and a half long, six wide, and at least seven deep; and repeated attempts had been previously made, without success, to empty it. For some time the process went on prosperously, when, at last, one of the workmen dropped his bucket into the pit. A ladder being procured, he immediately proceeded to descend, and would not wait to be tied with ropes. But hardly had he descended a few steps of the ladder, when he tumbled down without a cry, and was overwhelmed in the ordure below, without making the slightest effort to save himself. It was at first thought he had slipped his foot, and another workman promptly offered to descend for him. This man was secured with ropes in case of accident. But scarcely had he descended far enough to have his whole person in the pit, except his head, when he uttered a suppressed cry, made a violent effort with his chest, slipped from the ladder, and ceased to move or breathe. His head hung down on his breast, the pulse was gone, and this complete state of asphyxia was the affair of a moment. Another workman descended with the same precautions, fainted away in like manner, but was so promptly withdrawn that the asphyxia was not complete, and he soon revived.(a)

It was found impossible to go on with the operation of clearing out, and the pit was shut up again. The first workman never showed any signs of life; the second recovered after discharging much bloody froth; all the persons in the vault were more or less affected; and a gentleman who, in trying to resuscitate the dead workman, incautiously breathed the exhalations from his mouth, was immediately and violently seized with the convulsive form of the affection.

(a) "Christison on Poisons," p. 586.
(b) "Kay on Asphyxia," p. 329.
(c) The construction of the sewers of London is exceedingly imperfect.
(d) "Kay on Asphyxia," p. 325.
(e) "Recherches sur la Nature du Méphitisme des Fosses d'Aisance," 1786.

(a) A somewhat similar occurrence took place a few years since in one of the pestilential beds, named churchyards, in London. This has been detailed and frequently brought before the public by that indefatigable philanthropist, Mr. Alfred Walker.

INHALATION OF ETHER DURING LABOUR.

By EDWARD LATHAM, Esq.,
Royal General Dispensary, Aldersgate-street.

Since the valuable remarks of Dr. Simpson, of Edinburgh, as to the propriety and safety of administering ether by inhalation during parturition, I have had an opportunity of testing its effects in a case under my own care; when Dr. Lloyd, Physician to the Royal General Dispensary, Aldersgate-street, was kind enough to superintend and observe the effects of the agent. Mrs. ——, aged thirty, and the mother of two children, having read the public reports of childbirth without pain, expressed to me a strong desire to have the ether administered, and so to rid herself of that amount of suffering which she well knew it was her lot to undergo. She had been in labour about three hours; the os uteri was nearly fully dilated, and all the soft parts yielding. The membranes, with the liquor amnii, formed a large bag, which occupied the cavity of the pelvis; and, during the absence of pain, the child's head was felt above the brim, in which position it remained for half an hour, notwithstanding that the uterine efforts recurred regularly, and with moderate energy, once in about every five minutes. When the tip of the index-finger was applied to the head, it could be tilted upward considerably; and, as the presenting bag of membranes was large, it was supposed that an unusual quantity of liquor amnii existed, and retarded labour. Dr. Lloyd now commenced the administration of ether by means of Smee's hot-water inhaler; and in about four or five minutes our patient manifested the usual symptoms of unconsciousness—the pulse falling, and the pupils becoming dilated, &c. &c. The apparatus was now removed for some minutes. The uterine contractions continued regularly, though, we thought, somewhat abated in force. I now ruptured the membranes, when an immense gush of liquor amnii took place, and the child's head gradually descended into the pelvis. Consciousness having returned, the patient said that she had felt no pain, but had been in a comfortable sleep, and dreamt that her child was born. She now began to feel the pains recur with their usual severity, and earnestly entreated us to give her the ether again: she even seized the instrument from Dr. Lloyd's hands and applied it to her mouth herself. After three minutes' inhalation, unconsciousness was again established, and, though the inhaler was occasionally removed, she was kept under the lethean influence for about twenty minutes; after which time the apparatus was not again applied. The child gradually descended, the head pressing upon the perineum, which became perfectly relaxed, and the head and shoulders were expelled by one strong, continuous uterine effort, in eight minutes from the withdral of the inhalation. During the pains I applied my hand frequently to the abdomen, and found that the muscles were much more lax during than previously to the administration of other. A few minutes after the expulsion of the fœtus a considerable gush of blood came from the uterus, which was now felt to be large and relaxed, but soon contracted again under the firm and steady pressure of the hands; the placenta quickly followed, and a broad bandage was tightly applied. (It must, however, be stated that our patient had suffered considerable hemorrhage after the expulsion of the fœtus in her previous labour.) On questioning her subsequently, she stated that she had felt no pain with the exception of the last, and that she would strongly recommend any one to take the ether under similar circumstances, expressing her gratitude to us for having applied it. No inconveniences have since followed, and the patient is convalescing as favourably as possible. It is of course impossible, from an isolated case, to draw any just conclusions as to the admissibility of this agent in parturition. This case, however, so far as it goes, is satisfactory; and if we can by any means alleviate the first curse, which has for so many ages been incidental to the parturient state, we shall confer the greatest boon on those who are deserving of all our sympathies, and worthy of our best energies.

PROGRESS OF MEDICAL SCIENCE.

France.

ACADEMY OF SCIENCES.

Meeting of March 15; M. Brongniart in the Chair.

Nervous Fluid.—Professor Dumas laid on the table a paper by M. Matteucci, relative to the mode of action of the nervous system. That physiologist admits the existence of a nervous fluid analogous in nature to electricity. Its origin is in the muscular textures of the body, where it arises from a chemical process, viz., the action of their free acid on the alkaline principles of the blood. The fluid thus produced would be carried along the nerves, its conductors, to the brain, whence by the influence of volition it would be conveyed to the muscular system again, there to determine contraction.

Ether.—M. Doyère read a short account of a method which he proposes, for the purpose of limiting, to a certain proportion, the amount of ethereal vapour admitted into the lungs by inhalation.

ACADEMY OF MEDICINE.

Meeting of March 17; M. Begin in the Chair.

PRESERVATION OF ANIMAL MATTER.

M. Poiseuille read a report on the methods of preservation recommended by MM. Gannal, Dupré, and Surquet.

With regard to the mixture of carbonic and sulphurous acids, employed by M. Dupré, the reporter stated its inability to preserve or-

ganic substances beyond a very limited time. M. Gaunal's method, consisting in the injection of a solution of alum, appears to acquire, by the addition of an arsenical preparation, the property of preserving indefinitely animal substances; while the fluid adopted by M. Surquet contains no arsenic, but preserves in the most perfect manner possible—an experience of two years now demonstrating positively the fact.

M. Dubois presented a case of congenital deformity of the hand and foot. The learned professor having expressed his intention of resuming the consideration of this case on an early occasion, we shall until then postpone its history, of which we have at present obtained only an imperfect sketch.

M. Hutin, surgeon-in-chief of the Hôpital des Invalides, presented a patient, in whom, after angina, the soft palate had formed adhesions with the posterior part of the pharynx, so as to separate entirely the nasal cavity from the mouth, and to preclude any communication whatever between them. Olfaction was completely destroyed, and taste partially. M. Hutin was of opinion that the restoration of these two senses might be expected if the morbid adhesions were removed.

PARISIAN MEDICAL SOCIETY.

Meeting of March 16; Dr. Shrimpton in the Chair.

Carcinoma, by M. Pigne.

(Continued from p. 58.)

The shooting pains, usually considered as characteristic of cancer, are connected with the degree of its hardness; they are remitting, and the shortness of the intervals of remission indicate the approach of the period of maturity. This maturity may be considered to be the death of the pathological product; softening is its first phenomenon. The occurrence of ramolissement is hastened in proportion to the activity of the power of assimilation in each individual: hence it is very speedy in childhood; less so in the adult, and still less in the aged subject. It is only when cancer softens, that the veins of vicinous parts send ramifications into the tumour—a fact proved by the possibility, at that period, of throwing injections into the carcinomatous production through the vessels of neighbouring parts. By contact with carcinomatous matter, the walls of the veins and lymphatics become weakened, *atonized;* the circulation in the venous system is difficult; and the production of anasarca, œdema, and serous effusions, much facilitated.

On the progress of cancer, even apparently slight changes of air, diet, habits, &c., exercise the most accelerating influence: hence, the custom of leaving carcinomatous patients some time in hospital before the operation is decided upon, is much to be deprecated; and the necessity for immediate removal of cancerous tumours may be said to be as great as that of immediately operating in cases of incarcerated hernia.

By the absorption of cancerous juice into the system, a twofold effect is produced—1, its deposition, in the shape of infiltration, in the organic framework of tissues; and 2, its agglomeration into tumours—a circumstance coincident with destruction of the primitive texture of the part. The distinction between these two anatomical results of absorption can readily be established, with the assistance of maceration—a process which removes the infiltration, leaving the tissue of the diseased part in its natural state.

Reproduction of carcinoma is observed in three distinct cases:—1, After the spontaneous maturity of cancer, without inflammation; 2, after the spontaneous maturity of cancer, complicated with inflammation; and 3, in consequence of traumatic injuries or of operations. In the first case, the reproduction is more particularly confined to organs similar to that which was the original seat of the disease, and the secondary tumours are usually of the same nature as those to which they have succeeded. In the second case, it is in secretory organs, and especially in the lung, that reproduction is observed. The secondary tumours here vary from the primary, and their progress is unusually rapid. In the third instance, reproduction takes place generally in the liver, and usually by infiltration.

The following cases illustrate the great rapidity of development of cancer in the circumstances alluded to. In the year 1840, a man, aged thirty-two, was admitted into Professor Bérard's wards at the Hôpital St. Antoine. The patient had been struck with violence in the epigastric region by the shaft of a cart, and, notwithstanding a very attentive exploration of the abdomen, no tumour whatever was detected in the injured spot before the third day, when a swelling of the size of an egg was first noticed. Death took place on the ninth day after the accident, and an encephaloid tumour of the omentum, equal in size to the head of a full-grown fœtus, was discovered on dissection.—A woman affected with cancer of the breast became pregnant. The cancerous affection progressed, and abortion took place at the fifth month; a tumour, *four inches* in diameter, was found on *the fœtal aspect* of the placenta which was cancerous.—Secondary tumours progress faster than primary cancers; the latter are usually solitary, the former never. Hence the precept, never to operate upon a secondary carcinoma.

Dr. Montgomery read a paper on "Injured Arteries," and, taking Mr. Seton's case as a text, defended the practice adopted by Mr. Liston in that well-known instance.

An interesting case of a medico-legal nature, in which the liberty of a British practitioner at Nice, appears to have been trifled with, was then laid before the society. We will on a future occasion communicate the case, with the full details which it deserves.

FACULTY OF MEDICINE.

Lectures on General Pathology, by Professor Andral.

It is not a little remarkable that in the "Hippocratic Collection" no attempt at a classification of diseases is to be found. Themiso's division does not deserve that name. Galen divides all maladies into two great classes: in the first, he places those which he attributes to an alteration of one of the elements, such as heat, dryness, moisture, &c.; in the second, those diseases referrible to the alteration of the same combined elements, and the diseases of dissimilar parts or organs. This second class contains four genera—1, vices of form; 2, of number; 3, of volume; and 4, of structure. Together with Galen's theoretical views, this classification for fifteen centuries governed medical science. It was only towards the sixteenth or seventeenth century that other classifications were instituted: the nature, the seat, and the causes of maladies being conjointly or separately taken for the basis of the superstructure.

The first idea of modern classifications is due to Felix Plater; in 1731 Sauvages published the first edition of his "Nosology," which he perfected only in 1763. Sauvage established ten classes of maladies, and, in each, numerous genera and species. The following is his division:—1, vitia; 2, febres; 3, phlegmasiæ; 4, spasmi; 5, anhelationes; 6, debilitates; 7, dolores; 8, vesaniæ; 9, fluxus; 10, cachexiæ. These ten classes contain 44 orders, 315 genera, and 2400 species.

Linnæus also attempted a classification of diseases, in which he was not so successful as in his division of plants. It is now, as it deserves, forgotten, and we will not drag it from merited oblivion.

Cullen establishes four classes:—pyrexiæ, neuroses, cachexiæ, and locales. In the first class he places phlogmasiæ and hæmorrhagiæ; in the second, an order called "adynamiæ;" and in the fourth a large number of diseases which are totally unconnected with each other.

Vogel has five classes:—1, pyrexiæ; 2, phlegmasiæ; 3, hæmorrhagiæ; 4, neuroses, 5, organici.

Hufeland, four classes:—1, febres; 2, inflammationes; 3, exanthemata; 4, intoxicationes.

P. Franck, seven classes:—1, febres; 2, inflammationes; 3, exanthemata; 4, impetigines; 5, profluvia; 6, retentiones; 7, neuroses.

Sprengel, seven classes:—1, febres; 2, inflammationes; 3, exanthemata; 4, morbi excretorii; 5, neuroses; 6, dolores; 7, cachexiæ.

Hildenbrand forms five classes:—1, febres; 2, cachexiæ; 3, neuroses; 4, ecchyses (fluxus); 5, locales.

Selle founded his classification upon a different basis; his object was to divide maladies, according to their presumed nature, in such a manner that to each class should correspond a peculiar method of treatment. Thus he separates into distinct classes—inflammatory, bilious, and putrid affections, in each of which, for instance, a variety of fever, pneumonia, pleuritis, &c., may be found. He thus forms eighteen classes, which it would be tedious to enumerate.

Such were the principal classifications which had been introduced into science previously to Pinel. He endeavoured to simplify the nosological tables, and created five classes of maladies, the first of which is entirely attributed to fevers, and is subdivided into the following six orders:—1, inflammatory or angéiotenic fever; 2, bilious or gastric fever; 3, mucous fever, or F. adéno-méningée; 4, putrid or adynamic fever; 5, malignant or ataxic fever; 6, the plague, or "fièvre adéno-nerveuse." Now, these are forms really observable at the bedside of the patient, but they do not constitute separate diseases; indeed, in the progress of one case of fever, several of these forms will be assumed successively by the malady; it is in typhoid fever that they are most distinct. But it is not only so in this disease: and it becomes an interesting fact that the vivid picture which Pinel draws of adynamic fever was, in all probability, portrayed from the cases of pneumonia so frequent in the aged, and which Pinel had ample opportunity to study in his hospital wards at Bicêtre. The symptoms of general infection produced by phlebitis also resemble closely those of adynamic fever; Pinel's division, although expressive of differences existing in nature, cannot therefore, nowadays, be entertained: let us add, that, in this class of febres, Pinel did not place eruptive fevers, but forced them into the class of phlegmasiæ, by which his second great division is constituted. In a third class he placed hemorrhages; and the fourth class contains neuroses, and is perfectly instituted; this class is subdivided into five orders—1, neurosis of the senses; 2, of intellect; 3, of locomotion and voice; 4, of nutrition; 5, of the genital functions. Pinel's fifth class is consecrated to organic diseases, and contains a singular assemblage of ill-assorted maladies—syphilis, gangrene, cancer, scurvy, and intestinal worms, for instance.

After Pinel, Broussais appeared, and struck out fevers from all nosological classifications. With his great powers of induction, and his remarkable talents for observation, he endeavoured to prove that fevers were always symptomatic of phlegmasiæ: he succeeded in demonstrating that in a great number of cases in which dyspnœa, for instance, was considered as a malady, it deserves, in reality, only the name of "symptom"; his attention was chiefly fixed upon diseases of the solid textures; but, in scurvy, for instance, he did not refuse to acknowledge the alteration of the fluids of the body. His principal glory is to have established the great principle of the coincidence of organic with functional change; to have increased the number of those secondary phenomena which we call symptoms, and diminished the number of those primary lesions to which alone the name of disease is due; also to have shown that, in many instances, it is not the weakness but the over-excitement of an organ which interferes with the regular accomplishment of its functions.

Irritation constituted for Broussais the pathological element of a great class of diseases, into which he introduced three orders, according as

it might be referred to inflammation, to secretion, or to nutrition. In this class are placed many maladies which do not really depend upon irritation, and it cannot, therefore, be considered as being in harmony with the present state of science. Pyrexia and alterations of the blood deserve a special place in nosological classifications; and we must consequently set aside, at present, Broussais's divisions: we have proposed one which we consider to be complete, and which we are ready to defend.

During its progress each malady is revealed by certain special phenomena called "symptoms," and which intellectual labour teaches us to convert into "signs" indicative of its seat and nature. Were we not limited in our time, we would now begin the study of symptomatology, or semeiology; but the few days which are left oblige us to relinquish this plan, and to postpone these important subjects to the next winter session. We will at present merely follow disease, in its successive periods—or in its evolutions.

When health ceases to be perfect, a moment comes when the phenomena observed cannot serve to characterize any special malady, and still indicate a departure from health. These are called prodromata. The prodromic period of a malady cannot, in sound logic, be separated from that of the disease itself—it is in reality the disease, before it has assumed a determined form or a precise seat. In some affections the premonitory signs are very distinct from the disease itself; this is observable in acute phlegmasiæ; in typhoid fever the contrary is the case. They are more frequent in acute than in chronic disorders. In violent and acute phlegmasiæ, the prodromic period may be absent; but pyrexia, inflammations of the mucous membranes, or of the skin, are most generally ushered in by premonitory signs. The duration and intensity of prodromata vary considerably; in great epidemics, it is not uncommon to observe the premonitory signs of the prevailing disease, while the symptoms of the latter fail to manifest themselves.

Premonitory signs may be divided into two very distinct classes: one set, and it is the most frequently observed, present no special characters by which the impending disease can be foretold; the other, on the contrary, is of great assistance in the diagnosis of the symptoms which will follow. The prodromata of the first class may be studied in the functions of nutrition, or of the organs of relation. Thus the intellectual powers are not unfrequently impaired, and muscular exertions become more difficult. A sense of lassitude is complained of, and fixed or erratic pains are observed in the joints. Headache, vertigo, giddiness, disturbances of vision or of olfaction, may be noticed; the expression of the countenance is often signally modified: flushing of the face, injection of the conjunctive, or paleness, are so striking that even unprofessional persons can recognise the imminence of disease: "Physiognomia it's alterata, ut et profani, morbum instantem dignoscunt." (Hildenbrand.) Sleep is interrupted and disturbed. With regard to the nutritive functions, the appetite is lost; the tongue coated; constipation or slight diarrhœa appears; the skin is dry; the urine changed in its aspect; an habitual evacuation, epistaxis, or hemorrhoidal flux, is suspended; the secretion of an issue or blister diminishes in abundance. Each of these phenomena is doubtless trifling in itself, but, when considered in conjunction with the disease, they acquire considerable pathogenic importance. It sometimes happens that the days which precede the appearance of disease are marked by unusual mental activity and digestive power—a rare occurrence, but one which deserves notice.

Hemorrhages may not be ushered in by any symptoms whatever; but when these symptoms do exist, they are always the same, and constantly indicate congestion. Galen states that he obtained considerable credit in Rome, from the circumstance of his having on various occasions foretold epistaxis, in consequence of the presence of particular symptoms. Hemoptysis may not be preceded by any premonitory signs, but in many cases it is announced by dyspnœa, palpitations of the heart, heat of the interior of the thorax, &c. The hemorrhoidal flux may be preceded by local pains, by abdominal colic, or lumbago, or even by more general symptoms, such as headache, giddiness, palpitations, and even febrile excitement; all of which yield altogether from the time that the flux becomes properly established.

At the beginning of many acute diseases a febrile condition may be observed; it may be, and mostly is, unaccompanied with any local manifestations whatever; but we find it in measles and scarlatina, attended with bronchitis and sore eyes when the former, angina when the latter, is imminent. The antecedent fever may, in marshy countries, assume an intermitting form at first, but after three or four paroxysms it becomes continuous, and some local signs appear by which the diagnosis may be to a certain extent pointed out. The simultaneous appearance of local symptoms and of febrile excitement is perhaps the most common of the various modes we have enumerated.

In some diseases the incipient stage has a remarkably uniform aspect, as in eruptive fevers, for instance; in others the reverse is the case—witness typhoid fever.

It is practically of considerable importance to study the incipient stage of chronic maladies. They may succeed to acute disease, or at once set in under their chronic form. In the first case, convalescence is erroneously supposed to have followed the acute disorder, but the error can be recognised by the absence of appetite, the occasional chills, the loss of sleep, and the persistency of weakness: the local signs gradually reappear, and then the chronic malady becomes evident. When chronic affections have not followed acute disease, their origin is often very obscure, the local symptoms by which their first development was attended being neither continuous nor well marked, but the general health of the patient clearly declines. When, without any appreciable cause, this gradual decay is observed, you may be certain that some local lesion is present, which patience and attention will lead you to discover. The first period of the appearance of chronic disease often escapes detection, so insensible are the degrees which have intervened between perfect health and confirmed illness. Let us, to illustrate the assertion, throw a rapid glance over the incipient stage of several chronic disorders.

Consumption very rarely follows acute pneumonia. Some patients have since their first infancy had what is called a delicate chest; they have always coughed more or less, and been troubled with oppression; others, on the contrary, have enjoyed perfect health up to an attack of bronchitis, which never ceased since its first appearance; but previously they had never coughed. For others, hemoptysis is the first symptom which directs the attention of the patient towards the chest. Not that we believe this hemoptysis to be the cause of the development of tubercular matter in the lungs, but the result of the progress of tubercles which had not hitherto betrayed their presence by any symptoms whatever. In a fourth series of cases you will observe an acute febrile bronchitis, causing the rapid and galloping development of pulmonary consumption.

The incipient stage of emphysema of the lungs is also extremely variable. In some cases it is congenital; but in most instances it is the result of prolonged and violent bronchitis, during which the repeated efforts attendant upon cough have distended or lacerated the air-cells.

Diseases of the heart may also be congenital, or may set in with such a slow and gradual increase of symptoms that their exact origin cannot be traced. In some cases organic affections of the orifices follow acute pericarditis or endocarditis, complicated or not with articular rheumatism. We may here mention that it is of extreme importance in the progress of rheumatism not to mistake the anemic souffle resulting from venesection, with the souffle produced in the heart by its participation in the rheumatic symptoms. The distinction can readily be made by auscultation of the carotid arteries, in which the anemic souffle is constantly propagated, and not the souffle depending upon pericarditis or endocarditis.

How various are the incipient symptoms of organic disease of the stomach! Some patients die with a cancer of the viscus, who for years have suffered only from insignificant dyspepsia; in others, violent gastralgic pains seem to accompany its first development, and so doubtful is the exact time of the commencement of organic change that it may fairly, in many cases, be asked if the pain was a symptom of the textural alteration, or if it was not its cause.

D. M'Carthy, M.D.P.

EXTRACTS FROM PERIODICALS.

Exhibition of Assafœtida during Pregnancy.—Dr. G. Laferla, of Malta, recommends strongly this substance in doses gradually increasing from two grains to ℈j. daily, for the purpose of preventing the death of the fœtus *in utero*. The cases which Dr. Laferla particularly points out are those in which before labour the fœtus ceases to live without any appreciable cause—a circumstance which sometimes shows itself in several successive gestations. Dr. Laferla reports several cases in which the patients had two, three, and four times been delivered of still-born children, and afterwards, under the influence of assafœtida, gave birth to living infants.—*Revue Médico-Chirurg.*

Acetate of Lead in Spinal Irritation, and in Diseases of the Heart.—In these two orders of diseases, Dr. Salgues has found acetate of lead of the greatest utility, in doses varying from two to six grains daily. In cases of hypertrophy of the heart, palpitations, which had resisted several methods of treatment, yielded rapidly to a few doses of the saturnine salt. *Ibid.*

REVIEWS.

On Wounds and Injuries of the Abdomen and Pelvis; being the Second Part of the "Lectures on some of the more important Points of Surgery." By G. J. Guthrie, F.R.S. London: J. Churchill; H. Renshaw. 1847, 8vo., 73 pages.

The important class of wounds of which these lectures treat are amongst the most trying and difficult that fall under the observation of the medical profession, in consequence of the importance of the parts injured; the difficulty, in many cases, of ascertaining the precise nature and extent of the injury inflicted, and of applying such remedies as, in other situations, would be accomplished with comparative ease; and, lastly, the variety, not only in the injuries themselves, but also in the constitutional shock and general symptoms which ensue.

Unlike most other injuries, the extent of which has usually some relation to the symptoms which follow, the most trifling of these frequently prove fatal, whilst the more extensive and apparently serious often progress to a favourable termination, without a single bad symptom.

In the present state of our knowledge of the physiological and pathological phenomena attendant on the morbid actions of the animal economy, we are obliged to refer these apparent anomalies to a peculiar idiosyncrasy attached to the constitution of the person injured, without being able to trace out the cause of such idiosyncrasy, which, if it exist, can be but the effect of a peculiarity of constitution, dependent on a a corresponding *peculiarity* of physical structure.

Wounds and injuries of the abdomen and pelvis require much care and attention, in all their stages, from their first occurrence to the final termination, either in recovery or death.

To all of these Mr. Guthrie has directed his attention, and on all has afforded much of that sound practical information for which all the works of this eminent surgeon are so remarkable.

His condemnation of the use of purgative medicines, in the early stages of these injuries, is peculiarly valuable, as this most injurious practice is not yet exploded from the profession. What practice can be more fatal, in cases of wounded intestines, than the exciting of these to motion, by the use of purgative medicines, when rest is so essential, in order to avoid, if possible, the escape of the intestinal contents, and to allow of those conservative adhesions so industriously formed by nature for the preservation of the life of the individual, and the ultimate restoration of the integrity of the intestinal tube?

In treating wounds of the intestines, Mr. Guthrie prefers the *continued* suture, as recommended by Dupuytren, and advises "that the needle be carried through the cellular fibrous lamella, or between the muscular and mucous membranes, and not across all the tunics." (P. 25.) He also recommends that the sutures, when used in wounds of the abdominal parietes, should be carried through the skin only, and not through the muscular fibres, which he is disposed to think never unite, thus leading in most cases to the future formation of a hernial tumour. His observations on this subject, and the absorption of the muscular tissue of the abdominal parietes, subsequent to blows or other injuries, are both interesting and valuable.

Mr. Guthrie enters very largely, indeed much more largely than their merits deserve, into the various plans that have been recommended by the ancients for the treatment of wounded intestines, by means of tubes, tracheas of animals, and other substances, introduced into the cavities of the intestines. It may be well questioned if the notice of such foolish contrivances may not be prejudicial, as tending rather to distract the minds of practitioners from, than direct them to, the more simple methods now adopted for the treatment of these accidents, and which consist in little more than sewing the wounded parts together, and leaving their subsequent care to Nature, who has proved herself more competent to the task committed to her charge than art has been.

The greater danger attendant on wounds of the small than of the large intestines has not escaped Mr. Guthrie's observations. To this difference many circumstances contribute, namely, the more fixed position of the large intestines, their less relation to the peritoneum, and their inferior organization, which renders their injury less capable of giving rise to that constitutional depression and irritation, so remarkable where the small intestines have been wounded.

We cannot altogether agree with Mr. Guthrie's treatment of hemorrhage, in the interior of the abdomen; the practice of keeping the external wound open, in order "that the blood may have a ready vent," is most questionable, as the continued exposure of the peritoneal surface, thus rendered unavoidable, is productive of more serious injury than can possibly result from the closing of the external wound. It is true that, in some instances, this latter practice is followed by effusion of blood into the abdomen, and distention of this cavity; but what is more likely to put a stop to the internal hemorrhage than the pressure thus induced, especially if aided by the additional support of adhesive straps and bandage, where that may be resorted to? Any bad symptoms that should ensue may be treated as well after as before this method has been tried.

Mr. Guthrie evidently thinks lightly of exposure of the abdominal cavity, and regards "the admission of air—the bugbear of the olden time—as of no consequence." (P. 8.) In this opinion he is not supported by the best surgical authorities of the present day.

The fifth lecture, on Artificial Anus, will be found to contain an account of most of the plans hitherto recommended for the treatment and cure of this troublesome affection, and the general failure of every one of them. In this the restorative process of nature is certainly more efficacious than the ingenious inventions of either the ancient or modern surgeons. Mr. Guthrie leaves this, very judiciously, an open question, contenting himself with making some valuable remarks on its general treatment.

We should hail with pleasure the appearance of any work on these most serious affections, still, alas! the opprobrium of surgery; and therefore feel much gratified in finding that one of the leading surgeons of the present day contributes the result of his extensive experience to the improvement of the healing art, and the alleviation of human suffering.

As the use of the knife, unhappily, affords us, nowadays, so many instances of wounds of the abdomen, we strongly recommend to all practitioners a work which may be referred to on all such occasions with confidence, and consulted with much advantage.

We cannot refrain from extracting Mr. Guthrie's synopsis of the treatment to be observed in such cases:—

"The treatment of all these injuries must be eminently antiphlogistic, principally depending on general and local bloodletting, absolute rest, the greatest possible abstinence from food, and, in some cases, from drink; the frequent administration of enemata, and the early exhibition of mercury and opium in the different ways usually recommended, with reference to the part injured."

A Detail of Experiments proving the Identity of Cowpox and Smallpox. By John Badcock, Chemist, Brighton. 12 mo., pp. 78.

This work is purely practical in its nature; and the investigations contained in it are somewhat of the same kind as those pursued some time ago by Mr. Ceely, of Aylesbury, whose valuable monograph found a place in the "Transactions of the Provincial Medical Association." The fact has long been known and lamented, that the vaccine virus, in consequence of the many and various systems through which it has been transmitted, has lost much of its protective powers, and that it affords, even at the best, only temporary security against the ravages of smallpox. It has frequently been thought desirable that fresh matter should be taken from the cow; but it is one thing to speculate and advise upon this matter, and another practically to proceed with it. Mr. Badcock, however, choosing the shorter and more certain, though difficult, plan of direct experiment, proceeded at once with the business of obtaining virus fresh from the cow; and the results of his valuable researches are contained in the pamphlet before us.

He conjectured, as others have done, that cowpox is only smallpox modified by the nature of the animal in which it is generated. He therefore concluded that, if a cow were inoculated with smallpox matter, the resulting pock would be genuine *vaccine*. He observes—

"In the month of December, 1840, I commenced operations on a fine young cow, with smallpox matter taken from a strong healthy girl, and was singularly successful. My own little boy was first vaccinated from the cow, and from this and subsequent operations I have carefully kept up the supply of vaccine. In these proceedings the utmost caution was observed for the public safety, as well as to make the experiment interesting to the profession. Three days after inoculation with smallpox the cow was inspected by medical men; the vesicle was watched in its progress, and the lymph taken in their presence. I also placed all my early cases of vaccination under the inspection of medical practitioners, and a great number of them visited my little boy during the progress of the disease." (P. 15.)

"I have already remarked that my own little boy was the first human being whom I vaccinated with the lymph which I obtained from the cow. The operation was perfectly successful, and one of the medical gentlemen who had witnessed the development of the vesicle upon the cow became desirous to vaccinate his child from mine. Notwithstanding the unanimous opinions of all regarding my child's case, I thought it advisable to subject most of the patients of the first and second removes from the cow to the same scrutiny: the results were equally gratifying. Good vesicles were produced, and the children did not appear to suffer more constitutional disturbance than is usual from the ordinary vaccine." (Pp. 17, 18.)

"Up to the period of the experiments performed by Mr. Ceely and myself, I believe there is no authentic record of an individual in this country having succeeded in inoculating the cow with smallpox matter; but I have already shown she may be so inoculated, and that a vesicle thus produced yields a fluid which, being transmitted to the human subject, produces all the appearances which Dr. Jenner has described as the true vaccine vesicle; thereby demonstrating the identity of the two diseases, and that, notwithstanding the several points of dissimilarity, they are indeed the same—that cowpox is smallpox which has passed through the constitution of the cow, having lost its *infectious qualities*, but retained its *protective power*. This demonstration of the identity of the two diseases establishes the protective power of vaccination upon a substantial basis—proving, that as one attack of smallpox will prevent a subsequent attack, so will vaccination, for they are the same disease; and this identical nature of the two will afford a rational explanation of the protective virtues of the cowpox." (Pp. 22, 23.)

These extracts show the chief features of the monograph of Mr. Badcock, and they are sufficient to entitle him to great praise for the meritorious manner in which he has pursued a most difficult but a most important subject. Many communications from eminent practitioners are appended to his pamphlet, all testifying to the complete success with which he has conducted his admirable investigations.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

March 9.—J. M. Arnott, Esq., F.R.S., President.

ON CYNANCHE LARYNGÆA, OR ACUTE ŒDEMATOUS INFLAMMATION OF THE LARYNX.

By G. Budd, M.D., F.R.S.

The chief object of the author, in this paper, is to show that the disease known to practitioners under the above title is really erysipelas, commencing in the fauces, or in their neighbourhood; and that it has been generally supposed to be confined to the larynx, and has been termed laryngitis, in consequence of its often proving fatal before the erysipelas has had time to spread far from this part.

In support of this view, he relates five fatal cases of this disease that have recently occurred in London: one in his own practice, in King's College Hospital; three in the Dreadnought, the particulars of which were given him by Mr. Hudson; and one in Charing-cross Hospital, under the care of Mr. Avery, the particulars of which have been published in the medical journals.

These cases, the author observes, were clearly examples of the same disease; but they did not all begin exactly in the same manner. In three, the inflammation commenced in the fauces; in one, it commenced in the parotid gland; and in one, the first appearance of it was an erysipelatous blush at the angle of the lower jaw.

In all the cases, the inflammation soon spread to the glottis, and produced there the same effects—namely, redness and great thickening of the epiglottis, and of the lips of the glottis, with effusion of sero-purulent fluid in the submucous cellular tissue—to such a degree as, in three of the cases, to produce almost sudden closure of the glottis, and consequent suffocation.

In three of the cases, in which death occurred within a few hours after the inflammation of the glottis came on, and within twenty-four or thirty-six hours from the commencement of the malady, the inflammation had not time to spread far, and the air-tubes and lungs, and other organs, were sound.

In the other cases, which were more protracted, the inflammation had spread down the air-tubes, and there were marks of inflammation it the chest, and an infiltration of a sero-purulent fluid in the loose cellular tissue of the neck.

The occasional connection of laryngitis with erysipelas was noticed by Dr. Cheyne in his article on laryngitis in the "Cyclopædia of Practical Medicine;" and again by Mr. Wood, in a paper published in the seventeenth volume of "The Medico-Chirurgical Transactions." The first person to treat expressly of it was Mr. Ryland, of Birmingham, in his work "On Diseases of the Larynx."

The author cites the facts related by Mr. Ryland, and observes that they prove conclusively that inflammation of the larynx, causing great swelling of the lips of the glottis, and infiltration of fluid in the submucous cellular tissue, and thus leading to speedy suffocation, occasionally results from the poison of erysipelas.

He considers the following circumstances favour the opinion he has expressed as to the nature of the disease:—That the inflammation spreads in the same mode as in erysipelas of the skin, presenting the deep redness and swelling, and infiltration of a serous or sero-purulent fluid, which occur in that disease; that it is more fatal than ordinary laryngitis; and that it occurs most frequently amongst the inmates of hospitals in which erysipelas prevails, and amongst such of them as are peculiarly liable to erysipelas—viz., convalescents from continued fever or eruptive fevers, and those labouring under secondary syphilitic ulcers.

The author concludes with suggestions respecting the treatment of the disease, and some general remarks on erysipelas.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct from the Office of the Medical Times *to Annual Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.*

A HANDSOME PORTFOLIO *for holding the* "MEDICAL TIMES"*—very desirable to those who would keep the numbers clean for binding, and easy of reference—may be had, by order of any Bookseller, or at the Office, price 5s. An allowance is made to the trade.*

Ulverstone.—*We know of no "analysis of ether when mixed with carbonic acid."*

J. D.—*The new Irish poor-law, so far as it respects the appointment of medical officers to unions, is not retrospective.*

B. L.—*The great authority on vegetable physiology is our overlooked but distinguished Brown. Lindley's books bring us down to the latest discoveries on this interesting subject.*

Mr. Price, *of the Waterford Dispensary, sends us a report of a distressing case of asthma, cured by the inhalation of ether.* Mr. Price *may have the number he requests by ordering it of the publisher, and remitting postage stamps.*

Mr. Smith, Belper.—*We shall be happy to receive and consider the papers.*

Truthseeker's *paper is left for him at the office. We do not undertake, as a general rule, to preserve and return rejected contributions.*

We are sorry we cannot find room for Mr. Dillon's long case.

M. B.—*There is no doubt that such persons would be admitted to register, if any such bill were passed.*

"The Silent One," *who describes a billiard adventure to us of some gentlemen "who are in the habit of drawing if they win, owing if they lose, and chalking up for the tables," has sent us a medical case certainly, but not one fit for our columns.*

C. H. S.—*Mr. Childs has written a good book on the subject. It is also fully treated of in the lectures of Lawrence and Lallemand, published in past volumes of the* Medical Times.

M. D.—*The numbers of the last five volumes of the* Medical Times *are never allowed to be out of print.*

H. D.'s *letter should be sent to the* Army and Navy Gazette. *We are, we need hardly say, highly gratified by our correspondent's compliments.*

We have also to acknowledge communications and letters from Mr. Beet, Ashford; Mr. Williams, Swansea; Dr. Taylor, Askeaton; Mr. Charles, Colwyn; Dr. M'Keag, Coleraine; Mr. Rock, Castle Blaney, Mr. Flewett, Birmingham; Mr. Blake, Galway; Mr. Elliott, Tresillian; Mr. King, Stratton; Mr. Thompson, Edinburgh; Mr. Ricketts, Droitwich; Dr. Woollam, Ashton-under-Lyne; Dr. Flynn, Clonmel; Mr. Kemp, Wakefield; Mr. Martin, Stonehaven; Mr. M'Nab, Epping; Dr. S. Palmer, Birmingham, &c.

Ireland's *two questions are both unanswerable by us.*

The cases by Mr. Martin of Highworth, and Mr. Brown of Castle Dormington, have been received.

We have received the prospectus of Mr. Hansard's new Journal, and wish it success.

The gentleman *who comments so freely on the meeting at the Craven Head public-house, Drury-lane, London, in honour of the West Middlesex Coroner, should have given his name.*

A Constant Reader.—*During a delirium the ruling passion gets free rein, and hence we suppose the incessant raving about "libels." It is the old wonder—the Gracchi complaining of sedition.*

An immense quantity of correspondence must lie over till our next number.

A Correspondent *informs us that John Roberts, Esq., M.D., Carnarvonshire, and Christopher Fryer Curtis, Esq., Rio Janeiro, South America, were admitted members of the College of Physicians on Saturday the 20th inst.*

Mr. Edmonds *remarks to us:—"We find that the heart, in propelling its blood from its left side, causes at each contraction the peculiar sensation known by the name of the pulse, along the course of all its large arteries; and for a like cogent reason it must, I think, be allowed that the other side of the heart (its right side), during its contractions, must also cause a pulse along all the large vessels emanating from it."*

THE MEDICAL TIMES' PRIZES FOR THE BEST REPORTS OF MEDICAL AND SURGICAL CASES.

The results of our last Prizes have been so far encouraging that we propose for Professional Competition, for the year 1817, the following Prizes:—

Twenty-five Guineas for the twelve best reports of original cases in hospital or dispensary practice.

Ten Guineas for the twelve reports of original cases, as above, second in merit.

Five Guineas for twelve reports of original cases, as above, third in merit.

In offering these prizes we repeat that our aim in this, as in other matters, is to promote the SCIENCE of our Profession. The groundwork of the best part of our *practical* science and of most of our subsequent Professional worth is laid down in our studentship; and the great and the only true teacher of the student must ever be—hospital practice. Lectures and books have their uses; but it is by the bed which holds a human being, with the joy of health or the pain of disease, the chance of life or the peril of death, depending on the aids of science, that we acquire our true knowledge. There is there for the student no listless ear, no dull eye of the lecture-room; it is not the memory alone that is appealed to, or some abstract love of a pedantic and inapplicable lore. Every power of his mind is engaged: he is forced by the sympathies of his nature to hear and see, to observe, to reason, to prognosticate, to be EXPERIENCED: each patient's case is a volume of medical science in its most practical aspect, forced on his acquaintance for life!

The authors must be students who shall not have received any medical diplomas or licenses.

Six of the cases are to be medical, and six surgical.

The cases must have occurred during the year; and the names of the gentlemen under whose treatment they may have principally come must be distinctly mentioned.

Three arbitrators will be appointed—one surgeon, one physician, and one general practitioner—whose names will be duly announced. The decision will be on the 1st of July.

The Prize Reports will be published in succession in the "Medical Times," with the names of their authors.

They are to be sent to the Editor of the "Medical Times" on or before May 1, 1847, accompanied by a certificate from a surgeon or physician to a hospital, declaring that the writer is *bonâ fide* a medical student. A motto or device must be inscribed on each report, to identify the author, whose name, with a duplicate of the motto or device, must be mentioned in a private note, which will be opened when the award shall have been made.

THE MEDICAL TIMES.

SATURDAY, MARCH 27, 1847.

AN INCORPORATION OF GENERAL PRACTITIONERS.

EVERY hour is impressing us with the deeper conviction that the best foundation of any reform of the profession must be the incorporation of the general practitioners on liberal and comprehensive principles. The "pure surgeons" have their charter: the physicians are expecting, not without hope, an amendment of theirs: a bill, therefore, which does not set out with a charter for the great mass of the medical community would be one-sided, unequal, deformed, hopeless. It would strengthen the physicians in their exclusive privileges; it would confirm the injustice of the Lincoln's-inn innovations, and force on us a legislation which, without that preliminary, we cannot even begin to treat about honourably, much less arrange satisfactorily or fairly.

The charters, given or giving to the two weakest sections of the profession, may be revised or improved by an act of Parliament. But if we have an act of Parliament beforehand, and then have to treat for a charter, we shall at best only get what opponents do not think it necessary to oppose, and that little, whatever its advantages, will be unconfirmed by statute.

Let all the divisions have their charters: they will then stand on equal grounds, and a basis is laid on which the fabric of Medical Reform may rest at once respectably and safely. Adequate machinery for every requirement of medical government will then lie at the hands of the legislator, whether his aim be to educate, to examine, or to secure respectable practice. For every want there will be a supply—for every action an agent.

What would be the effects of a Charter of Incorporation to the General Practitioners? is a question that here naturally occurs to us. The first effects will be the bustle and importance and improvements of self-government. There will be a new ambition generated—that of standing high in the body of general practitioners, and so obtaining their corporate chieftainships. From this source more than one important result will flow. Men standing high as general practitioners will feel less temptation to give up their order and betake themselves to the higher rank of pure surgeons or physicians. Their own body will offer them

sufficient inducements to remain; and thus it will obtain two advantages—a greater *éclat* with the public, and the possession, within its own circle, of a class ready, if need be, to act as consulting practitioners.

Yet, to rise permanently in popular estimation, and to upheave their own best men into the position of consulting authorities, it will be necessary that the examinations should not be of an inferior character. What will a charter do under this aspect? If it leave the examinations under the control of the new corporation, independently of the Colleges of Surgeons and Physicians, all will go on well for the body itself, and for the public. With a less protracted term of study, and lower price of admission fee, they might yet make their diploma the most respected in the country. Thus they might have two examinations instead of one, hold both in public, secure the best examiners in the country, and enforce a more practical character into the examinations. Such guarantees would be sought by candidates, and held in estimation by the public.

What then would be the position of this new corporation, with distinguished examiners—respected examinations—a respectable Council—and an immense body of members? Must all who dispense their own medicines obtain its diploma? In that case it would have *necessarily* nine-tenths of the examinations of the kingdom, and, as it is easy to see, would be, in fact, the head of the whole medical profession.

Such a condition would beget new relations with both the Colleges of Physicians and Surgeons. They would become, in the course of time, corporations incorporated: instead of being *of* the profession, they would be *in* it. With a community of interests there would be a community of action; and utilities would be derived from their conjoint action which we should look for in vain from their present feeble, detached, and unsupported efforts.

ETHER INHALATION.

"In vitium ducit culpæ fuga."

We have always had our fears that the undoubted utilities of ether would be forfeited through the faults of reckless experimentalizers and the blunders of ignorant pretenders. Medicine, in its advances, has had more to struggle against the bad practice than even the bad theories of its professors; and many a valuable discovery, perfect in principle, has been immolated by the indiscreet or ignorant zeal of those who have been charged with its application.

The first to introduce ether into general use in this country, we for weeks congratulated ourselves on the immunity it seemed for some time to possess from this law of medical science. Successes were for months the *rule*: failure or accident the exception. Some of the most remarkable operations known to surgery were performed without the slightest sensation of pain; and this, too, while the varied construction of the apparatus, the novelty of the agent, and a rather general ignorance of its chemical and therapeutical qualities, made the chance of ill-success far from improbable. Latterly, however, with growing experience we have had deteriorated results. Three deaths are already on record; numerous serious accidents of a less fatal character are spoken of as common. In France a reaction has taken place as strong against ether as was the bias originally in its favour; in England it is beginning to be viewed with considerable distrust and suspicion; and in the canton of Zurich a state order has altogether forbidden its use, until its safety be better ascertained. In fact, at this moment it is a question in all men's. minds—is not the use of ether in operations too uncertain and dangerous a resource surgically to be had recourse to? Should not the "great discovery of the age" be forthwith abandoned? In other words, ether has been so discredited by the blunders of its partisans that it runs the peril of many a preceding boon of medicine—as hasty a proscription as it secured, in the first place, a zealous adoption.

Now, it is our privilege to contend that ether, while it is neither so magical nor safe as some zealots would describe it, possesses in prudent and enlightened hands clear and incontestible advantages which should for ever attach it to medicine as one of its most valuable and precious adjuvants. It is not, nor ought it ever to have been supposed, an agent without danger, under all circumstances. It is a law of nature, that whatever is greatly valuable in its use must be proportionately mischievous in its abuse; and it is impossible to survey the powerful effects of ether on the human frame—producing a total revolution in the whole physical and, we may add, psychical system of the patient—without feeling that the extremity of beneficial influence beneath our eyes must be lying very near the confines of that power which wields the sceptre of lethal disease and death. But it is the distinction of the true physician that out of the nettle danger he plucks the flower safety—that he can advance to the very boundaries of peril to secure the elements of conservation; and that, though the right path be narrow, his knowledge and skill enable him to walk it with as much certainty and assurance as though it were the broadest and safest highway. If we look at the late unfortunate case at Grantham, we shall find grounds for the belief that, had the patient been in the hands of any one well acquainted with the use of ether for operations, the poor woman might, *as far as that agent's influence was concerned*, have been alive to-day: for it should not be forgotten that there was here an operation of an hour's continuance, which, under any state, would make a reflective man hesitate in identifyng the *post hoc* with the *propter hoc*, and laying the death at the door of the ether. A fact, too, that at once invites remark is, that the apparatus described as having been employed would seem to possess so few of the indications requisite for the safe use of this agent that a failure could scarcely be deemed unlikely or surprising. It cannot, likewise, have escaped notice that the symptoms described in the report of the inquest by the witnesses examined entirely corresponded with those detailed by Mr. Startin, in our last number, as those characterizing the stage of collapse resulting from the patient having breathed the ethereal vapour in "too concentrated a form" and for "too long a time." We direct professional attention to his observations as most important: for compliance with the few rules set down by him seems to us of the first consequence. Every one of them appears to us to have been violated in the deplorable case before us. More rashness, more thoughtlessness, or more ignorance it would be difficult to exemplify in reference to so important an emergency. It behoves the profession, while proceeding in every step with the utmost caution, to examine and severely test the remedy under the varied circumstances for which its administration may be called for, and we invite any communications on this subject which shall *add* to our daily increasing knowledge upon it. So late as Saturday last we had the opportunity of witnessing two operations, by Professor Partridge, at King's College Hospital, under ethereal influence. The first, conducted with Startin's instrument under his own superintendence, was entirely successful in its early stages; but, though the operation lasted twenty minutes, Mr. Startin did not suffer the patient (a spare, delicate woman, suffering under mammary sarcoma of the breast and axillary glands) to inhale the vapour beyond ten minutes, and, altogether, only to the extent of *half an ounce*. The wisdom of this precaution was afterwards apparent, for so much exhaustion followed the operation that the consequences might have been as fatal as those at Grantham had the ether been breathed in a more concentrated form, or for a period longer than was permitted. In the second case, an amputation of the arm, performed also by Professor Partridge, the patient was not influenced by the ether: the apparatus employed—we do not know the name of the inventor—not possessing the qualities necessary for the safe and sure administration of this agent. As this is an important topic which throws considerable light on the Grantham case, we will enumerate what we consider the requirements of a perfect apparatus:—

1. The quantity of ethereal vapour and air for a single inspiration should admit of being exactly regulated, so that there may not be more than equal parts of air and vapour.

2. Aqueous steam should have the capability of being added to this vapour.

3. Lest the ether be impure, the apparatus employed should possess the means of purifying it.

4. The valves and tubes should be so arranged that the freedom of inspiration shall be interfered with as little as possible.

5. Simplicity should be the prevailing feature in the whole contrivance.

6. The mouthpiece should be so made as to take in the nose, or the means of compressing that organ should be attached, so that one hand of the assistant only may be required.

7. The receiver for the etherized air should be of glass, so that the party administering the ether may observe the progress of the inhalation, and have a hand at liberty to cut off or moderate the supply of ether as required.

8. In no case is the inhalation to be con-

tinued beyond a quarter of an hour, with an efficient form of apparatus; and never more than two ounces of ether in vapour should be inhaled.

These are simple matters, of self-evident propriety; yet we have more than a suspicion that in innumerable instances—one of them the Grantham case—they have been wholly overlooked. People have heard of ether operations, and in their eagerness to gratify the curiosity of their friends, and extend the celebrity of their own surgical powers, have fancied that, the discovery of a willing patient being given, all the other conditions were a mere matter of course. Any ether, in any quantity, in any combination, through any apparatus, would stupify—and, this gained, it was fancied that nothing was to be done but to operate. This recklessness has brought its natural consequences, and we shall feel resigned under them if, instead of wrecking the useful discovery, they rather serve as a beacon to those who are charged as a duty with its safe guidance.

MISCELLANEOUS CORRESPONDENCE.

DR. ORPEN'S REPLY TO DR. HILBERS'S LETTER OF MARCH 6. (Pp. 44—46.) HAHNE-MANIA.

[To the Editor of the Medical Times.]

SIR,—As Dr. Hilbers has not arranged the "experimentum crucis," which I suggested as a test of the comparative value of rational medicine, and of Hahne-mania (as it is now called on the Continent), as to medical men at Norwich, nor as to myself here, it would seem needless for me to answer his letter in detail until he does so.

There are, however, a few points on which I may touch briefly at present.

He acknowledges candidly that all the experiments of Hahnemann and his pupils were made on habitually inveterate smokers of tobacco, both at the time and during all their previous life. Such experimenting, on persons soaked with the poison of nicotiana, never could tell anything as to the true effects of other medicines, and especially not of any weaker ones, and in small doses.

As to musk not losing weight by years or ages of odoriferous effusion, if the experiment had ever been tried by Bell, Muller, Carpenter, or Chambers, they would have given the exact details of the trial. I again assert that no such experiment ever was made; but he cannot expect me to prove a negative. The fact is, that Bell, Muller, Carpenter, and Chambers, only repeat a common error. If his statement, that ten years' diffusion of odour by musk in a room, with a draught of air always through it, did not cause any loss of weight, were true, it would only prove that olfaction does not depend, as he asserted, upon an efflux, with loss of odorous particles, but upon some unseen cause, such as polarization of particles, magnetic or electrical powers, &c.

As to homœopathic dilutions, allow me to translate a passage from "La Lancette Française, ou Gazette des Hôpitaux Civils et Militaires," Mardi, 6e Octobre, 1846, No. 117; tome viii., 2nde série (19e Année), page 1:—

"A German physician, Dr. Schincko, of the duchy of Teschen, published, many years since, at a time when homœopathy was in great vogue in Germany, a work entitled 'The System of Hahnemann Considered and Examined in a Mathematical and Chemico-Geological Point of View.' The book has been translated into French by Dr. Dreyfus; the translation is dated at Moscow, in 1830. This work, which is very little known, however, in France, is very curious. The calculations in it, made by Dr. Schincko, have, though very complicated, been repeated and verified at the request of M. Aubert Roche, and found perfectly correct by the astronomers at the Bureau of Longitudes at Paris.

"All the world knows that, according to Hahnemann, the series of diluted homœopathic medicaments is formed of thirty shades or dilutions. The homœopathic pharmacian first makes a range of thirty flasks: into each he introduces 100 drops of water, or of some other diluent; into the first he then drops one drop of some active medicamentary substance, usually of a tincture, and he produces the mixture of this one drop with the 100 drops of diluent previously inserted, by shaking the flask according to certain rules; from this first flask he takes one drop, and adds it to the second flask of the series, containing also, already, its 100 drops of water, and then shakes it similarly; from this second he takes one drop for the third; from the third, one for the fourth; and so on, until he comes to the thirtieth.

"From all these processes there result thirty dilutions of thirty successive centesimal divisions, and each flask in succession contains, of course, one hundred times less of the medicamentary substance than the preceding one; all the thirty flasks together contain only one single drop of the original tincture, very unequally divided too.

"It was absolutely necessary to recal to mind this 'modus faciendi,' in order to understand what follows.

"Dr. Schincko first calculated the quantities of the diluent liquid which it would be necessary to employ to produce thirty similar dilutions, &c. &c., and he arrived at the following results:—

"For the fourth dilution one would require 65½ quintals of liquid; for the eleventh, as much as the whole waters of the Black Sea; for the fourteenth, as much as one-third of the globe of the earth could represent; for the sixteenth, as much as 3300 spheres like this earth in size; for the eighteenth, twenty-four spheres as large as the sun; for the twenty-first, twenty-four millions of suns; and, finally, for the thirtieth—that is to say, of that dilution in which the medicament is only given in the decillionth part—the operator would require as much liquid as could be supplied by twenty-four quadrillions of spheres of water as large as the sun, or thirty-three quintillions of spheres like this earth.

"The mass of water, therefore," says the author, "which would be necessary to obtain the division at a decillionth of a drop of the medicine, would form a sphere of which the diameter would be equal to 1,760,000 times the distance of the sun from this earth, or —900,000 times our distance from Uranus, or — nine times the distance of a fixed star. A ray of light, which in the space of a second travels 41,000 miles, and which, therefore, comes to us from the sun in eight minutes seven seconds, would take twenty eight years to traverse such a sphere as that described!!

"It would suffice, then, to mix one single drop of tincture of nux vomica with this immense mass of water to be able to give with success a decillionth of this mixture; but, if the atoms of that drop separated from each other with the rapidity of the flight of a cannon ball, it would still require us to wait for 45,000,000 of years before the mixture was uniform

"Here," says Dr. Schincko, "the question presents itself: how many sick people would Hahnemann say he could cure with a single drop of tincture of nux vomica if he gave it commonly at the thirtieth dilution, or in decillionth doses? It is easy to prove by calculation that this one drop of tincture of nux vomica would suffice for two hundred thousand quadrillions of men! and, if each man took every day one drop of the tincture reduced to the divisional decillionth, there would be consumed every year seventy-three quintillional drops!! consequently, one decillional drop would suffice for thirteen thousand six hundred and ninety-nine quadrillions of years!!!"

That such dilutions will cure diseases is what Dr. Hilbers expects us to believe. If he will only allow us a few patients, out of the eight hundred millions in this world, for treatment on the rational plan we will make him, with hearty good will, a present of the two hundred thousand quadrillions of men, to be treated by his decillionth doses, *in nubibus*.

As to "the vast body of symptoms obtained by Hahnemann, which he describes in his 'Materia Medica Pura,'" and to which Dr. Hilbers refers, I cannot say that I believe it to be a vast body of fancies or of falsehoods; but, if the symptoms produced by each medicine were really as numerous and as various as there stated, both they and Hahnemann's book would be totally useless: for it would be all guesswork, what symptom you were to oppose or to produce, or what medicine to use to induce the symptom wanted, so many, he says, do produce it.

Dr. Hilbers recommends me to attend the "Liverpool Homœopathic Dispensary," where, he says, I should "see 300 persons treated weekly." This would make, according to Cocker, the annual number of 15,600. And yet the late report of the "Birkenhead Homœopathic Dispensary" states, that "in the *four* years 10,240 patients have been admitted at the Liverpool one." Which statement is true? But 10,240 in *four* years, or 15,600 in only *one*? It is as evident as homœopathical dilution of truth, that both cannot. Yet "Dr. Hilbers" and the "Birkenhead" report both state, "300" as weekly treated at the "Liverpool Homœopathic Dispensary." How they make out "this average," they will settle among themselves.

But as to what is to be learned, either there or here, as to their non-treatment, I must say that I have no wish to learn it. Several patients have called on me with tickets, from the "Liverpool" or "Birkenhead Homœopathic Dispensary," and the diseases marked on their paper of recipes were not at all the diseases under which they had been or were labouring. For example, a man came to me some time since, with his disease marked "sciatica," by one of the Liverpool homœopathics, and yet it was not sciatica at all, but "morbus coxæ senilis"; and his left leg was two or three inches shorter than the other, in proof of the fact.

However, it is not by mistakes of this kind—viz., of more severe for less severe diseases—that they usually err, but quite the contrary: for, as they dis-aggerate microscopically their doses by infinitesimal subdivisions, and by dilutions into decillionths, so, on the contrary, they exaggerate telescopically the disease which they treat, calling often mere pains "inflammations"; and this is the whole explanation of all the false reports that they import from Germany and Dr. Fleischmann as to the numbers cured by homœopathic non-treatment or ill-treatment, compared with rational treatment, or what they falsely call "allopathy" or "heteropathy."

I could tell Dr. Hilbers the full details of the cases of three persons, whom I know well, who were killed by homœopathy within these two years; and of these, one was the very person who made me a present of a costly homœopathic medicine chest to induce me to try it; and I did so on myself to the very last bottle, as already explained: they were killed by their diseases being wholly mistaken, and also by their time of possible cure by rational treatment being let slip. To oblige one of these, I allowed the homœopathic physician, who had attended my friend in some prior illnesses, to prescribe for me, when ill; I described my case minutely—first personally, and then by correspondence—and did exactly as I was bid, taking medicines that I did not know at all. He was a thoroughly gentlemanly man, well educated, and clever; but the medicines produced no effect. I did not expect they would. I never had faith in any of them.

As to attending a homœopathic dispensary to learn, I should just as soon think of attending a bread-pill manufactory or hospital. Seeing cures of hundreds of cases occur under doses of globules, would only convince me of what I already believe —viz., that multitudes of diseases and illnesses will get well without any treatment at all, or by any treatment in which the patient has faith, and very many more by mere diet and the lapse of time.

Dr. Hilbers says that I have misrepresented his sentiments, misquoted his letter, and jumbled his

words together into new sentences. I say that I did not, and that it is not the fact, or true in any sense; and, as it would be mere waste of time to reiterate what he and I had said, let your readers compare and judge if I did not quote truly.

As to tobacco-smoking experimenters on infinitesimal medicines, he says—"Every smoker knows the extreme inconvenience occasioned by breaking through the habit when once formed." As I never smoked, I know nothing personally of this; but, as almost every homœopathic that I have met thought it right to imitate their master and his German pupils in this dirty custom, perhaps he does. But does he really think that it is only giving up a habit that in this instance causes inconvenience? Does he not know that it is not a mental or moral habit like cursing or false reasoning; but that it is a bodily habit, and that the inconvenience and discomfort of abstinence from tobacco—smoked, chewed, snuffed, or plugged, as snuff, cigar, pig-tail, or quid—are caused by the want of the usual quantity of poisonous or narcotic excitement, and an actual chemical difference in the circulating fluids, or in the nervous chemistry of the body? And if so, how can any any tobacco-smoker, while using it, or even until thoroughly purified, judge of the delicate effects of any medicine on himself?

Since you published my letters, I have received a very excellent letter from a foreign physician, who once went to Hahnemann, and put himself as a person in health, and his patient as a person in sickness, under his care, to try if, in his own healthy body Hahnemann could, by medicines, produce the medicinal diseases that he asserted, and whether in his patient he could produce the curative medicinal symptoms that his book promised. In all his attempts, in both the physician and his patient, Hahnemann completely failed. Dr. Hilbers objects to my trial of eighty-four medicines on myself, and says, that I "dishonestly undertook the experiments, without any *bonâ fide* intention of eliciting truth." Well, he is no judge of my honesty, let him object as he likes; he has not so fairly tried the experiment on himself; but what will he say to Hahnemann's own failure to prove his *words* in these two cases? I certainly did try to elicit truth; but I confess I never did for a moment believe that truth would issue from a homœopathic medicine-chest; I always disbelieved almost all that was asserted; but yet could not bring myself to conceive that men would assert so many things without any foundation at all.

If Dr. Hilbers tries to show that olfaction is caused by a body's losing odorous particles, by proving that, after ten years' loss of such particles, it loses none of its weight, I wish him joy of his physiology, no less than of his reasoning and statics, and only beg that he may not weigh me in his own scales. If he argues that there is a loss of particles, by proving that there is no loss of ponderosity, it is no wonder that he tries to show that diseases are cured by one or a hundred minims, taken from a solution of one drop of tincture of nux vomica, in a sphere of water equal in diameter to 169,200,000,000,000 miles: that is, in English arithmetic, one hundred and sixty-nine billion two hundred thousand million of miles. Did it never occur to him, that the proof that he adduces, even if it were a fact, would disprove his own theory? Is it the case in chemistry, mechanics, dynamics, or any other science, that any body loses parts without lessening the whole? Has he, too, ever examined, how much weight musk will lose or gain, by ten years of effluence of odours, or ten years of influx of damp or confluence of dust, in an open room? or by ten years' effusion and absorption of various gases? But this is all beside the point in discussion.

Dr. Hilbers confounds "Hahnemann and his system" with experiments on the precise effects of every single medicine, in every one of its preparations, and in all kinds of doses, both upon persons in all states of health, and in all sorts and symptoms of disease. To this part of Hahnemann's examination of medicinal substances no man ever objected: for it is only part of the common inquiries of every medical man, since disease entered the world. But this has nothing in it peculiar to himself; nor has it any necessary connection with his system, or his theory of "similia," &c., of "dilutions," "potencies," psora (or itch), nor with infinitesimal abstractions of the ghost of a medicament.

Dr. Hilbers says, "I am not aware that Hahnemann ever said that the effects of an infinitesimal dose of medicine, taken by a person in health, would display its effects for six weeks. Will Dr. Orpen refer us to the work where this assertion is made?"

If Dr. Hilbers will refer to the "Translation of Ernest von Brunow's Glance at Hahnemann and Homœopathy" (the author of the first French translation of Hahnemann's "Organon of the Healing Art)," "translated from the German by J. Norton, M.D." (my near neighbour at "31, Hamilton-square, West Birkenhead, 1st July, 1845"), and published by Simpkin, Marshall, and Co., London, 1845, 8vo., p. 40, he will find at page 27 the following sentences, honestly stated by Brunow, and honestly translated by Dr. Norton, whom I have the pleasure to know and respect:—"Hahnemann, however, was firmly persuaded of the 'potentialization' of every medicinal substance by its attenuation, in the way described, viz., 'trituration and dilution.' (See p. 25.) An entire drop appeared to him to be always too strong a dose, and he directed that 300 globules of milk-sugar, of the size of poppy-seeds, should be moistened with a few drops of the tincture; and he ordered that two or three of these should be taken for a dose. To this extreme smallness of dose he added another extreme opinion concerning the length of time of the action of an individual dose: for he maintained that we must allow the medicines to act, according to the state of the patient, from four to ten weeks, before we repeated the dose. With very irritable or susceptible patients, he considered even the globules were a dangerous medicinal dose. In such cases he recommended mere olfaction—the smelling at a bottle, containing globules, that had been saturated with the decillionth attenuation."

Perhaps Dr. Hilbers will favour us with a calculation, how many particles each sniff of each patient (especially snuff-takers) would abstract from the odorous effluvia of each such globule, in any such decillionth microscopic bottle; or how many centillions of ages it would take to exhaust one bottle, or the whole of a homœopathic medicine's stock, or his pharmacian's shop. Dr. Hilbers may say, that the above extracts only relate to sick people, or the word used is "patients," and perhaps it is so: but they may have been only "patients" of medicinal diseases, produced homœopathically, as well as of real diseases so treated, for anything that appears in these paragraphs. I have not my former letters by me at present to refer to, in order to see if I alluded to "six weeks" effects or "decillionth doses" in "healthy" or in "sick" persons. But, if such doses act for ten weeks in sick persons, it is scarcely likely that they would not act for half that time in healthy persons.

As to Hilbers's "provings" of medicines, the following extract from the same work, p. 20, gives a laughable account of his manner of trying the effects of them:—"A very peculiar mode of life prevailed in Hahnemann's house. The members of his family, the patients, and the students, &c., lived and moved only in one idea, and that was homœopathy; and for this, each strove in his own way. His four grown-up daughters assisted their father, and each gladly took part in the provings; and still more, this was done by obliging students," &c. This is really written by a homœopath, and translated by a homœopath! Only conceive "Hahnemann's four grown-up daughters," and a quaternion after quaternion, in succession, of "obliging students," trying the effects of all large doses of every medicine in the same house, and "each striving in his" or her "own way," after swallowing an ounce of salts, or a few drops of tincture of phosphorus.

But I must not trespass too much upon your space at present. I may hereafter send you a few other remarks on Dr. Hilbers's letter, and on Hahnemannism.

I am, your obedient servant,

CHARLES EDWARD HERBERT ORPEN, M.D.,
Fellow and Member of the Royal College of Surgeons of Ireland and of England.

34, Hamilton-square, West Woodside,
Birkenhead, March 8.

THE BIRKENHEAD CASE.

[To the Editor of the Medical Times.]

SIR,—Much as the death of Caroline Gray at Birkenhead, under circumstances detailed in your last, is to be lamented, I have long been convinced that such cases (I *hope* one might suffice) must occur, before a proper understanding can be made to exist between the public and the profession in respect of midwifery attendance. The jury, whom I must suppose to represent the public, "regret that more prompt and efficient aid was not rendered by the medical men *in attendance*." I do not wish to cavil about trifles, but must say that a verdict ought to put in something like consistent and intelligible form. There is not one tittle of evidence to show want of efficient aid *whilst in attendance*, for the woman was delivered by Mr. Stevenson. Mr. Steele calls on the Wednesday—can he be said to be in attendance, when he positively stated that he would not attend unless paid his fee, which was not forthcoming? What the jury meant to regret, if they were rational men, was, doubtless *that more prompt attendance was not given*. Be that as it may, certain it is that not a word of regret was uttered, that more prompt and proper provision was not made for securing to this poor woman the requisite aid when the hour of need should arrive, of which abundant warning had been given: for labour is not a casualty which comes upon a person unawares; many months are allowed, in which to prepare for all its consequences and necessities. Through a criminal neglect of the relatives in this respect, a woman's life is sacrificed, and a sapient jury salve their consciences by throwing dirt at members of the medical profession. Now, Sir, as a member of the profession impugned, with a wife and family dependent upon my exertions for support—my patrimony spent in qualifying myself for practice—I would beg leave to ask the public, am I justified in abandoning that family and such practice as would, by fair remuneration, furnish them with the means of support, and squandering my time and health in attendance upon midwifery cases, without hope of remuneration, till by such a course I become a tenant of the cold grave, and leave them as a legacy to a still colder world and the tender sympathies of a union workhouse, where, perchance (frightful though it appears), they might possibly be driven to allay the cravings of hunger by tearing the rotting flesh from my decaying bones? Or, declining such an asylum, if, as houseless wanderers perishing from starvation, they should venture in the dead of night to arouse the butcher or the baker from his slumbers, and demand his unremunerated assistance in averting their doom, would the public, on their appearance at a police-office the next morning, regret that his prompt assistance was not given to their necessities? or would they laud the public spirit and philanthropy of a man who, by his decisive conduct, consigned them to a cell, where they might receive just as much as would keep body and soul together till they should be brought to justice on so heinous a charge? Let the profession look to this—let the public look to this; and perhaps the latter will become somewhat more economical of its regrets and censure, and turn in its corrective mind the maxim, "Audi alteram partem." That the public is charitable, nay, even bountiful, after a fashion, I freely admit; and that the medical profession is more charitable by 100 per cent. I as unhesitatingly

affirm. If there be any class more than another who

"Do good by stealth and blush to find it fame,"

I solemnly believe it is medical men: they are charitable, as I could prove, to a degree altogether unjustifiable as regards those dependent upon them. Countless almost are the instances in the present day of misery and privation entailed upon their own, by their profligate benevolence to others; yet, as we have so recently witnessed, the shedding of human blood, or the loss of human life, is still essential to a correct adjustment of the relative position of the profession with regard to the public. The snoring public dreams little, or rather not at all, of the effect of midwifery practice, and its attendant anxieties on the duration of life. A casual expression of pity that a man should be cut off in his prime, without inquiring why or wherefore, carries but little of consolation to the bosom of his bereaved family.

Excuse me, Sir, if I take a liberty in appealing to you, or rather a layman in your establishment. My patrimony gone, I am launched in life to practise my profession. Suppose I recklessly disregard the difficulties I know I must encounter, and neglect, by keeping pace with the advance of science, to fit myself for those emergencies which must necessarily occur. I am hastily summoned to a case of midwifery, surrounded with danger and admitting of little delay. I am suddenly awakened to the inadequacy of my own resources, from my own culpable supineness; and, in this desperate state of things—professional death staring me in the face —I run and knock up your publisher, requesting certain numbers of the *Medical Times*, which might supply information that would save me; this I do without a shilling in my pocket to pay for that which I ought to have provided long before. Now, Sir, though I will grant that he is a humane man, what would your publisher, as a man of business, do in such a case? If he supplied me, I should regard him as a fool; if he only laughed in my face—an easy, good-natured fellow; if he assisted my retreat by an unmistakable *vis a tergo* properly applied, I might curse him in my wrath, but cherish him in my heart as a friend who administered a wholesome rebuke.

Permit me, Sir, to say that I have endeavoured to secure myself from any such sudden professional death, and avoided the necessity of putting myself under an obligation at the hands or toe of your publisher; and, moreover, effected a saving to my family of some 5s. or 6s., by the simple prepayment of one guinea for that which was essential to my "*doing as well as could be expected.*" If I had neglected this, and allowed myself to be swept from the stage of professional life, by putting off the evil day, in the hope that it would never arrive, my children pining, nay dying, for want of the necessaries of life, could I have been accounted an honest or an innocent man? Would not my conscience have upbraided me with a crime little short of murder? To avert such calamity as this, suppose I am driven in desperation to commit a crime—not of a serious character, but veiled in mysterious circumstances which, if not skilfully unravelled, might give to it the blackest dye, and subject me to the penalty of *death*—who, in such a case, would think of knocking up eminent counsel in the dead of night, to tender a weighty brief without a fee? Would the jury, in finding me guilty, regret that efficient aid was not rendered by counsel in attendance? And what of the public? That portion of it who can subsist upon the unrequited exertions of others could and would afford themselves a holiday to witness *justice avenged* on the scaffold; and perchance there too might be found as spectators one whom I had, without reward, assisted in the time of travail, with the offspring which I had saved from perishing in its birth, come now to requite me by lending the light of their countenance, decked in vulgar finery on this occasion.

You, Sir, or your "alter ego"—the *legal* half of yourself—might trip me up here by averring that counsel, under such circumstances, would be *assigned* to me, and, therefore, no such case of legal destitution could occur. I reply, that as assistance is by law provided, no case of *medical* destitution can occur—no ground for reflecting on the profession can exist; but both you and I know that such cases do occur, and such reflections are cast; and so long as the present system prevails, so long will this odium continue.

"But folks are often at a stand
When remedies are near at hand."

Counsel are "*retained*," medical men "*engaged*" or spoken to—the difference being that one receives a fee, the other none.

Now, Sir, I would appeal to you personally, as a skilled witness of the advantageous working of that system of prepayment which obtains in the establishment over which you preside, whether by such an arrangement, without obligation, favour, or affection on either side, a much better understanding is not secured, and whether the mutual interests and independence are not greatly enhanced? I can scarcely doubt your reply; what, then, is the inference? Why, that a retaining fee, paid to the medical man at the time of engaging him, would secure to the patient those advantages and services which, by a similar proceeding on his part, he is able to bestow with skill, judgment, and ability, tempered to the finest point—viz., on the sharpening-stone of science in its onward progress up to the latest hour.

But how is this practice to be introduced? Have we not societies and associations without end? Take, for instance, the National Institute: could it not effect for the profession what an individual has done for medical journalism? Ay, and find its account therein likewise. I am not at present even a guinea member; but, seeing its energies directed in such a channel, I would start myself and my children to furnish a donation, of which my children's children might reap the advantage tenfold. I have no right to claim this duty from the Institute more than any other society, even if my views are approved; I simply select it to illustrate the feasibility of such a movement—a sneaking liking, perhaps, putting it foremost in my mind. How many fees thus secured (otherwise hopelessly lost) might be contributed from the midwifery list of the general practitioner towards any institution that could effect such a wholesome revolution: to accomplish which would, I sincerely believe, be to lay the best and broadest foundation-stone of "Medical Reform," which, though it is being blurted through the land *ore rotundo*, is as yet but a flitting *ignis fatuus*—*a vox et praeterea nihil!*

To attempt by a little superficial varnish to raise to a healthy standard a profession which will not be true to itself is to me a manifest absurdity. For their encroachments and exactions from the profession people have nought to plead but custom. In obtaining services at a low remuneration, and subsequently for none at all, they of course reason that—

"the value of a thing
Is just as much as it will bring."

The Birkenhead jury selected one gentleman to whom to vouchsafe their thanks. Yet I by no means feel satisfied that the excepted gentlemen have cause to regret their exclusion from the compliments, or for self-reproach, in asserting the rights and privileges of their profession, and their immunities as members of society, much as they might deplore in common with others the foolhardiness with which the reckless and improvident will continue to jeopardize their lives. Tyrrell, the first and principal witness, does not state whether she received or expected to receive *her* wages.

I am, Sir, your obedient servant,

QUID PRO QUO.

ALLEGED MISCONDUCT OF THE FACULTY AT BIRKENHEAD.

[To the Editor of the Medical Times.]

SIR,—Your last number contains the report of an inquest copied from a Liverpool paper; as the account given is incorrect and exaggerated, and reflects unjustly upon the parties concerned, I hope you will afford me room for an explanation.

The facts of the case as concerns myself are as follows:—

"On Tuesday, the 23rd ult., the husband of the deceased came to my house about seven o'clock in the morning, and asked me to attend his wife, who was in labour. I asked him if he could pay a medical man. He said 'Yes,' and that I 'should be paid as soon as it was over.' I then accompanied him to his residence, and found his wife in labour, and attended by a midwife and a nurse. From the appearance of the place, and from the statements of the woman, I was convinced the man was not able to fulfil his promise of payment—in fact, that it was a case for the parish surgeon; but on hearing that they had been twice for the 'parish doctor,' and he had not come, and on the man saying he 'supposed his wife must die because he had no money,' I determined not to leave the woman, and proceeded *without delay* to adopt the means necessary for her relief. Finding the case to be one of unusual difficulty, I deemed it right to hold a consultation with another surgeon, and, having first ascertained that I could safely leave my patient for a short time, I *went myself* to Mr. Stevenson, the oldest practitioner in the place, and requested him to see the case with me, telling him it was a pauper case, and that neither he nor I would get a fee.

"With the readiness he has shown on former similar occasions where I have required a consultation in gratuitous midwifery cases, he kindly returned with me, and rendered the required assistance, and in due time the woman was delivered of a child, still-born and partially putrid, and, not as stated in the reports, '*with one leg off, and much mutilated*,' there being only slight laceration of the skin of one foot and arm, from incipient decomposition.

"I visited the woman again the same evening, and on the following day, when she was going on favourably; I then told the friends I should discontinue my attendance, and directed them to apply immediately to the relieving officer for an order for the parish surgeon, who would afford them not only medical attendance, but also food, which was then far more necessary for the patient, and which they had *not* the means of procuring, nor I the power of ordering.

"I heard no more of the case until Saturday, when the nurse called and told me the parish surgeon had not been, and that the deceased's husband would not go for him.

"I desired her to send some one immediately for the parish surgeon, and called afterwards myself, and ascertained that he was in attendance.

"I have Mr. Stevenson's authority for stating, that he is satisfied that, from the moment I was sent for, no unnecessary or injurious delay occurred, and that the treatment adopted by me was in all respects such as the case required; and, moreover, that he believes the woman's death was *not* owing to the *nature of her labour*, but that *it resulted probably from her previous habits and her state of destitution.*

"*I deny most positively having said that I would leave the woman unless I was paid my fee or received some security*, or that I had any intention of deserting the patient the moment I was aware of her situation, and the difficulty of procuring assistance from the parish. The reason I transferred the case to the parish on the Wednesday was, because the parties were in want of the common necessaries of life, and therefore my attendance would have been of little avail, whereas the parish surgeon has power to order anything necessary. "A. B. S."

The medical history of the case is briefly this: —On my arrival I found the woman had been in labour twelve hours, the membranes ruptured five hours, an arm and shoulder presenting, pains absent or very feeble. I passed my hand into the uterus, and with great difficulty brought

down one foot, but could not succeed in reaching the other, nor could I, with the degree of traction I considered justifiable complete the operation of turning.

Under these circumstances, I sought the advice of my friend Mr Stevenson, who made an unsuccessful attempt to reach the other foot, and to complete version The pains had now returned and became stronger, and, as Mr Stevenson considered that the fœtus was sufficiently small to pass in its present position, we agreed to wait a short time, and the uterine efforts increased and the child was expelled, it was partially putrid, and there was, as I have before stated, slight laceration of the arm and leg

The case presented no unfavourable symptoms up to the time when I ceased my attendance, which was on the second day, when I transferred her to the parish

I think, Sir, this explanation of the real state of things will sufficiently exonerate me from any charge of neglect in the opinion of my professional brethren, who are the best judges of the merits of such a case, but I cannot refrain from expressing surprise and regret that the coroner, who is a medical man, did not insist upon a fuller investigation into the circumstances of a case where the reputation of members of his profession was at stake, instead of closing the inquiry after examining only two witnesses, and adducing no corroborative testimony to the statements of the woman Mary Tyrrell, whose version of the story was in many points at variance with facts, and moreover, that no satisfactory proof of the cause of death was produced, as this important point was not mentioned in the medical evidence, nor was any *post mortem* made I have also to complain that I was not examined, and, therefore, the jury had no correct account of a very important portion of the history of the case, it is true I was summoned to attend the inquest, and, until the coroner commenced summing up, was under the impression that my evidence would have been taken, no intimation to the contrary having been given me and certainly before I heard the verdict I never for an instant supposed that any jury could pass a censure upon my conduct as I was quite satisfied I had done all that was required of me

Another hardship in the matter is this the local press have published, and thus disseminated throughout the kingdom, the grossly exaggerated and highly coloured accounts of their incompetent reporters, and thus cast an unmerited stigma upon the profession, in the eyes of that large portion of the public which is guided by first impressions

I am, Sir, your obedient servant,

ARTHUR BROWNE STEELE

Hon Surgeon to the Birkenhead Hospital and Dispensary

Birkenhead, March 2?

P S In order to enable you to judge more correctly of the case, I send the published letters of two gentlemen connected with the affair

[Mr Steele has evidently been much illused He was made to give a gratis attendance by fraud, then made answerable as for misconduct for his benefaction, and finally, through the characteristic slovenliness and injustice of a coroner's court, made the subject of the foulest charges and injustice through the whole newspaper press of the kingdom ! ED]

DEPUTATION TO SIR GEORGE GREY, BART, FROM THE COUNCIL OF THE NATIONAL INSTITUTE OF MEDICINE, SURGERY, AND MIDWIFERY.

The following is an abstract of the report of the deputation, consisting of Mr R R Pennington (president) Mr Martin (vice-president) Mr Clifton (vice-president), Mr Fuller, Mr Bird, and Mr Ancell, who waited upon Sir George Grey.

The deputation having been informed that the Government were not prepared to introduce any general measure of medical reform in the present session of Parliament, strongly urged the necessity that exists on public grounds for legislative interference in medical affairs, with as little delay as possible

It was stated by the deputation, that a large proportion of the Scotch and Irish graduates, and many members of the Royal College of Surgeons of England, were engaged in general practice in England and Wales, without possessing the license of the Society of Apothecaries—the only legal title to practise as a general practitioner in the above named divisions of the kingdom.

That upon a recent occasion the law officers of the Crown had declared that the individuals so practising were acting illegally, and could be proceeded against by a summary process at the quarter sessions of the county in which the offence was committed and that, if convicted, the party would be found guilty of a misdemeanour and be punished accordingly

That an imperative necessity had arisen, in consequence of that opinion, that the Scotch and Irish graduates, and the members of the College of Surgeons of England now engaged in general practice in defiance of the Act of 1815, should, without loss of time, be either prosecuted or legalized for that, if persons highly educated were permitted to evade the law with impunity, it would be utterly impossible to prevent persons without any medical or surgical qualification whatever from engaging in practice also, to the great detriment of the health and lives of the community

That from the number, intelligence, and the important functions exercised by the various classes above described, the best course to be pursued in the opinion of the deputation, would be forthwith to legalize them, and that the easiest and best mode of effecting this object would be to incorporate them in a new institution of a collegiate and collective character, and that legislation in this respect should not have a retrospective effect

That the principle adopted when the Act of 1815 passed the Legislature might with propriety be followed in the present case and that one other arrangement should be made for the future that would secure a uniform and high standard of qualification for all the general practitioners of this country alike

That in reference to the negotiations which, in concert with the Society of Apothecaries, were carried on with the late Secretary of State for the Home Department the deputation expressed that it was their opinion that the failure of the measures which the Minister successively brought forward was owing to the general practitioners not having been duly recognised as an independent body and that a charter of incorporation having been denied them, apart from a general measure of medical reform The deputation further adduced the fact in illustration of the difficulties arising from this omission, that the College of Physicians had refused to confer with the committee of the National Association on the ground that this body had no legal existence, although they were at the same time in communication with Sir James Graham by whom they were fully recognised

That the great difficulty as respects the grant of a charter which occurred in the course of the late negotiations arose from the disinclination of Sir James Graham to advise it without the consent of the existing institutions, that the Colleges of Physicians and Surgeons were founded centuries ago for special purposes, and their then respective councils were bound by oath to sustain the particular interests of those institutions and to carry out the special purposes for which they were founded, that, whatever might be the private opinion of the individuals in the councils of those special institutions as to the public advantages of a new college, it was not to be expected that they would be parties to a course which might be regarded as a violation of their allegiance to their respective bodies

That, therefore, the general practitioners, a class that has grown up within the last fifty years to its present position as a well-educated and influential body, required an institution of their own, embracing the whole range of medical knowledge

That in the opinion of the deputation these views could be carried out without injury to the existing colleges, which they were desirous of upholding, and that, so far as related to the Society of Apothecaries, the society had already agreed with the committee of the National Association on the terms of a charter, a draught of which the deputation believed was then lying at the Home office

The Right Honourable Sir George Grey, after thanking the deputation for the information they had afforded, stated that he should certainly bring in no general measure of medical reform to which the general practitioners were not concurrent parties, and that he would refer to the draught of the charter alluded to by the deputation

FATAL EFFECTS OF ETHER.

CORONER'S INQUEST.

A case of considerable importance, as affecting the practice lately introduced into the medical world of subjecting persons about to be operated upon to the influence of ether, by causing them to inhale its vapour in order to render them insensible to pain, has just occurred at Spittlegate, in the parish of Grantham, in the county of Lincoln, in which death has resulted from that mode of treatment

At the inquest the following evidence was given

Elizabeth, the wife of Nelson Leak, of Spittlegate, mason, deposed that she is sister to John Parkinson, of Spittlegate, hairdresser, who was the husband of the deceased Ann Parkinson, to whom witness was also cousin. That her brother had been married to the deceased about a year and nine months, and she was in a very delicate state of health at the time of her marriage that is to say, she was what is called a very delicate woman, subject to cold upon the slightest occasion, but was not subject to any particular illness and was not consumptive, as witness believes That about three months after her marriage she became pregnant, and about three months before her confinement she complained to witness that she had a substance formed upon her left thigh, which caused her pain and impeded her walking That she showed witness the place, and she (witness) observed a swelling about the size of an egg upon the under part of the left thigh nearer to the body than the knee, and it caused pain upon sitting down. That she called in Mr Bentley, a medical man, living at Spittlegate to attend her, and he saw her, and prescribed linseed poultice, and afterwards brought a plaster, which was applied, and causing great pain it was taken off before he ordered it to be so That the tumour kept increasing, and Mrs. Parkinson was confined of a boy about nine months since, which was born at its full time, and she did very well, and suckled the child for about six months, when it was weaned. That during the whole of this period she was in good health, otherwise than as she was affected by the tumour before mentioned. That during all this time the tumour increased in size, and became a great impediment to her walking, sitting, or sleeping That in January last she applied to Mr Robbs, surgeon, Grantham, to attend her That he did so from that period until her decease That he ordered leeches, and made several punctures in the tumour, which, however, was not reduced, but rather increased. That, in consequence of this, she wished to have the tumour removed, and wished witness to speak to Mr Robbs upon the subject, which she (witness) did, and he said he would bring Dr. Turner to look at it That he did so on Thursday, the 4th inst That at this time she had seen several reports of successful operations under the influence of ether, but had expressed her wish to have the tumour removed before she

had heard of such mode of treatment. That when Dr. Turner came he said he thought there was no other remedy than taking it away by an operation. That on the next day Mr. Robbs called to see the deceased, and asked her if it was her wish to have the tumour removed? and she said that it was; and it was then determined that it should be taken away, and it was also determined that ether should be applied. That about a fortnight or three weeks before witness had asked Mr. Robbs what he thought of the application of ether, and he said he had no faith in it, but at the time in question he said he had performed an operation on a young man's toe with success, under the influence of ether. That witness, on the Saturday, the 6th of March, saw the young man in question, and asked him how he had felt during the operation? and he said quite comfortable, "that he felt quite like a fool;" and he said in answer to a question, that if he had to undergo another operation he would take the ether. That on the same evening Mr. Robbs administered ether to Mrs. Parkinson, in witness's presence, by causing her to inhale the vapour, in order to see what effect it would produce upon her. That it made her laugh very much, and whilst under its influence she was pinched very severely; and when she recovered from its influence she said she felt quite comfortable, and retained all the "consciousness of mind," but not feeling, but was aware she was being pinched, although she said it did not give her pain. That the operation lasted about ten minutes, but the influence continued about two hours and a half, during which time she was hysterical. That on the following Monday evening she was again subjected to the vapour, when its influence was much more rapid, and she became quite unconscious in a few minutes - in about four or five minutes. That she remained so for about a quarter of an hour or twenty minutes, when she became conscious, but the effect of the ether did not leave her for about an hour. That on her recovery she said she knew all that had passed in the room, though she was apparently unconscious; that she could hear though she could not see. That she was not hysterical the second time. That after this it was arranged that the tumour should be removed the next day, Tuesday, the 9th inst. That she appeared to be in her usual health between the operations of Saturday and Monday; and, on being asked if she felt at all unusual, she said her head felt heavy, which she attributed to her laughing so much whilst under the influence of the ether. That witness asked her, on Monday evening, whether she was determined to have the tumour removed? and she said she was; and witness asked her if she would have so determined even if the ether had not been discovered? and she said she should; this she also asked her on the Tuesday morning, and she again replied in the affirmative. That on Tuesday last, the 9th of March, about noon, Mr. Robbs, accompanied by Mr. Rogers, Mr. Priest, and Mr. Dibben, all medical men, arrived at Mr. Parkinson's, and the operation was performed. That it was about one o'clock that the ether was administered. That the apparatus consisted of a glass jar or globe, with a tube that was made to fit the mouth, and it was applied by Mr. Dibben. That in about ten minutes Mrs. Parkinson was reduced to a state of unconsciousness, when the operation of removing the tumour commenced, and she appeared to feel the first cut, as she made a deep moan, whereupon ether was again applied, but witness is not of opinion that she inhaled much more upon such second application. That the operation proceeded during the time the vapour was so inhaling the second time. That witness cannot positively state whether the ether was again applied during the operation, nor can she state positively whether the apparatus was kept applied to the mouth during the whole time the operation was going on. That Mrs. Parkinson was laid upon her stomach upon a table and witness assisted in holding her during the operation, and was placed about the lower part of her body, and did not, therefore, see her mouth. That upon every incision made during the operation she moaned, and appeared to feel it, as she struggled and nipped witness's hand; but she did not appear to feel anything when the different vessels were being tied up. That to the best of witness's belief the operation lasted an hour all but five minutes, when she was taken from the table and laid on the bed; she had a little brandy and water before the operation was quite over, which she swallowed readily, and a little more when she was put to bed. That she did not appear to lose much blood, and the wound was dressed after the operation and bandaged, and when put to bed she appeared to be conscious. That shortly after she was in bed witness made her a little gruel, which she took, and said she felt better, but spoke in a very low and faint tone of voice. That she did not appear to rally at all from that time. That Mr. Robbs came to see her in the afternoon and evening, and desired her to be kept quite still. That on the following day she remained in the same low state, and Mr. Robbs saw her more than once, and sent her medicine, which was administered, and a little thin gruel and tea were given her by his directions, which was all the nourishment she took. That on Wednesday she complained of a numbness in both legs and the lower part of her back, and hot bottles were applied by Mr. Robbs's directions, but she was not relieved. That witness asked her if she felt pain during the operation, and she said she did when they cut, but not otherwise. That on the Thursday morning, about twenty minutes past five o'clock, she died without uttering a groan. That from the time the operation was performed till her death she never moved by her own power, but was moved when necessary by witness. That she seemed quite conscious during the whole time from the operation till her decease. That Mrs. Heaney, the nurse, was backward and forward in the room during the operation.

William Eaton, of Grantham, surgeon, deposed that on Saturday last, by order of the coroner, he proceeded with Mr. Shipman, in the presence of several other surgeons, to make an examination of the body of the deceased, Ann Parkinson. That on examining the body externally he found an incised wound on the left thigh about six or seven inches long, secured by sutures, on removing which he found a wound, which had the appearance of an operation having been performed upon the thigh. On examining it closely he could not observe that any nerve or large bloodvessel had been divided or wounded. That there were four ligatures, which appeared to have been applied to small arterial branches. That there was nothing in the appearance of the wound or of its situation that could account for the speedy dissolution of the deceased, and the operation appeared to have been performed as correctly as it was possible to have been done. That he then proceeded to examine the chest internally, and found nothing unnatural in the appearance of it; the lungs were pervious and appeared healthy; they were a little congested at the posterior part, which witness attributed to the position at the time of dissolution. That the heart was next examined, was healthy in structure, but more flabby or flaccid than usual, and containing rather less blood than usual. The stomach was next examined, and contained a little dark-coloured thick fluid of a greyish colour, apparently gruel, and was healthy, but rather congested at the lower part from the position as above stated. The liver was of its natural size, but paler than usual and softer in texture; the spleen healthy and natural, the intestines also. That he did not think it necessary to examine the kidneys, but then proceeded to examine the head. That the brain was quite healthy, with the exception of the upper part of the anterior lobes, the membranes of which were congested with blood, and there was no effusion in the ventricles. That the blood throughout the body was in a fluid state. That witness discovered nothing in the appearances on or in the body to account for the death under the ordinary circumstances attending an operation of the nature that had been performed. That the congestion of the brain, in witness's opinion, was caused by the exhibition of the ether which was administered, as also the liquid state of the blood. That in witness's opinion the death was not caused by the shock to the system simply produced by the operation, as the deceased exhibited every appearance of a healthy person, though delicate, and the operation was not in any part at all likely to affect the general state of the patient's health. That in witness's opinion the death of Mrs. Parkinson took place from the effects of the ether which she had inhaled, and the tumour itself was not in that state to cause death, witness having seen it since its extraction. That it is what is called an osteo-sarcomatous tumour, which is of a malignant nature, and calculated to destroy life ultimately. That the practice of using ether in similar cases has been sanctioned by the highest medical authorities, and has been used with success in many cases in the public hospitals, and he himself has operated upon a patient, though he suffered a good deal from the effects of it, but is now getting on well.

Robert Shipman, of Grantham, surgeon, assisted Mr. Eaton in the examination of the body of the deceased, and entirely concurred with the evidence given by the latter gentlemen. At the conclusion of the evidence, the coroner, having duly cautioned Mr. Robbs, requested to know whether he was desirous of making any statement relative to the case? upon which that gentleman described the manner in which the vapour had been inhaled, and stated that the operation lasted about twenty-five minutes, including the tying of the vessels, the remainder of the time being occupied by the inhalation and the necessary bandaging, &c. He also stated that he believed the deceased felt as much pain as if she had not inhaled the vapour, as she cried out and struggled at each cut. He then proceeded to read accounts of numerous operations in the public hospitals and other places where the ether had been used with success, and stated that nothing had been done in this case but what had been fully warranted by the practice of the leaders of the profession. He also stated that he had attempted to produce reaction by the exhibition of ammonia and other applications without success.

The coroner then summed up, and the jury, having deliberated a short time, pronounced a verdict, "That the deceased Ann Parkinson died from the effects of the vapour of ether, inhaled by her for the purpose of alleviating pain during the removal of a tumour from her left thigh, and not from the effect of the operation, or from any other cause."

At the conclusion of the case Mr. Robbs stated that he fully concurred in the verdict, as he had no doubt whatever that the ether alone was the cause of death, and it was a duty he owed to the public to say so.

Dr. Little, of Sligo, Physician to the Sligo County Infirmary, addresses us in the following gratifying language:—"I send you a Post-office order for two guineas—one guinea my subscription for the *Medical Times*, which, I am free to say, is the best paper of the kind ever yet published; and, for its manly defence of the rights of the profession, demands the grateful acknowledgments of every member thereof for its able and sincere conduct in the Hounslow case."—[We publish this extract as one of many gratifying proofs of the interest felt in the *Medical Times* by all sections of the medical profession in every part of the empire.]

Apothecaries' Hall.—Gentlemen admitted members March 18.—Robert Finch, Robert Kemp Buckell, Geo. Anstice Knott, and James Edmund Curney.

Mr. Phelan, Surgeon, of Dublin, has been reappointed an assistant poor-law commissioner for Ireland.

No. 392. **SUMMARY.** April 3.

A COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the THEATRE of QUEEN'S COLLEGE, Birmingham.

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Typhoid variety of the fever of 1846; its origin and exit; probable cause; not pure typhus; reasons for thinking so; general features, healthiness of the locality, perhaps, prevented it becoming malignant; sanatory condition of Birmingham; typhoid fever of last year, marked at the commencement by nervous prostration, in what organs this was first manifested; concomitant symptoms; debility of the heart; not always to be ascertained by the pulse; reflections upon this subject; faultiness of the heart's action in the fever of 1846; secondary of the debility of the voluntary muscles; not genuine softening; reasons for thinking so; passive congestion the result of this cardiac debility; how produced; congestion of the brain and its symptoms; of the lungs; of the liver; of the kidneys; of the mucous membranes; reflections upon the treatment of this fever, special and general.

GENTLEMEN,—I shall conclude what I have to say concerning the fever of 1846 by some observations upon its typhoid variety. This was the most common of any. During the latter part of the summer, and throughout the entire of the autumn of last year, it prevailed to a fearful and fatal extent in this town and neighbourhood. In some instances it appeared to be a *sequela* of bowel complaint; but in the majority there was nothing to account for its origin or exit; it came, nobody knew how—and it departed, nobody knew why; but its visit was an awful one, for many were the sufferers that fell before it.

As I said, when speaking of cholera, I can only suppose its advent to be due to some atmospheric peculiarity. At least, no special cause or causes could be assigned for it. Age, sex, temperament, occupation, mode of living, residence, and state of general health, had no influence over its seizures—they were made indiscriminately, and found victims everywhere.

The cases of course varied very much in intensity; but even the worst which I witnessed (and I saw many very bad ones), I should hardly be disposed to call *pure typhus*, or perhaps, I should say, *complete typhus*. Most of the characteristic features of this were present in the cases I speak of, but they did not occur suddenly, nor in an extreme degree. There was great anxiety especially expressed in the countenance (almost pathognomic of typhus); prostration of strength; thinness of the blood, which was generally dark, and often uncoagulable; putrescent tendency; fetor of the breath, and a cadaverous odour of skin; accelerated action of the heart, with diminished impulse, and sometimes with a remarkable diminution of its systolic sound; a dry tongue, coated with a brownish or blackish fur; sordes on the teeth; low muttering delirium; epigastric tenderness; occasionally purging of dark-coloured matter; dusky urine with a putrid, or ammoniacal smell; petechiæ. There were all these things, as you know, and yet I should rather call the fever they characterized *like typhus* than *genuine typhus*. In the latter these morbid features are manifested much more suddenly and more severely than I ever observed in the fever of last year, and they often proceed to a much greater extent, especially the putrescency of the solids and fluids, than was observable in it; moreover, I never saw a case of ulceration of the bowels in the fever of last year, and the enlargement and inflammation of the intestinal glands were much less conspicuous than we generally see in pure typhus. This, again, I believe to be infectious; but I had no evidence of the fever of 1846 being so. These are my chief reasons for thinking that it should be said rather to have resembled typhus than to have been really such.

Perhaps its immunity from a malignant type may have been owing to the several circumstances which contribute to make Birmingham a healthy place of residence. These are—the elevation of its site, its undulations and facilities of drainage, its sandy and gravelly substratum, its ample supply of water, and the average good living of even its poorer workpeople. These are so many antagonisms of the origin and spread of typhus; and it is likely that to them we owe the gratifying fact of this disease, in its worst forms, rarely appearing amongst us. At least it never occurs here in anything like the virulent form in which it appears, too frequently, in the lower parts of Liverpool, and in the old town of Edinburgh. Nor is it improbable that, if our mild cases could be transported thither, they would not be long in acquiring a deadly malignity.

The typhoid fever of last year was particularly marked by nervous prostration: it was the earliest symptom, and the leading one whilst the disease lasted. This lesion of innervation seemed to be the cause of several of the subsequent features of the malady, especially of the fluidity of the blood, and the tendency to putrescency of the solids and fluids. Anything which exhausts the nervous vigour, whether slowly or suddenly, produces these effects. Animals that have been poisoned by strong sedatives, that have been killed by lightning, or run to death, quickly decompose, and their blood rarely coagulates.

The first morbid impression, in the fever I allude to, I have no doubt was upon the nervous system, and many, if not most, of the other pathological phenomena, came as *consequences*. In this respect it differed from that typhus which is *communicated*, and in which it is probable that the primary effect is produced upon the blood, and the secondary one upon the nervous system.

The depression I speak of was first shown in the organs of locomotion. The patients complained of listlessness and disinclination to stir, and when walking, or rather tottering, their knees were bent, and were straightened with difficulty. After a time, the brain showed its participation in the general bodily languor, and the ideas became confused, the perception weakened, and the judgment wavering; this was without any evidence of irregularity in the cerebral circulation. There were at this period no false ideas, no phantasies, no watchfulness, anxiety, or stupor; the intellectual processes seemed to be irregular and imperfect, merely for want of energy, just as we see after severe illness, in which the brain has had no share except in so far as it has suffered from the debilitating effects thereof; after profuse hemorrhages, mercurialization, &c.

About this time the stomach failed in its offices: the appetite was generally defective from the commencement, but what food was swallowed was usually retained without difficulty; now, however, the *irritability of debility* was manifested in the gastric apparatus, and, whilst the patients complained of a distressing sense of hollowness or sinking at the epigastrium, they quickly rejected any substantial food that might be given to correct it. In some cases the retching was very severe, and followed by alarming prostration. Shortly the bowels became inert: they acted only when prompted, and their sluggishness was the occasion of a great accumulation of flatus, which distended the abdomen so as to give, on percussion, a uniformly tympanitic sound.

The heart was generally the last organ to show its weakness, but its time at length arrived; and then, in almost every case, a new pathological feature was acquired.

The pulse at the beginning was always quicker than natural, sometimes firmer, and again weaker, than it ought to be. But, as I have

often before told you, you must not trust to the pulse to know what is the condition of the central organ of the circulation: you must listen to the sounds of the heart itself, if you desire to know, from its action, what its probable state is. You may have a pulse in all respects natural, and yet the source of it be the reverse of healthy. This is especially the case if you desire to take the circulation as the test of a patient's strength: if you trust to the pulse for this, it is as likely as not that you will be deceived. You may ply your fingers delicately upon a patient's wrist, dangle mysteriously your watch-chain, elevate your eyebrows, and shake your head—and be no wiser for all this pantomime of pedantry. You may say, "But a man may flourish his stethoscope about a patient's chest, and yet know nothing of what he is doing." This is perfectly true, and I am afraid the fact often meets with an illustration; but, admitting that the stethoscopist *understands his business*, he is far more likely to be correct in his diagnosis of the heart's condition by listening to its action, than another who trusts merely to feeling the pulse. The arterial beat at the wrist has often been considered satisfactory, at the very time when the heart itself was in process of softening. It is far from uncommon for the impulse of the heart and its systolic sound to be scarcely appreciable, and yet the pulse to be sufficiently distinct at the wrist. Admitting that there was no pericardial effusion, there must have been evidences either of softening of the heart, or great debility of it. Such evidences were often furnished in the typhoid fever of last year, and especially in one case you saw treated in the hospital, of which I will speak shortly.

As I have said, the heart was generally the last organ to show itself affected by the nervous depression under which the system suffered. I think this is usually the case under such and similar circumstances: at least my own experience inclines me to say so. If it be a rule that this involuntary muscular structure is more tardy than are the voluntary muscles in participating in systematic debility (as I believe it is), the provision is one of those instances of wisdom for which the operations of nature are constantly remarkable. Our organs of locomotion, though of inestimable valuable to our existence, are not *essential* to it. People have been born, and have lived, without arms and legs; and these organs are often lopped off by accident and in battle, or rendered useless by paralysis, and yet the deprivation is not destructive of life. On the first accession of fever, when extreme weakness of the limbs is the chief cause of complaint, there is little harm in this singly: for the services of these limbs can easily be dispensed with for a time, should it be necessary to confine the patient to bed. Moreover, their ailment is suggestive of its probable source, and thus, when advantage is taken of their early manifestations of disorder, this is often remedied before it has time to extend to other organs less capable of sustaining it with impunity. Thus, we frequently see the debility, characteristic of an accession of fever, confined to the structures of locomotion, in consequence of the malady being being cut short by judicious treatment. In other cases, however, where treatment has been improper, or altogether neglected, or where it has not been yielded to, however good and early administered, an important organ has at last begun to fail in its functions, and upon this a fresh, and commonly a fatal, train of symptoms has arisen.

The organ I allude to is the heart. In the fever of last year, this organ (so far as my own experience goes) never indicated weakness as early in the disease as did the muscles of voluntary motion. At the commencement of the attack, when these were comparatively powerless, its action was firm, and only marked by frequency or irregularity. At variable periods, however, when the fever persisted, either in spite of treatment, or for the want of it—periods varying from five or six days, to two or three weeks—the central organ of circulation evinced signs of debility. These, as I have said, chiefly consisted in a diminution of impulse, and of systolic sound. In some cases there was a proportionate reduction of pulse at the wrist; in others, this correspondence was wanting. In one or two instances which I met with, the impulse of the heart was quite inappreciable when the hand was placed over it, and the systolic sound was almost inaudible by the stethoscope. I have no doubt some pathologists would have considered these to be examples of genuine softening of the heart (especially as they occurred in very severe and protracted cases of typhoid fever), arising either from actual alteration in the muscular substance itself, or from the interstitial infiltration into it of some morbid fluid. For my own part, I think it was simple debility of the muscular apparatus, owing to an insufficient supply of nervous power. I think so, because the feebleness of the heart's action exactly corresponded with that of the voluntary muscles; because, like these, the condition of the heart improved under stimulant and tonic treatment; and because, I am not disposed to think that, had it been genuine softening, such treatment would have been productive of such marked effects.

Upon this debilitated state of the heart supervened passive congestions of various organs that gave fresh features to the pre-existent morbid symptoms. You will easily understand how this would occur, as a consequence of the *vis a tergo* of the blood being diminished, and its passage along the vessels being correspondently slow—circumstances especially favourable to local stagnation. To this must also be added the fact that, though the cardiac weakness was shown (as is always the case in these states) chiefly in the *left* ventricle, yet the *right* ventricle, to some extent, shared in the condition: for this reason, the current of blood through the pulmonary artery and its branches would be lessened in frequency and force, and it would be likely that some congestion would occur in the right auricle and in the great veins leading to it, and, consequently, in the brain. These two causes—the weakened impulse of blood to the lungs, and the diminished sensibility of the brain—would of course render the respiratory function slower and less perfect than natural; and thus, in the unoxygenated blood, would be found another impediment to due capillary circulation.

Hence, as a sequence of the debilitated heart, came the passive congestions I have alluded to. When the congestion occurred in the brain, the simple irregularity of its natural processes, that I spoke of at the commencement, gave place to actions of a more thoroughly morbid character. There was generally a dull, heavy pain, either across the forehead or about the region of the cerebellum; the pupils were dilated, and sometimes there was a slight inclination of the eyes inwards; grotesque or frightful figures were often seen, as well during sleep as when awake; morbid fears or fancies occupied the mind, and were ramblingly and confusedly expressed in a muttering tone; the waking state was of one of semi-stupor, and that of sleep was marked by its profundity and long continuance. A congested state of the brain was the most common pathological condition secondary to that of cardiac debility. Few cases were entirely without it, and the majority had it almost singly.

Sometimes the lungs became congested: with this state the brain always sympathized. I never met with an instance of pulmonary congestion in the fever of last year, without also finding cerebral congestion as its concomitant. The condition of the lungs was chiefly shown by the respiration becoming shorter and more frequent; the action of the heart laboured and unsteady; frequent sighing, or gasping for breath; occasional short cough, troublesome and wearying, but unaccompanied by expectoration, except in a very few cases, when a little frothy, fluid, black blood was spat up; diminished respiratory sound all over the chest, but especially at its inferior portion, with corresponding dulness on percussion.

Sometimes, again, but more rarely, there was evidence of congestion of the liver. The extent of this organ, as indicated by percussion, was increased, and its marginal locality was tender on pressure; there was oppressive headache, with extreme anxiety and sickness; pale fæces, and scanty, dark-coloured, bilious urine; sunken features; yellow conjunctiva, and general sallowness of skin.

The kidneys, in other cases, chiefly suffered from congestion. Here, there was a dull aching pain across the loins, often shooting down the legs; occasional cramps in these; frequent sickness; difficult micturition; urine scanty, and containing albumen, blood globules, or a brownish red sediment, due to the colouring matter of the blood.

The mucous membranes occasionally became the seat of congestion. In the case of Jones, whom I have before mentioned to you, the buccal membrane first suffered, and his mouth was constantly bloody; then his schneiderian membrane became swollen and vascular, and there was either a slow epistaxis, or a discharge of blood by the posterior nares, which was afterwards hawked up by the mouth. Next, his intestinal membrane became congested, and he was the victim of pain and purging of blood.

When congestion seized the mucous membrane of the stomach, there was always epigastric tenderness and oppression; more or less nausea; frequently, vomiting of a dingy-looking mucus, of dark fluid blood, or of black grumous matter, seemingly blood altered by contact with gastric juice; the tongue, also, became of a dusky red at the edges and tip.

When the congestion attacked the lining membrane of the bowels, there was tormina, tenesmus, occasional tympany, and discharge, *per anum*, of mucus and blood.

You will understand, from the report I have now given you of the typhoid fever of 1846, that the very essence of it was nervous depression; in many cases, this was the chief manifestation—the constitutional power either recovering itself, or its recovery being effected by remedial means, before subsequent pathological conditions had an opportunity of succession: in other cases, secondary causes came into operation, as I have detailed to you, but still they were subservient to the leading one, and were best relieved *by relieving it*.

You will anticipate my saying that a stimulant form of treatment, discretionally used, was the most efficacious in the fever I speak of. It was. In my own experience, there was no treatment like it. Perhaps I may speak with some confidence upon this subject, having had, in earlier life, an acquaintance with a very different plan of treating typhoid fever. It was my misfortune, many years ago, to see what bleeding would do under such circumstances. During my preliminary medical education, I was temporarily placed with an individual who thought that bleeding and mercury were the only remedies for this form of fever: the result of the practice I will not detail to you. I forgot it as soon as I could, and I am only too happy in the reflection that, in the Edinburgh school, I was able to escape from my *bad tuition*, by availing myself of a *better!*

In the fever of 1846, ammonia and wine were the best remedies as a general rule. As the patients were judiciously sustained, so did they rally. The *reaction* was what was chiefly wanted: directly that *innervation* became restored, the patients might almost be left to themselves. I saw nothing clean the tongue, and moisten it, like diffusible and sustaining stimulants. Yourselves were also witnesses of this fact. The only case in which I omitted this form of treatment, the patient died. I had certain reasons for my practice in this instance, as I will tell you in another lecture—whether right or wrong I cannot pretend to say, but certainly the issue was very contrary to my hopes and wishes.

Nothing balanced the circulation, and distributed the stagnant blood of congestion, like stimulants. General bleeding, of course, was out of the question: I have no knowledge of its

having been practised. Local bleeding was not only useless, but hazardous, except in a very few instances, in which the prostration was not marked. In others, the pulse fell even from leeching, and the greater stimulation was needed to establish reaction. Counter-irritation, by blisters or rubefacients, answered most satisfactorily in these cases.

Mercurials, when called for, were borne in only small quantity, and then only when the preparation was mild, such as the grey powder or blue pill.

Strong purgatives, especially of the hydragogue class, did more harm than good. Gentle aperients were the most useful, aided, when necessary, by stimulant injections of turpentine or assafœtida.

This is all I can say at present concerning the treatment; I must give you its detail more fully in the cases I shall report in the next lecture.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), Licentiate of the Royal College of Physicians, London; Fellow of, and Honorary Librarian to, the Medical Society of London; Member of the Botanical Society; Lecturer on Therapeutics and Materia Medica at the Charing Cross Hospital; Physician to the Surrey Dispensary, and to the Royal Infirmary for Children.

GENTLEMEN,—I have taken upon myself the duty of venturing to offer you a few remarks upon some of the more important and frequent diseases to which the body is liable during the earlier periods of existence—diseases which, when thus occurring, offer many points of extreme interest, and several of which are marked by peculiarities not observed or displaced by others when the body in its more matured condition is subjected to their attacks. Many important affections also are almost limited to the period of childhood, and hence the study of their various phases and of their natural history must be undertaken in the opportunities afforded by youth. When some of the latter class are now and then observed in manhood, their characters and complications are often very different from those seen to occur at an earlier period of life; the treatment of them will have to vary considerably, and, did you apply the experience you gained of them in the study of adults only, to their treatment in children, you would often be very seriously at fault. The affections again to which we are liable in the earlier periods of our life require for their due investigation and treatment the application of principles which in our practice with adults are often but of secondary importance, or entirely inapplicable to their cure. The characters, physical and mental, of the youthful organism stamp specialties of their own upon all aberrations from the proper standard of health in the child; and since, as progressive growth goes on, the body is often endowed with impunity from important maladies, you will not think that I am unnecessarily circumscribing your attention, or diverting it from viewing disorder on a large and comprehensive scale, in thus specially directing it to the study of disease occurring in the first and second ages of man.

When you reflect upon how large a share of your attention, on entering the every-day duties of your future professional career, these maladies will of necessity occupy, how high is the interest attached by the parent to your consideration and judgment of the misfortunes of her child, and how often the characters of the material and mental organization of the future man are derived from the impress stamped upon it in youth, you must confess your inability to perform your avocations with self-reliance, and satisfaction both to the mother and yourself, unless you have learned the necessity of paying the closest scrutiny and attention to the disorders of the infantile and youthful frame.

It must be confessed that in this country we are behind in that attention which is paid in France and Germany to instructing the student of our art, both orally and by book, in the manifold diseases incident to the child. In the former country especially, very great attention has been paid to them, and the *pathology, more particularly*, of these affections has been ably and widely developed. Highly profitable to you as will be the study of the writings of the French authors, yet I must confess that there exists not a class of disorders requiring more practical investigation and direct clinical observation of your own than does this, if you would acquire a proper and serviceable knowledge of its numerous phases and forms. In our own language the works of Evanson and Maunsell, Reece and Underwood, are the proper text-books for your perusal; and I would especially draw your attention to the able papers which have now and then appeared from the pen of my colleague, Dr. West. But the best book for your study will be made up of the *living pages* of the history of the physiology of the sick child, and which, at an infirmary for children, may at all times be conveniently laid open to you for reference.

In offering you the remarks which are to follow, I would wish it to be particularly understood that I have no intention of making them a vehicle for statistical or mere numerical details, of accounts of minute lesional alterations, or for a far-fetched, much-forced, and often practically useless exhibition of *post-mortem* details. They are to be—at least, such is my desire so far as my ability will lead me—essentially practical in their nature and tendency, offered to you with a deep and full persuasion of the fact that the grand and ultimate aim of medicine is to *cure*, and that everthing is to be made subservient to that important end. I do not, therefore, intend to dilate of mere curiosities of aberrations, either of a functional or organic kind, but to tell you, so far as it lies in my power, how I think you can best find out an every-day occurring disorder, and treat it by a proper application of the principles either of palliative or curative therapeutics when you have so done. I am one of those who believe, and regret to have to do so, that we are tending too much to the mere elucidation of the transcendentalisms of morbid anatomy and of statistical details, and often losing sight of the grand effort—the noblest prerogative of our art—the endeavour to *treat* a diseased condition of body so successfully that we can restore the sufferer to his former state of health. In the words of M. Dobreyne:—"The Pinel-ists, the organicians, the anatomo-pathologists, the Broussais-ians, the statisticians, the numerists, have all, by the exclusiveness of their particular doctrines and views, stood in the way of, and materially retarded the advance of, sound therapeutic knowledge. * * * The reign of anatomism—that is to say, of necropsies and facts and figures—has nearly come to an end, and medical men now long for something more tangible and more applicable to the every-day duties of a professional life; in other words, they wish to have pointed out to them useful rules of treatment and rational means of cure, instead of endless catalogues of statistic tables and of *post-mortem* examinations."

In the lectures which I shall have the pleasure of addressing to you, I shall follow no particular system; one day I may speak to you of pneumonia, on the next of measles; but I shall endeavour rather to call your attention to the disorders prevailing at the particular time. Before proceeding to notice any special disease in detail, I shall make a few observations which I think may be of service to you as guiding and directing your attention when examining the sick child. When you recal to mind the helplessness and dependency of such a little patient, the inability of infancy to make known its own sufferings and disorders, the obscurity thus and otherwise induced in discovering the symptoms of important maladies, or related ones, of the nature, cause, and duration of which we can often glean pretty exact information about from more adult persons, you will see that our means of diagnosis must often be apparently obscure in the extreme. I say *apparently* obscure, because I believe, when once that diagnostic tact is attained—which, analogous to what is often called a botanical eye by naturalists, may here be termed a clinical one—by careful attention to, and frequent observation of, the general physical appearance of the sick child, you will find the right diagnosis of infantile disorder by no means of difficult attainment. It is true, also, that by experience and frequent observation of her infant, the mother can often be advantageously referred to for information, yet she is exceedingly apt to mislead the practitioner, often giving undue importance to particular signs, and scarcely mentioning others of great and paramount interest, as relates to her child. You will be constantly puzzled in endeavouring to separate essentials from non-essentials in the often elaborate description which the parent will retail to you about the disorder of her infant. It is here that you will find that which I have alluded to as a clinical eye come so greatly to your aid in enabling you to reduce her descriptions and analyse her notions of the malady, so that you may arrive at a satisfactory result. In the case of very young children, of course, we can ask nothing of the patient; from older ones it is often exceedingly difficult to arrive at the truth, the child being sometimes led by a sort of special pleading, either of the doctor or the mother, to answer "yes," or "no," as it fancies it is wished.

Amongst the poor, again, you will particularly meet with obstacles to the satisfactory examination of your little patient, some of which impediments are of a kind not so frequently opposing your exploration of the adult. You will find, for instance, that in very young children it is quite impossible to employ *immediate* auscultation; but the ear must be directly applied to the parietes of the chest; in many cases, such are the dirty habits of the mother and the neglected state of the child, that the odour arising from the effete matters continuously accumulating in the long-worn flannels and other clothes of the child is so disgusting and repulsive that the face of the examiner cannot remain but for a very short time indeed in the position necessary for a proper examination of the respiratory parts. Of course, I am now alluding to children of the poor, who are brought dressed to you for examination, or are at least not undressed, and lying in bed, and whose parents have the habit of loosening the upper parts of the dress and slipping them down below the shoulder-blades, so that the mouth and face of the examiner is often brought into direct contact with the disagreeables to which I allude. In our examination of adults, from our being able to remove the face to some distance from the body, these drawbacks are not felt. Again, the crying and fretful disposition or obstinate behaviour of older children will sometimes put the patience of the practitioner to a severe test. In some cases also, so powerful has the idea taken possession of the mother's mind that her offspring is labouring under some particular disease—such, for instance, as hydrocephalus—that, on making inquiries as to the existence of certain symptoms for the knowledge of whose presence you are quite dependent upon the mother, she will reply in the affirmative, persuading herself unwittingly that they really do exist, whilst, in truth, they have occurred at a distant period, or have been but very slight, or been induced by causes of quite a different kind.

I shall now suppose you seated at the infirmary, and a child of from a few months to three or four years old is brought to you for advice, and that the patient rests on the lap of its mother. By a glance merely of the patient many things are learned. First, observe whether the child is dull and heavy, or comparatively lively; if the latter, no important acute affection can be going on: this may be self-evident; but not unfrequently a mother will tell you the child has got inflammation of the lungs: by this glance you know it has not: If the infant be unweaned,

ask if it can suck well; sometimes it is brought to you hanging at the breast—observe if it can suck continuously—if it is not obliged every now and then to remove its mouth from the nipple; if it is not so obliged, but can continue the action, there is no severe acute affection of the respiratory organs going on. Now, observe particularly these three things—whether the child be lying in a dull heavy condition in the mother's arms; whether the lips be very red, sore, cracked, or the corners drawn upwards; or whether there be evident action of the alæ nasi during the respiratory act. By observing these three things you gain an enormous advantage. By the existence of the first you are led to make inquiries as to the state of the *brain*; by the second, to the condition of the *digestive apparatus* and *intestinal canal*; by the third, to the *air-passages* and *lungs*. I repeat, that by the state of repose, the appearance of the mouth and of the nose, you are told volumes. If the child be lying in the condition I have alluded to, regard particularly the head—notice if it is large, much or little hair upon it, fair or dark in colour, and whether rather large blue veins ramify over the unhidden portions of the scalp. If young, put your hand upon the anterior fontanelle, observe whether it be closed or not, whether flat, rather concave, or very convex. If the head be large, hair scanty, fair, blue veins over scalp, fontanelle unclosed and convex, ask the mother if the child has been constipated, and if there is much vomiting? If the answer be in the affirmative, there can, in nine cases out of ten, be no doubt about the matter—serious disease of a scrofulous character is going on in the coverings of the brain. If nothing of all this exists, but the lips are red, cracked, or sore, the edges retracted, look in the mouth: you will perhaps find the tongue loaded, or red at the edges and point, and elsewhere coated, or there will be apthoid exudations in the oral cavity; feel the state of the skin, it may be very warm; observe the legs, they may be every now and then twisted about or drawn up to the belly. Ask the mother if it gets very hot towards evening, is thirsty, and the state of the bowels? If these things, or several of them, exist, the patient labours under disease having close connection with the digestive and intestinal lining membrane—remittent fever with its gastro-intestinal complications, and disorders of a like character. If, on the contrary, you are attracted by the quick dilating and contracting action of the alæ nasi, and by the peculiarly anxious look of the child, and, if the child sucks, by its inability to continue, for long, the action, place your ear against the chest, between the shoulder-blades, towards the base of the lungs, and the small crepitant sound you will hear indicates the severe pulmonary disorder. Now, I only lay down these as very general principles to act upon; I am entirely throwing aside for the moment, mind, the connection and complication of the signs of one class of disorders with another. A child may have intermittent fever with pneumonia, pneumonia with secondary brain complication; but I assert that convex fontanelle, with constipation and vomiting, red lips with hot skin and evening exacerbation, nose-breathing with inability to suck long together, are signs of the utmost import, and worthy of your acceptance as guiding principles of great and general value. Again, there are other and very important characters to be caught at a glance, which will guide you in reasoning upon the nature of the particular disorder, as well as upon the general character of the constitution or the diathesis of body, &c. If the child be fair in complexion, the iris and the hair light in colour, and the upper lip swollen, see if there be eczematous disease behind one of the ears, or discharge from the latter; observe the ends of the long bones if they be swollen, the ends of the fingers if they be clubbed, the glands of the neck swollen, or the stomach large; notice whether the tarsal edges are inflamed or congested. If all or several of these signs are present, the child is scrofulous without a shadow of doubt; it may soon labour under tuberculous meningitis, disease of the mesenteric glands or joints. Perhaps the child is dark in complexion: notice particularly if the eyelashes be very long and rather thickly placed, the ends of them almost lying on the cheek: whether the hair intrude upon the forehead, or the latter be covered by a layer of appressed hairs; examine the arms, perhaps there is much short hair upon them; observe particularly, too, the skin of the back, from the nucha down between the shoulder-blades, whether or not much hair is present there as well: if it be there, the child being also thin, inquire if any relative of the patient have been lost through phthisis, or some other disorder of a tubercular kind; for depend upon it, in nine cases out of ten, the tendency to deposit tubercle is present in that child. It may, even then, be coughing; or, if you examine the chest, the the signs of pulmonary tuberculosis may be apparent to the ear.

Again, the child may be very young, relatively small in size, brought to you for some affection of the cutaneous surface; observe if there be eruption on the eyebrows or very near them; breaking out, as it is called, about the nose, with constant snuffles; and whether there be eruption between the nates: if there be, make cautious inquiries as to the possibility of the child having been infected with syphilis.

Lastly, if the child be very young, and very thin, and the mother says it is gradually dwindling and pining away, examine well its countenance—it may look like a little old man or woman; observe the abdomen and legs—the skin about the thighs hangs in folds, the extremities are like little sticks, the belly wrinkled, the integuments spotted, or of a dirty brown colour; the mouth is large, and it opens it and cries in a very peculiar manner. Inquire at once, if the child is being brought up by hand, whether it is fed upon such things as "tops and bottoms," "biscuit-powder," arrowroot," and other farinaceous food, instead of being made to live, as all very young children should do, on food of animal origin; ask if the mother has enough milk, if she suckles it; whether she is subject to exhausting discharges of any kind; or whether she is in the habit of giving her child medicine to "compose" it?

These, as I have told you, are important general principles for your guidance; there are others I might notice, but scarcely of so general a character. If, for example, a child is brought to you puffy about the face and eyes, inquire if it has lately had scarlet fever; if the glands of the neck towards the posterior part be enlarged, examine the scalp, perhaps matted with hair, and see if there be not eczematous or porriginous disorder. The dropsy and swollen glands are *secondary* disorders. Sometimes troublesome vomiting or diarrhœa is complained of: inquire if the little patient is being fed chiefly upon slops, and of a high temperature; or if the child is being continually harassed in all sorts of ways, under the impression it has got worms, since it gets thin, but eats ravenously; ask if it is confined for long periods together in some public or infant school, or gets anything but slops to eat for days together. If an older female child is brought to you with a crooked spine, and her parents are poor, always ask what they do with her: for sometimes she is converted into a diminutive nurserymaid, and obliged to carry about a heavy fat child upon her arm half the day, for weeks together.

DUMAS ON ORGANIC CHEMISTRY. No. XVI.

ON THE URINE.

(Continued from p. 92.)

Urinary Calculi.—Among the materials which the urine contains, there are some which are naturally insoluble in water, and which, under certain circumstances, may become deposited within the bladder, or even in the kidneys. Thus, when, in consequence of some derangement in the phenomena of nutrition, uric acid is secreted too largely to become wholly dissolved in the urine, it separates in a solid form. So, also, with regard to the earthy phosphates, when the urine has lost that excess of free acid which retained them in solution. In certain cases, the urinary secretion, from the alterations effected in it, gives rise to the accidental formation of insoluble products, such as oxalate of lime, or, more rarely, cystine and xanthine. These different materials are sometimes deposited in the pulverulent state, without acquiring any coherence, and are voided by the patient under the form of *gravel*; whilst, at other times, they become agglomerated in the bladder so as to form more or less voluminous concretions, known under the name of *calculi*.

Usually, the urine, when taken from the bladder, is super-saturated with insoluble products, and requires but an opportunity to throw them down. Should any solid body reach the interior of the bladder, it quickly becomes the centre of a calculus. This it is that happens so frequently with the calculous fragments which fall from the kidneys into the bladder; also, with bodies which are introduced by the urethra, or with those which get into the interior of the bladder by means of violence, as musket-balls, &c. This usual condition of the urine explains why vesical calculi almost always have a nucleus formed of some small concretion of uric acid, derived from the kidney. We may also, from the foregoing facts, understand how it is that a calculus, when once commenced, always tends to increase.

The same phenomena occur in animals. If a calculus be introduced into the bladder of a dog, it will quickly become covered with fresh layers.

From the earliest period, calculi have attracted the attention of physicians. But it is chiefly to the labours of Scheele, Wollaston, Fourcroy, Vauquelin, Proust, and Marcet, that science is indebted for those precise notions which we now hold in their regard.

The principal materials which we meet with in calculi and gravel are: uric acid, urate of ammonia, ammoniaco-magnesian phosphate, phosphate of lime, carbonates of lime and magnesia, oxalate of lime, cystine, xanthine, silica, and fibrine. Frequently, moreover, these matters are impregnated with mucus, albumen, and analogous animal substances, which serve them in some sort as a cement. Calculi are usually presented under the form of globular concretions; somewhat flattened at the sides. Where there are several existing in the bladder at the same time, it ordinarily happens that the surfaces which have been in contact are smooth, and that the calculus is found in the form of a polyedron; those concretions which are deposited in the ureters have generally more or less of a cylindrical figure. The colour of the calculi differs according to the substances which they contain: those which are formed of the earthy phosphates are almost colourless, whilst others have a grey or yellow shade, or even a more or less deep brown tint. Their surface is sometimes smooth and polished; at other times it is rough and earthy, and is capable of being broken with ease. Sometimes, also, it presents asperities and projecting angles, as may be remarked in calculi of oxalate of lime.

The specific weight of the different calculi varies from 1·2 to 1·9. Sometimes their size does not exceed that of a millet-seed, and in other cases it attains that of an egg. They have even been found occupying the whole capacity of the bladder, and weighing several pounds. The structure of the calculus becomes a very important point for consideration: sometimes it is homogeneous, more or less compact, and earthy or crystalline; at other times it presents concentrical layers, which are arranged around a central nucleus. This remarkable structure becomes very apparent, if we carefully saw the calculus through the middle, and then polish the newly formed surface. Ordinarily, the chemical composition of the different layers varies, while the central nucleus itself may be formed by some body accidentally introduced into the bladder.

Uric Calculi.—Uric-acid calculi are generally

of a brownish-yellow or brownish-red tint; very rarely they are white, or of a straw colour; their surface is partly smooth, and in part formed of nipple-like projections which appear to have been somewhat rubbed down. Their fracture is slightly crystalline; frequently, also, it is earthy. They are formed of concentrical layers, resembling one another in their aspect, but differing in thickness, and which give to it a general appearance of wood. We usually find a grain of uric-acid gravel, proceeding from the kidney, or a little inspissated mucus of the bladder, forming the nucleus to this calculus, around which are successively deposited layers of impure uric acid, always mixed with a little mucus, earthy salts, urates, and the colouring matter of the urine. This colouring matter may be isolated by means of acetic acid, which dissolves it. Ether always removes from the uric-acid calculus, as well as from most other of these concretions, some trace of fatty matter.

Uric-acid calculi may be recognised with great facility; they are insoluble in alcohol and in ether; water dissolves but a very slight proportion of them. Caustic potass dissolves them entirely, frequently leaving a slight residue of phosphate of lime, and disengaging a very transient odour of ammonia. The mineral acids, and the more energetic organic ones, as acetic acid, form in this alkaline solution a gelatinous precipitate, which, on washing, assumes the appearance of shining scales. The potass likewise dissolves the mucus which serves as the cement; consequently, it may happen that the precipitate will be soiled with some traces of foreign matters. Nitric acid dissolves the precipitated uric acid. By evaporating the solution to dryness, at a moderate heat, we obtain a reddish-coloured residue, the tint of which may be greatly heightened by exposing it to ammoniacal vapour. Heated in a platinum capsule, uric-acid calculi at first disengage the odour of burnt horn, along with that of cyanogen; after a time, they take fire and burn alone. If they should have happened to contain any alkaline urates, oxalate of lime, or earthy phosphates, we shall find in the ashes traces of alkaline carbonates, caustic lime, or phosphatic salts.

To analyse a calculus correctly, we should first thoroughly dry it; then act on it successively by ether, alcohol, and water, so as to isolate the fatty and extractive matters, as well as the soluble urates. The residue is to be treated by dilute hydrochloric acid, which dissolves the earthy phosphates, and there then remains but the uric acid, which is entirely soluble in potass, and the amount of which is easily calculated by precipitating this alkaline solution by an acid, and then washing and drying the precipitate.

Uric acid calculi are often mixed with a very large quantity of urate of ammonia; sometimes they are almost entirely constituted by this salt. The existence of calculi of urate of ammonia was first pointed out by Fourcroy and Vauquelin. They burn with a flame like the uric-acid concretion; but when dissolved in potass, they disengage a strong odour of ammonia. Boiling water dissolves them more readily than it does the pure uric-acid calculus. The acids remove their ammonia, and separate from them the uric acid; the presence of an ammoniacal salt may, indeed, be with facility ascertained in the liquid, separated from the uric acid. In general, calculi of urate of ammonia are less voluminous than those of pure uric acid; they are formed of concentrical layers, and their nucleus ordinarily consists of uric acid.

Calculi containing a certain quantity of urate of soda have been met with, though but rarely. Wollaston has, however, proved that the arthritic concretions are essentially formed of this salt.

Xanthic Calculi.—Dr. Marcet was the first to describe this peculiar formation, which he denominated xanthic oxide. This body presents a very great analogy in its composition to uric acid; its formula is:—$C^{10} Az^4 H^4 O^4$, and differs from that of uric acid—$C^{10} Az^4 H^4 O^6$—only by containing two atoms less of oxygen. This species of calculus has since been met with by Laugier and Stromeyer. Its exterior may be either smooth and shining, or dull and earthy; sometimes it is of a clear brown colour, and, at other times, whitish. Its fracture presents a brownish-coloured surface, but which is devoid of any crystalline or fibrous appearance. It is composed of concentrical layers easily separated one from another; by rubbing, it acquires a smooth and shining aspect. Its hardness equals that of the uric-acid calculus. When exposed to the flame of a blowpipe, it burns without any residue. It is distinguished from the uric-acid concretion by its insolubility in carbonate of potass, and also by its dissolving in nitric acid with a yellow colour, which does not change to red by evaporation.

Cystinous Calculi.—Calculi of cystine are less rare than the foregoing. Frequently they are found almost pure, or containing but insignificant traces of foreign matters; they are generally rather small, rounded, and possess a yellow colour. Their surface is smooth, and presents a shining and crystalline aspect. They are distinguished from the preceding calculi by their solubility in weak acids. If a portion be dissolved in ammonia, and the solution left to evaporate, the cystine is deposited in crystals which, under the microscope, present the form of flat, six-sided prisms.

Phosphatic Calculi.—Urinary calculi are but very rarely constituted of pure phosphate of lime. Wollaston scarcely ever met with any such. When, however, we do find them, their surface is smooth and brownish-coloured; and they are formed of concentrical layers, which separate with the greatest facility. They have a radiated fracture, apparently formed by parallel fibres. The mucus of the bladder serves as their cement; when heated, they turn black, giving out a smell of horn; this carbonaceous mass burns, and even fuses at an elevated temperature. Where, however, this phenomenon occurs, we must satisfy ourselves that the calculi contained no phosphate of magnesia. They are, moreover, dissolved by acids.

The double phosphate of ammonia and magnesia is never met with in a pure state in urinary calculi; but it often forms the greater part of them. These calculi are almost always white; their surface is rough, and furnished with small shining projections. Their structure is never lamellar, and they are very pulverizable. In some rare cases they are hard, and have a crystalline fracture. The acids dissolve them, while the alkalis precipitate these solutions, at the same time regenerating the original salt. Caustic potass liberates their ammonia. When heated in a platinum capsule, they turn black, at first giving out their ammonia, and eventually they melt, forming an enamel-like substance, or a red-coloured globule, should a little nitrate of cobalt have been added before their fusion.

Fusible Calculi.—The calculi most frequently met with, next to those of uric acid, are formed of a mixture of phosphate of lime and ammoniaco-magnesian phosphate. They are ordinarily rounded, or slightly elongated. Their surface is often smooth, rarely crystalline, and is either of a white, grey, or pale yellow colour. Their fracture is somewhat compact, never lamellar; it often presents small cavities lined with shining crystals of the ammoniaco-magnesian phosphate. They sometimes acquire a very considerable magnitude, but their density is in general less than that of the other calculi. Heated on a platinum plate, they blacken, and at the same time disengage ammonia. At an elevated temperature, they become fused; their fusibility, however, diminishes in proportion as the quantity of phosphate of lime which they contain is increased. A great excess of the magnesian salt, in like manner, renders them less fusible.

When acted on by dilute acetic acid, the ammoniaco-magnesian phosphate is dissolved, and may be precipitated by ammonia. On the contrary, the greater part of the phosphate of lime remains in the residue, which is entirely soluble in hydrochloric acid; if ammonia be added to this solution, so as to neutralize it as nearly as possible, and we then treat it by a little oxalate of ammonia, we shall have the lime precipitated in the state of an oxalate.

The liquor, being filtered and supersaturated with ammonia, gives with chloride of magnesium a precipitate containing phosphoric acid, re-combined under the form of an ammoniaco-magnesian phosphate.

Carbonated Calculi.—Calculi exclusively formed of carbonate of lime are very rare, and are chiefly met with among the herbivorous animals. They are white or grey, sometimes yellow, and even brown or red. Their colouration is owing to the presence of a little animal matter, which becomes carbonized by the action of fire. They are easily recognisable by the property which they possess of effervescing with acids, and, further, by their leaving a residue of caustic lime when strongly calcined.

Most frequently it happens that the carbonate of lime is found mixed with the more ordinary materials of calculi. We have sometimes seen old calculi of earthy phosphates covered over with a thin layer of carbonate of lime. Proust has met with a calculus the outer surface of which was formed by a mixture of oxalate and of carbonate of lime, the next layer by phosphate and carbonate of lime, and the third by simple phosphate of lime. Brugnatelli states that he has found a calculus of carbonate and oxalate of lime, mixed with benzoate of ammonia; this latter salt being soluble in water, it is difficult to explain how it could have become deposited in the urine.

Carbonate of magnesia is rarely met with in great quantity in calculi of carbonate of lime. M. Berzélius, however, affirms that it always exists there, and he cites an analysis of M. Lindbergson, who found in one of these concretions 62·55 per cent. of carbonate of magnesia.

Mulberry Calculus.—Among the more common calculi, we must also cite those which are formed of oxalate of lime. Their surface is commonly rough, and covered with little nipple-like projections or asperities, which give them a very peculiar form, similar to that of the mulberry. Hence, the name of mulberry calculus. The size of these concretions varies from that of a hemp-seed up to a pigeon's egg. They present, especially when of large size, a brown colour, sometimes even approaching to black. This colouration is attributable to the colouring matter of the blood which, from the irritation caused by the asperities of these calculi, is constantly escaping into the bladder. In fact, hœmaturia is frequently dependent on the presence of this form of calculus alone. Their fracture is ordinarily compact and granular. Sometimes, according to M. Berzélius, it presents an agglomeration of crystals. Their density is considerable. They ordinarily contain a very large quantity of organic matter. Heated in a platinum capsule, they swell up and become carbonized; after incineration, there remains a residue of caustic lime, provided the temperature has been sufficiently elevated. Hydrochloric acid dissolves them—a circumstance which distinguishes them from uric-acid calculi; the alkaline carbonates equally attack them, and transform them into carbonate of lime. According to some authors, it would appear that children are especially subject to this species of calculus.

Fibrinous Calculi.—Dr. Marcet has described a calculus of very remarkable composition. It contained a matter insoluble in water, alcohol, and ether, but soluble in potass and in boiling acetic acid; prussiate of potass precipitated it from this solution. Marcet regarded this substance as identical with fibrine. It had, moreover, the appearance and consistence of yellow wax, and was up to a certain point elastic.

Silicious Calculi.—Fourcroy and Vauquelin found some silica in two calculi which they met with; the first contained but a very little, whilst the second was formed by a nucleus holding 66 per cent. of silica, and 34 per cent. of animal matter. They also discovered silica in the gravel voided by a woman.

M. Boussingault analysed a calculus of extraordinary composition; it weighed 17 grains. Its form was irregular; in some parts it was lamellar; it had been passed by a female, and contained—

Peroxide of iron	38·8
Alumina..................	23·0
Silica	17·3
Lime	8·0
Water.....................	10·9

The total absence of organic matter in this calculus is extraordinary; and the analogy of its composition with that of some iron mineral bodies, induced a supposition that it had been accidentally introduced into the bladder.

Such is the composition of the different calculi met with in man. They may be classified either as simple or compound, according as they contain one or more of the materials which we have enumerated above. The compound calculi may be mixed or alternating, that is to say, formed by a homogeneous mixture of several principles, or by alternate stratifications or layers of varying composition.

As to their comparative frequency, out of 1000 cases, there were found—

372 calculi formed of uric acid alone, or mixed with a small quantity of urate of ammonia, and oxalate or phosphate of lime.
253 formed of the earthy phosphates (fusible calculi).
233 formed by alternate layers of uric acid, oxalate of lime, and the earthy phosphates; and
142 formed of oxalate of lime alone.

ORIGINAL CONTRIBUTIONS.

THE CAUSES OF SUDDEN DEATH.

By MALCOLM HILLES, Esq.

(Continued from p. 96.)

Part III.

CASES OF SUDDEN DEATH, THE RESULT OF ARREST OF THE RESPIRATORY FUNCTION, CAUSED BY DIRECT VIOLENCE, INJURY, OR ACCIDENT.

It would be foreign to the object of the present papers—and most unprofitable, to consider in detail the various cases of sudden death produced by arrest of the respiratory function, induced by violence, whether accidental or otherwise. It will be sufficient to state, that such accidents may prove suddenly fatal, by inflicting a mechanical injury on the respiratory organs—thereby rendering them incapable of performing the function of respiration, or by destroying the influence of the nerves of respiration.

Severe injuries to the parietes of the thorax—extensive or penetrating wounds of the lungs, in which these organs or the cavities of the chest are filled with blood, afford examples of fatal mechanical injuries to the respiratory organs.

Accidents to the spine or spinal marrow present instances of the destruction of the influence of the respiratory nerves. These induce sudden death, by causing an arrest of the respiratory function, although the organs of respiration have escaped direct injury. Cases of falls from a height, in which the individual pitches so as to fracture or displace one of the vertebræ, or cause a laceration or compression of the spinal marrow, are usually productive of sudden death in this way.

When the part injured is below the level of the fifth cervical vertebra, the individual generally survives a few hours (a) or days; but when the injury occurs at or above this point, death is usually instantaneous. In the former cases the nerves of respiration are not paralysed; in the latter, that influence of these nerves is cut off, and thus respiration is arrested, and death produced.

(a) The victorious Nelson died from an injury of this nature.

It is an interesting provision of Nature, that the respiratory nerves should arise nearly together, from a portion of the spinal marrow situated so high up and so far from the organs which they supply. Thus, for instance, the *phrenic*, which supply the diaphragm; the inferior external respiratory, supplying the serrati magni; and spinal accessory, which are destined to the trapezii muscles, arise from nearly the same point of the spinal marrow, opposite about the fourth cervical vertebra.

If we reflect for a moment, we shall see the advantages gained by this arrangement to be— 1, greater security to the individual; and 2, a combination of action which is necessary to produce the mechanical act of respiration. I may be allowed to observe, that the opinion so generally entertained that the phrenic nerves are sufficient to sustain respiration, is not correct; unless the diaphragm be antagonized by the action of the serrati magni, supported by the trapezii muscles, the result will be, when the diaphragm contracts, a drawing in of the lower margin of the thorax, tending to expiration, rather than to inspiration; the ribs, however, having been previously fixed by the serrati magni muscles, the contraction of the diaphragm produces its descent, and the consequent enlargement of the capacity of the thorax, whereby inspiration is performed and maintained.

Death, in these cases, is to be attributed to the arrest of the function of respiration, in consequence of paralysis of the respiratory muscles. In some cases, however, the great shock to the system will also contribute to the fatal result. Under the present head may be considered those remarkable cases of suffocation and sudden death which so frequently occur from a morsel of food or other foreign body stopping in the neighbourhood of the air passages, and most frequently in the pharynx.

I use the term remarkable, because, although these cases are of constant occurrence and are most easily remedied, the profession, generally, are not sufficiently aware of their nature, and many persons thus perish without any help being administered to them, or without, at least, the proper means being resorted to.

The situations where foreign bodies most frequently lodge, so as to be productive of fatal consequences, are the pharynx, the larynx, and trachea. Of these, the pharynx is the most exposed to the stoppage of foreign bodies, in consequence of its contracting, suddenly, towards its termination in the œsophagus, and of its being so frequently engaged in the passage of the food and other substances into the cavity of the stomach.

As this sudden contraction of the pharynx in the œsophagus occurs directly behind and opposite to the lower extremity of the larynx, where the laryngeal constrictor muscles are situated, it follows that so soon as a morsel of food, such as a portion of hard meat, potato, &c., stops at this point, these muscles are thrown into a state of spasmodic contraction, and the consequences are even more rapidly fatal than if the foreign body had entered the larynx itself.

It is, indeed, remarkable that foreign bodies, entering the larynx and trachea, are productive of less immediately serious results than where these have stopped in the pharynx. When an accident of this kind occurs, the patient is usually attacked with severe fits of coughing; in one of these the foreign body is thrown against the rima glottidis, so as to prevent the egress of the air; it here produces alarming symptoms, sometimes partial insensibility; when the patient suddenly inspires, the foreign body descends into one of the bronchial tubes, where it generally becomes impacted, at least for some time.

A case of this nature occurred sometime since in the person of an eminent engineer, and attracted much public attention; several similar cases have been recorded in almost every medical periodical during the last fifty years.

The fatal result, which ensues so rapidly in cases where a foreign body has become impacted in the pharynx, is owing to these sudden spasmodic action of the constrictor muscles of the larynx, which is induced by the foreign body irritating sympathetic cells, as the nervous filaments distributed to these muscles.

In these cases asphyxia takes place very rapidly; the patient becomes apparently insensible in less than one minute from the occurrence of the accident; the period, however, appears shorter than it is in reality, as the patient is usually struggling for some time unnoticed, and often commands attention only when he falls from his chair in a state of insensibility. Life—that is, organic life—continues in these cases much longer than in those we have described in the preceding section, there being almost always time to send for assistance, and for this to arrive, if at no great distance, before actual death takes place.

This form of death arises purely from arrest of the function of respiration, and is therefore interesting, as affording an example of the mode in which death takes place, from this cause alone. It properly forms one of that division of sudden deaths generally adopted by authors, and first chosen by Bichat, namely, death commencing in the lungs.

Here there is no injurious impression made on any other part of the system: the air is simply prevented from entering the lungs; the blood ceases to be arterialized; venous or black blood circulates through the arteries of the body, enters those of the brain and nerves; the nervous system becomes paralysed; the respiratory nerves cease to excite the muscles of respiration, this function is still further interrupted; and finally ceases. As the heart continues to contract after respiration has ceased, the left cavity of this organ becomes emptied of its blood, whilst the right cavities and the lungs, as well as the whole venous system, become filled with the fluid. The order in which the important functions of life cease is: — 1, respiration; 2 (b), nervous influence; 3, circulation.

Having now considered the prevailing and most important causes of sudden death referrible to the arrest of the function of respiration, one of the great vital functions, so essential to the maintenance of life, it may be asked, to what good does the inquiry tend? what beneficial results may be expected from it? how is human life to be preserved, or human suffering alleviated, by such investigation?

Although I have but little respect for the *cui bono* philosophy of the present age, and believe that a single spark elicited from the lamp of truth may lead to the most extensive and satisfactory results, as the distant ray of light seen through the narrow chink leads to a world of light and beauty, I shall not avail myself of any speculative good that may or may not arise from our present subject, but shall proceed to point out how far the theories advanced should prove beneficial.

As the full consideration of this part of our subject would lead us to the treatment of most of the affections that have been alluded to, and thus out of the course originally proposed, I shall only offer a few brief observations in connection therewith, and such as bear directly on the points discussed.

Indeed, I consider any lengthened observations on this head are quite unnecessary at present, as our great object should be, first, to establish correct physiological and pathological theories regarding the phenomena attendant upon life and death; this once accomplished, the treatment will suggest itself without much

(b) In considering the destruction or death of the nervous influence, it should be recollected that the nerves of organic life—or the sympathetic system, retain their power in general to a later period than those of animal life or of the cerebro-spinal system. I do not consider it necessary, however, to dwell particularly on this fact, as a too nice distinction might tend rather to confuse than to explain the subject treated of at present.

difficulty or research. The correct diagnosis of disease is usually more difficult than the treatment.

In the treatment, then, of the various diseases and affections to which mankind are subject, our special attention should be directed to the vital function most seriously impaired or injured: if it be the respiratory, our remedial measures should be applied to the relief of the organs necessary to its maintenance; and so, also, as regards the two remaining vital functions, namely, the nervous and the circulatory. In some cases these measures will be necessarily directed to the relief of a local affection, in others, to the alleviation of symptoms which indicate that the function is generally impaired.

At the same time, it will be borne in mind, that a purely local affection scarcely exists, and that all parts of the animal economy are so intimately connected, at least in man, the perfection of organization, that no one part can suffer, without the rest sharing in the distress. If this be true as regards the minor or less important portions of the frame, how much more certain is it as respects the great centres of life, the vital functions. Man must be viewed, even when labouring under disease, as a whole, the integrity of which depends on the well-being of the parts, and not as an assemblage of atoms, one or more of which may be disorganized in the general mass without compromising its safety.

It is, indeed, this intimate connection and mutual dependence which exists between the various functions of life that render the diagnosis of disease so difficult in some cases. When speaking of asthma, I related a case of enlarged liver that had been regarded as one of this disease, although no abnormal condition of the lungs existed. The disease here was purely functional, so far as regards the lungs. Similar cases occur to most practitioners of medicine.

How necessary, then, is a correct diagnosis! How indispensable to fix in our minds, if it be possible, the organ affected, which is pathologically diseased, so that we may remove its disordered action, if such be in our power, and so relieve the vital function most seriously disturbed! Our treatment, then, would be based on fixed and certain principles, and the absurd practice, too prevalent in the profession, of prescribing a distinct remedy for each particular symptom, discarded; our attention would be directed to the removal of cause, and not solely to the alleviation of effects, which are frequently uncertain, and may depend on other and sometimes most deceptive causes.

The theoretical views I have advanced regarding the influence which the temperature of the water exerts, in cases of drowning, have been long since anticipated in practice by the officers of the Royal Humane Society, who make use of the warm bath most extensively and most beneficially in cases of suspended animation from drowning. I am not aware that they entertain the opinion, that the morbid impression made by the cold water on the nerves of the cutaneous surface is destructive of life, further than as this fluid acts as a destroyer of the animal heat of the body, and thus tends to a fatal result. The distinction is of no practical importance, as appears to me at present.

If the rapidly fatal action of carbonic acid gas be, as I consider, in like manner exerted on the sentient extremities of the nerves of the bronchial membrane lining the air-cells, how are we to remedy this? How antagonize the baneful influence exerted by it? How convey our means of relief to the parts affected? Can we negative, or destroy the paralysing effects thus produced by its contact, by exciting other portions of the nervous system, either the cerebro-spinal or sympathetic? Will electricity or other powerful nervous stimulants be of any service?

To these questions I can give no satisfactory reply at present; the field is still open to theory, and, alas! to practice also, as our efforts in these cases are rarely successful. On no subject are we, perhaps, less informed than on the action of morbid poisons on the human subject,—and on animal life in general. On no subject, therefore, do we more require to be informed.

How much is still before us to be investigated! How much remains yet for us to learn! Let no man halt, then, in the pursuit of knowledge—or dissuade another from the task. The spark that falls from the struck flint is but trifling, yet to what extent may it not be spread by diligence and attention; how easily is it extinguished!

I am sure it is quite unnecessary to offer any remarks as to the treatment to be pursued in cases of foreign bodies becoming impacted in the pharynx or entering the larynx.

We shall next proceed to consider the causes of sudden death in connection with the vascular or circulatory system.

ON SOME POINTS CONNECTED WITH DIABETES.

By M. BOUCHARDAT.

Translated for the MEDICAL TIMES by ALFRED MARKWICK, Esq., Surgeon to the Western German Dispensary, and formerly Externe to the Venereal Hospital, Paris, &c.

(Continued from p. 35.)

The cases I am going to relate I shall divide into three series. In the first I shall comprehend those that have terminated fatally; in the second, those that have been benefitted; and in the third, those that have been cured (a).

FIRST SERIES.

M. B., jeweller, aged forty-eight, was seized almost suddenly with an ardent thirst, and frequent desire to make water. Dr. Requin immediately recognised diabetes, and sent me the urine passed in the twenty-four hours. It amounted to rather more than 7¼ quarts, and contained 98 grammes of glucose per quart. The patient had taken during the twenty-four hours about 650 grammes of feculent food.

M. B.'s strength had not become much diminished, and he was tolerably stout. He attributed his disease to the suppression of hemorrhoids. M. Requin prescribed abstinence from feculent food, and the regimen I have already alluded to (b), and at the same time ordered leeches to be applied to the anus. Under this treatment the desire to make water and the thirst immediately disappeared. At the expiration of eight days I again examined the urine: it contained all the principles of healthy urine, but not a trace of glucose, although the patient took daily with his food nearly 200 grammes of feculents. It must not be forgotten that the disease had been recognised and treated from the commencement.

Four years were passed in this way very comfortably; but M. B., fancying himself cured, returned by degrees to the use of feculents in large quantities. The thirst gradually returned, and before he again applied to M. Requin his disease had become greatly increased in severity. I again analysed the urine, of which the patient passed about 60 litres, and found it now to contain 101 grammes per litre of glucose. During this analysis, and before any fresh treatment could be adopted, the patient was suddenly carried off by pulmonary apoplexy.

G., aged forty-seven, cook, does not know positively when the disease commenced, but has complained for some time past of great thirst; and has, during the last twelve months, fallen away very considerably. When he entered the hospital, auscultation caused the existence of a few tubercles at the summit of the left lung to be suspected. His appetite was great, and his thirst excessive. His urine, previous to his diet being changed, amounted to five quarts in the twenty-four hours; and contained, per quart, 104 grammes of glucose. The patient had taken during this period, 550 grammes of feculent food. The feculent food was reduced to 120 grammes per day. At the end of three days, he passed in the twenty-four hours only 2·1 litres of urine, containing 70 grammes of saccharine matter per litre. G. remained in the Hôtel Dieu twelve months, but he never entirely abstained from feculents; and his urine, which was frequently examined, always contained glucose. Several remedies were successively tried, with a view to check the glucosic transformation; common salt in large doses was persevered in for some time, and under its influence the proportion of glucose diminished in the urine; but this amelioration was only transient; bicarbonate of soda was employed in doses of 15 grammes daily, but without effecting any improvement. Creosote was also administered, but without any success. G. procured feculent food by stealth; the sugar contained in his urine increased, and the winter setting in, in the meanwhile, the tubercular affection became accelerated in its progress, and eventually carried off the patient.

Mrs. H., aged thirty-five, a widow. Her husband died about two years since of phthisis, and, what is very remarkable, Mrs. H. assures me that his disease commenced exactly like hers, by great thirst and an enormous appetite. Be it said, however, I have no positive proof of this concomitance. Mrs. H. is considerably reduced, her strength is gone, her skin and mouth dry, her appetite great, and her thirst ardent; she has some difficulty in breathing, and percussion and auscultation prove that there is only a slight congestion towards the summit of the lungs. I advised her to enter the Hôtel Dieu, which she did.

At first no alteration was made in her diet; she took in the twenty-four hours 400 grammes of feculent food, 250 grammes of boiled meat, 40 centilitres of milk, 24 centilitres of wine, and 3¼ litres of common tisane; she passed 5·75 litres of urine, which contained 73·2 grammes of glucose per litre.

The quantity of feculents was reduced to 100 grammes per day, and a suitable and sufficiently abundant diet prescribed, which was continued for six weeks. On the eve of her departure the patient passed only a litre and a half of urine, containing 47 grammes of glucose per litre. Her strength had returned, and she was beginning to regain flesh. Notwithstanding my observations, she left the hospital fancying herself cured, and again had recourse to feculents. In a few days all the symptoms reappeared in their former severity, and three weeks had scarcely elapsed before Mrs. H. was brought back to the Hôtel Dieu, labouring under a very severe attack of pneumonia, of which she died in three days.

The lungs were gorged with black blood, and were full of tubercles.

SECOND SERIES—DIABETICS IMPROVED.

M. P., aged forty-nine, resides in the country. Previous to the commencement of his disease he had unusual strength and activity; but since then, now nine months ago, during the whole of which time the affection has been overlooked, he has become indolent, idle, and unable to perform his duties; his thirst is excessive, his appetite considerable, and his desire for feculents great; his mouth is parched, his saliva acid, and his skin dry, &c.

Before submitting him to any treatment, he was ordered to continue his ordinary diet for twenty-four hours. During this period he took 500 grammes of feculent food, and passed 5·75 litres of urine of specific gravity 1·036, having a notation of +13° in a tube of 303 millimètres, and containing 100·4 grammes of glucose per litre (5th of April).

The treatment already detailed was adopted. By this regimen the quantity of urine became reduced in twenty-four hours to 2·2 litres.

I saw this patient again on the 28th of June. His flesh and strength, and his original energy, had become so completely restored that he fancied himself cured. He now passed only 1½ litre of urine, of natural colour and smell, in the twenty-four hours. Its density was 1·030; examined in a tube of 303 millimètres, it had a power of +4°, and contained 31 grammes of

(a) [I shall not give the whole of those published by M. Bouchardat, but merely a few of the most interesting in each series.—TRANS.]

(b) See pp. 34, 35.

glucose per litre. M. P. never entirely abstained from feculents, still his diet was satisfactory; he took daily two quarts at least of good wine, and he was clothed in flannel. The skin regained its functions. The patient also took carbonate of ammonia and theriaca.

M. A. is at the head of a large establishment in the country, which requires great activity. He was in the prime of life when the symptoms of diabetes first became manifest. The disease was overlooked for six months, and during this time the patient's flesh and strength disappeared, and with these all his energy. M. A. passed in 24 hours 7·50 litres of urine of specific gravity 1·040, having a power of 13·5 in a tube of 311·5. This urine contained 97·30 grammes per litre of glucose. M. A. eat in the same space of time about 750 grammes of feculent food.

His diet was immediately changed to the one we have already described; although he never entirely abstained from the use of feculents, but always took in the twenty-four hours, save with a few exceptions which I shall presently mention, a quantity varying from 160 to 200 grammes; but all the other hygienic means were very carefully employed, and with the greatest vigilance, such as varied and chosen food; wine of excellent quality, in doses of 1½ to 2 litres for the twenty-four hours; daily exercise, and good flannel clothing; in short, nothing was neglected.

From the commencement of the treatment the quantity of urine was reduced to 2 quarts, and sometimes was as low as 1, and even 0·95 litres.

The proportion of glucose in the urine underwent numerous changes. For instance, it immediately decreased to 68·35 grammes per litre, then to 67·40; the specific gravity remaining 1·040. At the end of a month the urine contained only 34·15 grammes; the density being 1·028. I analysed it again two months afterwards, and found 41·90 grammes; but this proportion soon decreased, for a fresh analysis yielded 31·70 grammes.

Twelve months passed in this way, and the symptoms of the disease almost entirely disappeared. The feculents were increased in quantity; but the thirst returned, and the proportion of glucose in the urine became increased, without, however, any augmentation in the amount of the secretion in the twenty-four hours. The specific gravity reached 1·041, and the proportion of saccharine matter per litre 71.66 grammes.

We now arrived at the period of decrease. On the 17th of October there were only 52·63 grammes, the density being 1·035; on the 14th of November, 34·15 grammes, sp. gr. 1·034; and lastly, on the 15th of December, 5 grammes, and a density of 1·019.

Towards the month of February the thirst increased: on the 9th, a quart of urine contained 61·80 grammes, and the density had returned to 1·040; on the 15th of April, the specific gravity being the same, there were 55·40 grammes; and lastly, on the 28th of September, 61·30 grammes, with a density of 1·039.

M. A.'s health is very satisfactory—he has regained his flesh and strength and his usual energy. In fact, no one will believe in his malady. His urine is normal in quantity; and, to be certain of the existence of disease, it is necessary to have recourse to optical analysis, to prove the presence of saccharine matter.

It is still necessary to state that M. A.'s father was a martyr to the gout, and that he himself, notwithstanding his diabetic affection, had experienced very severe attacks. During the febrile period, the glucose disappeared from the urine; but this, however, was a natural occurrence, inasmuch as during these few days the patient was on low diet. Besides the saccharine matter, the urine contained a large quantity of uric acid; the inside of the urinal being coated with its crystals. It is in these cases that the Vichy waters are particularly useful: I have in vain recommended their administration. The carbonate of ammonia was given from time to time, and, under its influence, the proportion of glucose diminished in the urine.

M. T. is the patient to whom I alluded, when speaking of the extraction of diastase in diabetes, and who furnished me the first opportunity of studying glucosic diastase in a state of perfect purity. His disease commenced about two years ago; and, as I have already stated, he has been twice an inmate of the Hôtel Dieu. When he first entered the hospital, he was excessively emaciated; and, although only forty-four years of age, had no venereal appetite; the least fatigue occasioned pains in the loins and limbs.

Before submitting him to any treatment, he was kept for twenty-four hours on his feculent diet. He took 500 grammes of bread, 250 grammes of boiled meat, 40 centilitres of pea-soup, 40 centilitres of wine, and 6½ litres of tisane; and passed 9·75 litres of urine, containing 71 grammes of glucose per litre.

During his first stay in the hospital, he was treated chiefly on hygienic principles. The quantity of wine did not exceed a litre and a quarter —a quantity which I considered insufficient for this patient, but it could not be increased: for, notwithstanding he was most carefully watched, he always sold some to the adjoining patients. Gluten bread was employed; but the rules of the hospital were such that we were unable to change the diet for a sufficient length of time; nevertheless, as I had succeeded in obtaining for him the situation of assistant in the kitchen, his ordinary diet was somewhat improved, and he, in consequence, made considerable progress towards recovery, and he regained his flesh and strength; but the smallest quantity of feculents always caused the saccharine matter to reappear in the urine; and I have even detected it after complete abstinence from feculents. But I have no great faith in his assertions, for I fear very much that he exchanged some of his wine for bread. However this may be, the patient, believing himself cured, requested permission to leave the hospital. He worked all the summer in tolerably good health, by abstaining as much as possible from bread, and by taking a pretty large quantity of wine or of brandy and water.

His work having at length ceased, and not being able to procure sufficient wine, he was compelled to return to the use of bread, when the disease again reappeared in all its severity. He returned to the Hôtel Dieu at the commencement of the winter. By continuing his feculent diet, he passed six quarts of urine, containing 68 grammes of glucose per quart. Unfortunately, in consequence of his propensity to trade, he could not return to his duties in the kitchen, therefore his improvement this time was slower and less complete; this, however, must be partly attributed to the severity of the season, for when the weather became warmer his condition improved. He never entirely gave up the use of feculents, and there was consequently always glucose in the urine. He only passed from 2¼ to 3 litres in the twenty-four hours, containing from 55 to 75 grammes of glucose. Yet he was only ordered 50 grammes of feculent food, 500 of roast meat, and 1¼ litre of wine. But I always suspected his fidelity.

The most varied remedies were uselessly administered in this case: bicarbonate of soda in 20-gramme doses, in the twenty-four hours, produced no good result; carbonate of ammonia was rather more efficacious, but did not cause the glucose to disappear from the urine; magnesia and lime-water were of but doubtful benefit; still, from having been kept on a good diet, he left the hospital much improved, although depressed in spirits at the thought that want would contribute greatly to aggravate his malady, and to compel him again to enter the Hôtel Dieu.

19, Langham-place.

(To be continued.)

The editor of the *Lancet* gives as his reason for relinquishing the Course of Physics, by Müller, *the fact* that he had been asked by numerous subscribers not to begin it till January, 1848! The prior publication in the *Pharmaceutical Times* is, of course, not adverted to.

FURTHER OBSERVATIONS ON THE CONDITION OF ASPHYXIA, OR INSENSIBILITY, INDUCED BY THE INHALATION OF ETHER;

And of the Indications to be fulfilled in the Treatment of the Effects of its Maladministration.

By CHARLES SEARLE, M.D., M.R.C.S.E., of Bath.

In the *Medical Times* of the 19th ult. is a report, made to the Académie de Médecine à Paris, by M. Amussat, of his experiments on animals under the influence of the vapour of ether, in which it is said:—"that, during the condition of insensibility induced by the ethereal inhalation, the blood in the arteries was found to be of the venous character, and resumed its florid appearance when the state of unconsciousness had ceased. And that, in animals which had died during the inhalation, the blood was found of the same venous colour in the heart, veins, and arteries." If such are the results of M. Amussat's experiments, they establish, beyond doubt, the correctness of my views on the subject, published in the *Medical Times*, under date of January 5, to the effect that the condition of the patient under the influence of the ethereal vapour is that of asphyxia; and that the sedative or narcotic effects of ether as ordinarily administered is of the same character. Its stimulant operation when so administered, that is, by the stomach, I must, however, first explain, or the views I entertain of its inhalation will not be rightly apprehended. To make this understood, it is necessary for me first to observe that life, the attributes of which are heat and motion, is the result of the chemical action developed in the animal system by the agency of the oxygen of the air inspired in its combination with the hydro-carbonaceous constituents of the food existing in the blood—caloric and electricity, the actuating stimuli of all vital phenomena, being evolved in the process. And as this process of chemical combination and electrical evolution, we may justly infer, takes place more particularly in the capillary or hair-like vessels, wherein the particles of the blood are brought into the closest approximation, and in which the final changes in its composition in relation, at least, to the conversion of arterial into venous blood takes place, hence the excitement of these vessels and motion of the blood in the capillary vessels, or organic life of animals: capillary action being the first visible motion to be discerned in the egg in the process of incubation, and the last to be discovered in animals when death takes place. These views I submitted to the profession as long back as 1830, when I had the honour of reading to the Westminster Medical Society a paper on the subject, and have since enlarged upon in a work recently published, entitled "The Philosophy of Life, Health, and Disease."

Now, the transitory stimulating effects of ether, when received into the blood from the stomach, is in virtue of its composition, it being a compound of carbon and hydrogen; its absolute composition is carbon, hydrogen, and oxygen; but the latter, it is presumed, exists in combination with its equivalent of hydrogen in the character of water—that it virtually is, as I say, a hydro-carbon. This, then, we may fairly presume, from its highly inflammable nature, must exist in a looser state of combination, or a condition of greater affinity for oxygen, than that of the fatty or other hydro-carbonaceous constituents of the blood, and would, therefore, when received into the general circulation from the stomach, by predilection of affinity, enter immediately into combination with the oxygen of the blood, and a more active combustion, and, by consequence, excitement of the capillaries of the general system, would ensue; and thus the stimulating qualities of ether, in common with other hydro-carbonaceous alcoholic fluids which operate in like manner. And hence Mr. Spalding, the celebrated submarine operator, found that, when he drank alcoholic beverage, he required a greater amount of air being supplied to him during his operations. But the stimulating

qualities of ether are of a very transitory nature, these effects being soon followed by its opposite condition of narcotism; but before I proceed with these, its effects, as ordinarily administered, I must explain that of the insensibility induced by its inhalation.

The offices of respiration are, the exhalation of carbonic acid gas, and the reception into the blood of its equivalent of oxygen. Now, in the ethereal inhalation, as the air of the lungs presented to the blood for absorption is not only diluted with this vapour, but in admixture also with this hydro-carbonaceous compound, the latter, when imbibed from the air-cells in admixture with the air, from its greater affinity for oxygen than the constituents of the blood, immediately seizes upon the oxygen, and, combining therewith, thus de-oxidates the blood in the lungs, whereby the blood, thence returned to the heart for general circulation, is deprived of its vitalizing qualifications; and hence defective capillary excitement of the heart and brain, and of all the functions, and thus the condition of insensibility and asphyxia induced: limited, of course, by the extent and period of the inhalation; but involving, necessarily, caution that it be not carried to too great an extent, considering that it virtually consists in a species of burking!

We may now comprehend the narcotic and sedative influence of ether which so soon succeeds to its use when received into the blood from the stomach. It having, as I have already explained, by its union with the oxygen of the blood in the general circulation, produced a certain amount of excitement, other portions of the ether existing in the blood, in their circulation through the lungs, enter into combination with the oxygen of the air imbibed, and here de-oxidating the blood at the expense of the general system, produce effects, though less in degree, yet analogous in kind, to its inhalation—narcotism; and thus its sedative influence and reducing power. And thus are all the operations of ether, I am of opinion, very satisfactorily accounted for, and established as such, I think I may venture to say, by the experiments adduced of M. Amussat.

Reverting to a former observation, I may be permitted to add, that precisely in character with the operation of ether, in producing both excitement and asphyxia, are the effects of alcohol, though modified in description by the difference that exists between them: alcohol being soluble in water, and mixable with the blood; and ether not so, but much more volatile and combustible. Alcohol is accordingly much more permanently stimulant in its effects, and only asphyxiating when received into the system in a concentrated form, or where the quantity in a more diluted state has been so considerable that the blood in its passage through the lungs has become incapacitated for transmitting oxygen for the purposes of the general system; that is to say, the amount of alcohol present in the vital stream de-oxidates the blood in the lungs before it is returned to the heart for general circulation; and hence the more enduring condition of insensibility which succeeds intoxication, the whole vital stream abounding with its polluting influence.

If the explanation afforded be considered the true one, the circumstances prohibiting its use are obviously those of feeble power, as well as apoplectic predisposition, as the effect of all narcotics and reducing agents on the system is to produce venous congestion; and, from reasons afforded in my work "On the Philosophy of Life," but too lengthy in description to be here adduced, and more especially manifested in the liver and brain; hence there was found, on examination, in the case of death recorded from ethereal inhalation, congestive fulness of the bloodvessels of the brain; and, moreover, that bleeding was found useful in the recovery of dogs which had been rendered apparently dead by its use, as so stated in France. But the most obvious and direct indication to be fulfilled, in a case of its maladministration, is the re-excitement of capillary action by the inhalation of oxygen gas; subsidiary to this, or when this is not immediately available, judicious blood-letting is the next object, followed by the excitement of the skin, and respiratory function of the lungs, by the sudden splash of cold water, followed by galvanism and artificial respiration in extreme cases. And, as an internal stimulant, ammonia, alcoholic fluids, or agents of the like character, being interdicted, nitric acid might prove more useful in these cases than ammonia. In India I once drank an entire drachm in a tumbler of water, and with, I thought soon after, decided exhilarating effects. In addition to these means, warm salt-water clysters are clearly indicated; and, although the last to be noticed, I am not sure that it is the least in importance, an emetic may prove a useful ancillary.

Bath, March 27.

DISSECTION WOUNDS.

By J. E. PATTISON, Esq., Surgeon, London.

CASE OF SIMPLE PUNCTURED WOUND FOLLOWED BY SYMPTOMS SIMILAR TO THOSE EXPERIENCED IN DISSECTION WOUND.

Amongst the numerous writers who have written on dissection wounds, few of them seem to have observed that punctured wounds, followed by similar symptoms, are not unfrequently seen in general practice; though from the often trifling nature of these wounds, such as the prick from the splinter of deal wood in the present case, the local affection is frequently forgotten or unheeded in the urgency and danger of the more formidable constitutional symptoms.

How is it, inquires Mr. Shaw—(who is an advocate for the influence of a septic agent in causing the disturbance),—how is it, says he, in his paper "On Dissection Wounds," if the symptoms depended merely on the puncture, that we have not those effects, *i. e.*, symptoms of dissection wounds, constantly taking place in common life among artificers? So also do most of the other writers on this subject argue, as though the symptoms following dissection wounds never occur in common life among artisans.

If this were strictly true, then there would be good reason for believing the usual formidable symptoms to be dependent on the absorption or reception of some septic agent; but, as examples of the same range of symptoms from simple punctured wounds multiply, the doctrine of the inoculation of a morbid poison into the system, as productive of the mischief, must be qualified by the assertion, that the same range of symptoms do occasionally take place from simple punctured wounds, such as carpenters, joiners, and artisans receive while at work; so that, in this controversy of the influence or non-influence of a septic agent, perhaps it will be found that both are right, and both are wrong—that the formidable symptoms may arise from absorption of poison in some cases, whilst in others it may be dependent on the state of the body at the time of the infliction of the injury. I shall relate a case illustrative of this opinion:—Mr. B., a carpenter, called on me at my surgery, on the 8th of December last, complaining of being unwell; he was rather slight made, dark complexion, and was fifty-two years of age; his habits of life were temperate, but he had lately suffered heavy losses from bad debts, which affected him, as he stated, very much, producing despondency and loss of appetite. He said he felt a continued inclination to be sick, and complained of faintness and being chilly, and that he had no mind for work, owing to excessive lowness of spirits. Thinking that something he had eaten might have disagreed with him, I prescribed an emetic, and promised to call and see him in the evening at his residence.

When I saw him at eight P.M., other symptoms had set in; he complained of severe headache; the emetic had acted well, still there was great restlessness and languor, the pulse was frequent and sharp, and the tongue coated; he now complained, too, of pain in the shoulder, and a stiffness of his right arm. I bled him to sixteen ounces, and, as I was undoing the button at his wrist, I observed a small punctured wound just under the nail of the second finger, which, he said, arose from a splinter of deal wood pricking him the day before; on examining this prick (for it could scarce be called a wound), it looked a little red, and had a pustule on it; I directed the patient's attention to it; he said, as it gave him no pain, he had not applied anything to it. I freely lanced the part by making a crucial incision, which bled freely, and ordered a poultice, and prescribed a laxative mixture, with two grains of calomel in a pill, to be taken every four hours with each dose of the mixture.

On the morning of the 9th I again saw the patient, when the symptoms of dissection wound had fairly set in: the pain in the shoulder had increased in severity; the breathing was difficult, attended with quick pulse; great mental depression; dry and brown tongue, which was tremulous, as though he was suffering from delirium tremens; the expression of the countenance was haggard, and the nervous shock threatened an alarming termination. On examining the axilla, I found it puffy and painful; the medicines that had been ordered on the 8th had acted freely on the bowels; and on the evening when I saw the patient, as the fever had assumed an irritative or typhoid kind, I prescribed a diffusive tonic mixture, containing ammonia and camphor, and gave him extract of henbane to procure sleep.

On the 10th, on examining the axilla and chest, the latter of which the patient complained of, as being painful, I perceived a slight erysipelatous redness over the pectoral muscle; the pulse had increased to 120, but weak. During the night he had been at times delirious, and attempted to get out of bed to go to his workshop. At the time I saw him, however, this had passed off. At the wish of the friends of the patient, a physician was called in for consultation, and we agreed to favour the formation of pectoral abscess; so poultices were ordered, and hot fomentations, to the seat of pain in the pectoral muscle. He had continued taking the calomel pills, and his mouth now became slightly affected; the mercurial was discontinued. At night I gave him a full dose of morphia, as the henbane had failed in procuring sleep.

On the 11th day, many of the symptoms had increased in urgency, assuming more and more the typhoid type. Delirium was present more or less during the day, and, as he felt distinct chills, I was in hopes that pectoral abscess was about forming, and ordered the parts to be continually fomented, and the diffusive tonic mixture and anodyne at bedtime to be continued.

On the 12th, on visiting him, I fancied there was matter under the clavicle, formed in the swelling of the pectoral muscle, though I could perceive no distinct fluctuation; I, therefore, made a deep incision with the abscess lancet, and was gratified by the discharge of a quantity of pus, which very much relieved him. From this date the symptoms gradually subsided; the convalescence was, however, slow, though large quantities of quinine and wine were taken in conjunction with a nourishing diet; the arm at length renewed its power of motion as the discharge from the abscess lessened.

On comparing the symptoms in this case with those that arise from a common dissecting wound, the similarity will be seen to be very great: there was present inflammation of a distinct kind perfectly different from erysipelatous inflammation; the fever was of the typhoid type, similar to that induced by the morbid poison from dissection wound; the colour of the skin, too, that covered the pectoral muscle was more of the tint of the purple peach-blossom tinge than the red hue of phlegmonous inflammation. It may also be noticed, that, after the peculiar peach-blossom colour of the inflammation had disappeared, it left no desquamation after it, which is usual and characteristic of erysipelas; and as to the fact observed by Mr. Colles and other writers on this subject, of the incisions producing

no discharge in cases of true swellings from dissection wounds, my own experience of the disease, as a sufferer from the inoculation of the morbid poison, would tend to contradict this opinion, as the incision made in my pectoral abscess was followed by a copious discharge of pus, and its attendant relief. The mental distress so truly appalling in dissection wound was here present from the first, and, with the tremulous tongue, indicated the powerful shock on the nervous system. The presence of delirium and the haggard expression of the features in this case were precisely similar to the same results so generally following the introduction into the system of a septic agent. In this case of recovery, too, as in those from dissection wounds, every portion of the limb between the original wound and the seat of pain in the shoulder and pectoral muscle was swollen; the subsequent pains of a rheumatic character were manifest also in this case: so that, taking the whole range of symptoms and circumstances attending this case, and comparing them with those attendant on dissection wounds, the similarity, to say the least, is very striking, and tends to favour the opinion that, in peculiar states of the system, a simple wound may be productive of similar symptoms to those sometimes following the wounds received in the dissecting-room, or the *post-mortem* examinations of the dead from inflammation of the serous and peritoneal membranes.

NEW MODE OF TREATING UTERINE HEMORRHAGE.

By T. R. TORBOCK, M.D.

I wish now to redeem my promise of furnishing such cases which, in my humble estimation, will fully prove the inestimable advantages of the plan set forth in my former communication, viz.—"The injection of stimulants into the cavity of the uterus by a suitable apparatus, so as to arrest flooding." Having mentioned my views to one or two of my medical friends, they were not prepared to give an opinion—the novelty of the plan, and the means recommended, being such as, very judiciously, to prevent them giving an opinion *pro* or *con*; however, I was soon enabled, practically, to prove the correctness of my views, by being called in consultation with my friend Mr. F. Thompson, surgeon, of Sunderland, when a frightful hemorrhage followed the extraction of the placenta.

This case was one, of all others, where the application of stimulants might have been dreaded, as superinducing untoward symptoms, and that owing to its peculiarity. The patient, a delicate female, between the age of twenty and thirty years, was seized with labour, when Mr. Thompson, her medical attendant, was summoned to attend. For the first few hours, everything appeared to progress favourably; the second stage being ushered in, it was found that little or no progress was made in the descent of the child, notwithstanding the presentation was natural. A more minute examination was now made, when it was found there existed an impenetrable barrier to its descent—the mouth of the womb being completely closed by bands of adhesion—the result of a former accouchement, which took place at Hull, at which time great violence had been used in the extraction of the child by means of the forceps; moreover, there existed a *recto-vaginal fistula*, which rendered the case still more perplexing and difficult. On my arrival, accompanied by my friend Mr. H. H. Taylor, surgeon, we at once found matters to be as represented by Mr. Thompson, and concluded in consultation that a division of the several bands (anteriorly and posteriorly) should be attempted by means of a curved bistoury; this was speedily effected by Mr. Thompson. Notwithstanding, after waiting a suitable time, and the patient becoming exhausted, it was thought expedient to accomplish the delivery by means of the forceps. This was speedily done, and the placenta extracted. It was at this moment, from the atonic state of the uterus, frightful hemorrhage followed. The ordinary means were used to produce uterine contraction, as pressure, grasping the uterus, secale, and the introduction of the hand into the uterus. At this critical moment was suggested the introduction of a piece of rag, saturated with brandy diluted one-third with water, into the uterine cavity, which was very promptly done; when on a second application it was grasped by the contracting uterus, all hemorrhage ceased; the patient progressing favourably. The second case was one which occurred in the practice of my friend Mr. H. H. Taylor, the like mode being adopted with the most gratifying results; the stimulant used in this case, if I mistake not, was rum alone.

Kirkby-Stephen, March 10.

PROGRESS OF MEDICAL SCIENCE.

France.

ACADEMY OF SCIENCES.

Meeting of March 22; M. BRONGNIART in the Chair.

ETHER.

M. Flourens read a short paper on the action of ether on the nervous system. Unconsciousness is produced by that substance only when exhibited by inhalation. M. Flourens gave to dogs from ℥ss. to ℥vj. of ether internally; they were intoxicated by it, but insensibility was not produced. Having injected ether into the arteries of other animals, M. Flourens had noticed the interesting fact, that motility disappeared before sensibility: a succession of phenomena contrary to that usually observed in the human subject after inhalation.

A letter was also read from Dr. Jackson, in which Dr. Jackson explained that, if he had taken out a patent for his discovery, it was less to protect its commercial value, than to establish his claims to priority of invention. Dr. Jackson had unsuccessfully repeated Dr. Wells's experiments, and could not acknowledge that gentleman's claims to the discovery of the stupifying properties of inhaled ether.

ACADEMY OF MEDICINE.

Meeting of March 23; M. BEGIN in the Chair.

The meeting was entirely occupied by a long paper on ether, by Professor Blandin; we expected this communication would bring forward some new facts, or present the question in a new light. It was not so: the paper contains nothing but what is already known: it comes one day after the fair.

PARISIAN MEDICAL SOCIETY.

Meeting of March 24; Dr. SHRIMPTON in the Chair.

The following case was read by Dr. Olliffe:—

CASE.—UMBILICAL HEMORRHAGE—PURPURA—DEATH—DISSECTION.

The case was that of a child in whom, six days after birth, the funis was detached; on the eleventh day of life an oozing was observed from the umbilicus which continued in an alarming manner during several hours. Cauterization with nitrate of silver, twice repeated, had proved unavailing; compression was too painful to be borne, and the application of the ice was unsuccessful, every scream of the child being followed by an increase of the hemorrhage. Professor Dubois saw the case during the night, and the ligature of the umbilicus was resolved upon. The operation succeeded perfectly in arresting the hemorrhagic discharge; but the child remained very small, and in a state of great debility; occasionally a small quantity of putrid blood was passed with the motions. Icterus was present. A homœopathic practitioner was called in, and that gentleman did not hesitate to promise a complete cure in the space of four days; on the second, however, the child died after a very abundant intestinal hemorrhage.

Sectio Cadaveris, thirty-six hours after Death.—Rigidity complete; icteric colour of the skin; no traces of purpura; cicatrix of the umbilicus complete; skin round the scar healthy.

Abdominal Walls.—The umbilical vein was almost entirely obliterated, contained no blood, and was all but converted into a fibrous chord; the left umbilical artery was obliterated. The right umbilical artery presented a different aspect: its external appearance resembled that of a vein; small eminences were noticed from distance to distance, which, being incised, gave issue to a few drops of blood, and to very minute clots; its cavity readily admitted a probe as far as the umbilicus. The tubercle was divided by a series of horizontal sections, the deepest of which discovered a surface—in appearance fibrous, brilliant, and bluish. On the inferior and right side of the tubercle was a red spot, from which small clots of blood were forced out. It appears therefore certain, that the hemorrhage arose from the right umbilical artery.

Digestive Organs.—The palate and tongue were covered with purpuric spots, already observed during life; the stomach and small intestines were healthy; but the cæcum, colon ascendens, and right half of the arch of the colon, presented a uniformly red hue; and on two or three spots were observed submucous hemorrhagic blotches. The liver was large, its colour natural; gall-bladder small and empty; near its neck, externally to the cystic duct, was observed a small tubercle, attached by cellulo-fibrous adhesions to the liver, with the substance of which it was otherwise unconnected; it was equal in size to a pea, and rather less dense than if it were of a fibrous nature. The hepatic vessels healthy. The spleen natural, rather large; peritoneum healthy.

Urinary Organs.—Kidneys natural, with the exception of a small purpuric spot on each; uretus and bladder natural; urachus obliterated.

Respiratory Organs.—No alteration.

Circulation.—Heart small, pale, and soft; foramen ovale incompletely closed; thymus not congested.

Organs of Innervation.—Cerebral substance soft and rather diffluent; extravasated blood in the subarachnoidian cellular tissue, near the pons varolii; a few diffluent clots in the lateral ventricles; anterior fontanella enormous. Spinal chord not examined.

FACULTY OF MEDICINE.

LECTURES ON GENERAL PATHOLOGY, BY PROFESSOR ANDRAL.

Some diseases, eruptive fevers, for instance, have a predetermined and invariable course, to arrest which art is powerless. Their symptoms may be slightly modified, their intensity diminished, their dangers lessened, but their course and duration remain the same. Other acute affections can, on the contrary, be arrested by the interference of medical art. Such is pneumonia during its first stage.

In general the morbid phenomena of acute disease acquire in the evening a greater degree of violence than during the day; this increased intensity of the symptoms is termed "exacerbation"; at this hour not only are the previously existing symptoms more manifest, but those which had ceased may return, or even new symptoms appear. The reason of this change for the worse, generally observed in the evening during the course of acute maladies, is perfectly unknown to us.

We have hitherto treated of continuous affections; but disease does not always present this type: it may be periodical, intermittent, or remittent.

A disease is said to be continuous when its characteristic phenomena follow an uninterrupted course; and we have nothing to add to what we have already said of the progress of affections of this sort.

A periodical malady is one, the symptoms of which return from time to time, without regularity—epilepsy, for instance. The progress of

such affections is very irregular, and is called "erratic."

A disease is termed intermittent when the symptoms reappear at stated intervals: each of the attacks is called a paroxysm (*accès*). The return of the paroxsms may be quotidian, tertian, quartan (every third day): a double-tertian fever is that which occurs every day, the alternate paroxysms being similar to one another. Mensual and annual paroxysms have been also admitted to exist; but it is not well proved that intermittent diseases can present so long an interval as the latter. We find intermittent affections in five of the fourteen classes of diseases we have admitted, viz., in pyrexia, in hyperemiæ, fluxes, hemorrhages, and neuroses; but, whatever the nature of the intermittent affections, they are all relieved by one medicine—cinchona.

Intermittent pyrexiæ are the types of intermittent diseases. Each paroxysm consists of three stages, which are called the cold, the hot, and the sweating stages. Of those three periods, one alone never fails, it is the hot stage: the chill and sudor may fail, or be exaggerated. When the paroxysms are not marked by any important local symptoms, the fever is said to be simple. But when serious local manifestations appear during the fit, and threaten immediate danger, the fever is called pernicious. In general it is the third paroxysm of such fevers which is fatal. The nature and form of these perilous accidents of pernicious fevers vary considerably, often testifying great disturbance of some important function, by delirium, convulsions, paralysis, dyspnœa, diarrhœa, or syncope: from the kind of symptom observed, each variety of pernicious fever derives its name—hence apoplectic, convulsive, comatose, or syncopal fever. Instead of a functional disturbance, it may be the exaggeration of one of the natural phenomena of the paroxysm—rigors, sudor, &c.—which may mark the fit as pernicious. Sometimes it is only the sudden and fatal collapse of all vital power which characterizes the paroxysm and points to its fatal nature. Intermittent fevers may be caused merely by marshy emanations; they are then idiopathic; they may also be symptomatic of other maladies. The urinary organs and the liver seem to enjoy the privilege of expressing their sufferings by creating general intermittent paroxysms; at the same time, let us say that, when once a patient has suffered from idiopathic ague, its symptoms may, at a future day, reappear on very slight provocation.

Hyperemiæ are occasionally observed to adopt the intermittent type; they are noticed chiefly on the skin and on some mucous membranes, the conjunctiva for instance; cerebral congestion occasionally presents this form. The existence of genuine intermittent inflammations is, at least, doubtful. Intermittent cutaneous eruptions, such as urticaria (nettle rash), cannot be called inflammations: they belong more properly to the class "congestion."

Intermittent mucous discharges and hemorrhages have been not unfrequently noticed. But intermittent neuroses are very common. Mania occasionally puts on this form; and very frequently neuroses of sensation, specially neuralgia; and amongst the varieties of this genus, cephalia and facial neuralgia.

The shortest description we can give of remittent diseases consists in saying they are continuous diseases, during the progress of which, at almost regular intervals, a chill is observed. The history of their progress may be inferred from what we have already said of the progress of continuous and intermittent affections.

Turning to chronic diseases, we find that, for the most part, they are continuous; they may, however, be also periodical, returning in the shape of more or less distant attacks. Their progress may present remissions, unexpected alternations, and exacerbations.

Chronic maladies, such as scrofula and syphilis, may show themselves by the successive development of various groups of symptoms.

Where chronic disease has invaded any precise seat, independently of the local symptoms, a certain number of general manifestations belonging to chronic affections make their appearance. These general symptoms may be referred to several causes: some depend on the disturbance of the function of the diseased organ. Thus, in cancer of the stomach, an imperfect digestion becomes the cause of an equally imperfect nutrition; others depend on sympathy; others, again, on derangement of the nervous system; a fourth set are produced by the gradual change of composition of the blood; and, lastly, some are due to more or less mechanical impediment to the freedom of circulation. Amongst these morbid phenomena some belong more particularly to the alteration of the functions of nutrition. Thus, in most chronic diseases, digestion is sooner or later impaired, particularly when they are hurrying on to a fatal termination. Sometimes the appetite remains even after hectic fever has set in, but a time surely comes when it is replaced by a disgust for food. Some symptoms furnished by the digestive organs are special to peculiar maladies: thus the diarrhœa of consumptive patients cannot be considered in the light of a complication, it is a symptom belonging to phthisis. General weakness and oppression belong to chronic maladies in general, and are usually proportioned to the diminution which has taken place on the globules of the blood. The circulation is also more or less disturbed; palpitations, for instance, are observed in most cases. As to fever, it is not an inseparable companion of chronic diseases; many neuroses, for instance, are never attended with febrile excitement. But chronic inflammation and accidental products almost invariably occasion fever at one period of their existence: it is when a local process of diminution has set in, and when the consistency of the morbid products is beginning to diminish. This is particularly well-marked in tubercular disease; in cancer it is not very rare to find patients affected with a softened cancer if the stomach or liver still remain free from fever. The history of this form, hectic fever, I will lay before you next winter, when treating of semeiology. We may, however, say at present, that in chronic disease, when feverishness sets in, it consists only of frequency of the pulse; the heat of the skin appears some time later: in general, much anxiety is justified by the mere acceleration of the arterial circulation. The febrile excitement produced by chronic disease may, during the first days of its manifestation, assume a periodical type, it may even closely resemble ague, and further, it is not impossible that it may sometimes yield to the exhibition of cinchona or its preparations; but after a short time quinine ceases to have any influence over it, and may aggravate the internal disease. We must, however, carefully distinguish those other cases in which a chronic disorder becomes complicated with intermittent fever. This intervention may exercise an unfavourable and, occasionally, a favourable influence on the progress of the original complaint: we have seen cases of neurosis, and others of chronic inflammation, cured by this process.

During the course of chronic affections, the secretions are generally more or less modified. The secretion of fat, for instance, is usually suspended. Perspiration is suppressed in some maladies, for instance enteritis, cancer of the stomach, diabetes, &c. Perspirstion is, on the contrary, very much increased in others, such as phthisis, internal suppuration, &c. Many patients present a tendency to nocturnal perspiration long before caverns are formed in the lungs, and this sign is usually very useful to assist a doubtful diagnosis. In many chronic disorders, œdema, anasarca, and serous collections are observed; they depend not upon debility, as it was formerly believed, but, as it has been elsewhere established in these lectures, on a change of composition of the blood, or an obstacle to its free circulation. Towards the close of chronic maladies it is not unusual to observe a pultaceous secretion on the tongue, and on the mucous membrane of the mouth—a most unfavourable prognostic sign. Urine is less changed by chronic than by acute affections. In cirrhosis of the liver, when ascites has appeared, the renal secretion is much diminished in quantity, and contains a large amount of lithate of ammonia. In general, where great weakness is present, and the globules of the blood diminished in number, the urine loses a considerable part of its solid elements.

Chronic disease, is attended with symptoms referrible to the sensitive or animal functions. The intellect seldom preserves its undiminished power. The moral condition of the patient is also worthy of attention; at the beginning of their malady, at a time when their sufferings are doubted, when their disorder is often referred to imagination, patients so labouring under the first attacks of a chronic malady fall into low spirits, and despond. Their internal disease progresses, and in proportion to their rapid advance towards death the patients recover hope. Nothing in this respect can be more striking than the sanguine dreams of consumptive persons, who, during the last hours of their life, form plans for future years. Cancer of the stomach does not, however, present the same features: persons affected with it are usually melancholy. Sensibility is generally altered—it may be increased or perverted; motility becomes less and less active, and its diminution is frequently remarkable at the very beginning of chronic affections—a fact which often adds to the very great difficulty of the diagnosis in young women between chlorosis and incipient consumption. With regard to the function of generation, we find that, in most women, chronic maladies disturb more or less the catamenial excretions, and sometimes suppress them altogether: a remark to be borne in mind, in order not to consider this arrest as a cause of disease, when it is only its natural result.

Some cirumstances stop the progress of chronic disorders, or otherwise modify it: *per se*, chronic affections follow an irregular course; we have mentioned their alternations of improvement and exasperation—their occasional diminution of speed, their frequent increase of rapidity. Spontaneously, or by the efforts of art, chronic disease sometimes assumes an acute form, and the fact may exert a favourable influence, as it is often observed in cutaneous disorders. Amongst the circumstances which may considerably modify the progress of chronic disease, let us mention puberty, menstruation, hemorrhoids, and pregnancy.

What we have said of the progress of disease may dispense us with laying any stress upon its situation. We now come to the termination of maladies; disease may terminate—1st, by death; 2nd, by a return to health; 3rd, by transformation into another disorder; 4th, by passing from the acute to the chronic state.

In acute disase, when death occurs, it is always from the disturbance of the action of the brain, heart, or lung, and in most cases it is due to the lung becoming an improper agent of hematosis, in consequence of diminution of the energy of the contractions of the heart, or gradual extinction of cerebral influence. Some individuals, labouring under acute disease, expire suddenly, at a period when they seem still to have preserved considerable strength; others die, as it were, by the gradual exhaustion of vital powers. All this we can readily understand where the function of the affected viscus is one of great importance, such as the lung or brain, for instance; but it is not so easy to account for death where the part occupied by disease does not perform a function absolutely necessary to the continuance of life—the peritoneum, for instance. Here we believe, that, in consequence of the great extent of the membrane, a concentration of vital energy takes place, by which the other parts of the system are dangerously depressed. In chronic disease, death may be the result of the gradual progress of the morbid change, of an intervening inflammation, or again follow some

accident, due to the development of the disease itself, for instance, hemorrhage in cancer, or pneumo-thorax in phthisis; death may also be the first indication of latent disease, as it often happens in aneurism of the aorta. Sometimes, in chronic maladies, life is suddenly terminated by syncope, and no anatomical cause of the fatal issue can be detected on dissection.

The return to health is the second termination of disease—it may be gradual or sudden; in most cases illness is separated from perfect health by a condition called convalescence, which we will study on a future occasion. In febrile or acute maladies the general symptoms always yield before the local.

When disease is on the point of ceasing, certain concomitant symptoms are often observed, to the apparition of which the physician is tempted to refer the cure: they are called critical phenomena, and will occupy our attention at our next lecture.

EXTRACTS FROM THE MEDICAL PERIODICALS.

A MEMOIR ON EXOSTOSIS, BY PROFESSOR ROUX. —In this interesting paper the learned professor treats only of those tumours which, organized like bony structures, arise from the surface of the bone like one of its natural processes. Professor Roux has met with them more frequently in the inferior parts of the femur than elsewhere. The upper part of the humerus is also subject to the same disease, also the inferior maxillary and the phalanges, peculiarly the last phalanx of the great toe. Dupuytren had directed formerly the attention of the profession to the latter, which causes much pain, and recommended to divide the nail—remove it—and with a small saw, or a pair of bone-nippers, to take off the projection. This affection appears peculiar to youth, and generally appears between the ages of twelve and twenty-five." Professor Roux presumes that the increase of size of this form of exostosis ceases with the growth of the bony system. The volume of the tumour is always in proportion with that of the bone itself, and it is attached to the diseased part by a narrow basis, too broad, however, to deserve the name of pedicle. The centre of the exostosis is areolar; its surface consists of a thin layer of compact tissue. A bursa sometimes separates it from the skin, but the growth occasionally presents, with the neighbouring muscles, singularly intimate adhesions. These tumours never become malignant, but they always constitute a deformity, may cause much pain, and interfere more or less with the accomplishment of the functions of the limb. The operation for their removal may be performed, without denuding the tumour, by two lateral incisions parallel to each other, through which a chain-saw or the nippers may be introduced for the purpose of dividing the neck of the exostosis. This operation is seldom followed by any distressing consequences.—*Revue Médico-Chirurgicale.*

Hiccough may be arrested in most cases by pressure over the epigastric region. Professor Rostan, who recommends this very simple process, and asserts its efficiency, employs a special truss for the purpose.—*Idem.*

CASTRATION.—M. Baudens proceeds to this operation in the following manner: An incision proportional in length to the size of the testis having been performed on the inferior and external part of the testis, the chord is divided near the epidydimis when healthy—near the inguinal ring when diseased. As to the ligature of the funis or of its isolated arteries, M. Baudens rejects it for two reasons—first, because it may cause unpleasant consequences by the constriction of the nerves of the funis; and, secondly, because it interferes with and prevents immediate union. The chord should be seized with a tendon forceps, and divided between the instrument and testis. One suture is generally sufficient, and the dressing consists merely in applications of ice to the wound.—*Gazette des Hôpitaux.*

D. M'CARTHY, D.M.P.

ERRATUM.—Page 80, col. 2, line 29, for "tetanus" read "icterus."

PATHOLOGICAL SOCIETY OF DUBLIN.

TUBERCULAR CAVITY IN THE RIGHT LUNG OPENING INTO THE SAC OF THE PERICARDIUM—PERICARDITIS.

Dr. M'Dowel said that the specimen which he then presented to the society exhibited a mode of termination of thoracic disease which, as far as he could discover, had never been previously described.

The subject of the case was a policeman, named James Kenah, aged twenty-nine, a robust, well-made man, and who had always enjoyed remarkably good health, until about three weeks prior to his admission into the Whitworth Hospital, early in June, 1846. When placed under Dr. M'Dowel's care, he was complaining of cough and dyspnœa, and his countenance was pale and anxious. Careful examination of the chest at this time failed to detect any amount of organic lesion sufficient to account for these symptoms.

The history he gave of his case was, that three weeks before his admission he had incautiously exposed himself to cold, whilst profusely perspiring, and soon afterwards was seized with a severe stitch in the right side, for which he was bled, and with relief. In a few days, a return of the pain required a repetition of the venesection; profuse perspiration now followed, with deep-seated pain in the chest, and cough attended with expectoration of a dark colour. Five days after admission into the hospital, he was suddenly seized with violent and most acute stabbing pain in the left side of his chest, which lasted for several hours, and was accompanied by very severe dyspnœa. Examination of the chest now gave the following results: The natural respiratory murmur existed over the upper portion of the left lung anteriorly, and over its entire extent posteriorly; but anteriorly from the left nipple downwards to the lowest limits of the left lung, the respiratory sound was inaudible, and from this space was heard distinct metallic tinkling, and "bourdonnement amphorique." To percussion the left side of the chest sounded clear throughout, without being tympanitically so over the space where these abnormal sounds were heard. Nothing morbid was at this time detected in the right side of the chest. The symptoms next observed were that the breath became extremely fetid, the dyspnœa more urgent, the countenance continued pale and expressive of suffering, the voice became faint and hollow, the expectoration copious, purulent, and extremely fetid; he had wasting night-sweats, and his pulse was rapid and feeble. Diarrhœa then set in, and his lower extremities became anasarcous.

When the examination of his chest was repeated, after a few days' interval, there was still distinct evidence of the existence of a large cavity in the anterior inferior portion of the left side of the chest, containing both air and fluid: for here the splashing of a fluid could be distinguished, along with metallic tinkling produced by each cough or forced inspiration; through these sounds the normal cardiac sounds could be heard, but very faint, and as it were distant. Posteriorly, over the inferior portion of the same side, distinct frottement and fine crepitus existed. There was also crepitating râle over the base of the right lung, audible as well anteriorly as posteriorly; and under the right mamma, over an extremely limited space, there was once heard what seemed to be cavernous respiration.

The difficulty of forming a diagnosis in this case was extreme; although the symptoms in some particulars resembled those of pneumo-thorax, yet it was judged that this could not be the lesion, because the metallic sounds were not heard posteriorly; nor was there displacement of the heart, as would have occurred with effusion into the left pleura; whilst the cavity of the pleura was known not to be obliterated, as the continuance of frottement testified. Finding crepitating râle present in the lower lobes of both lungs, it was supposed that double pneumonia had existed, which had run into the suppurative stage, and that thus a cavity had resulted in the left lung, sufficiently large to yield the metallic sounds, and accounting for the purulent, fetid character of the expectoration. This conjecture, however, the result proved to be erroneous. The patient rapidly sank, violent delirium set in, and death occurred July 26—the duration of the disease being thirty days. The body, which was but little emaciated, was examined twenty-four hours after death. When the sternum was raised the sac of the pericardium, enormously distended, came immediately into view, completely concealing the left lung; on opening this sac, there were evidences of acute pericarditis having existed: the pericardium contained a great quantity of fluid similar to that which had been expectorated, viz., pus, of thin consistence, and a milky white colour, but inodorous; the serous surfaces were deeply coated with lymph, which was deposited in them in irregularly formed masses. On investigating further, as to the cause of this inflammation, a round, smooth fistulous opening was discovered on the right wall of the pericardium. This opening, which was as large in diameter as a common goose-quill, led through a straight fistulous channel, about an inch in length, into a small tubercular cavity in the right lung, near its anterior thin edge. The bases of both lungs, but especially that of the right, were solidified, or rather splenified, from a twofold cause: first, from the existence of pneumonia; and, secondly, from their being the seat of a deposit of miliary tubercles. No tubercles were detected in the apex of either lung. This morbid deposit was observed in their bases only.

Dr. M'Dowel thought that it was not difficult to conclude what had been the order of occurrence of the morbid changes noticed in this case; he thought it probable, here, that pneumonia, occurring in a strumous habit, gave rise to tuberculous depositions; that a vomica, being then formed near the anterior thin edge of the right lung, produced adhesion between the opposed layers of pleura, and then between the pleura and pericardium, and that a communication, subsequently, was established by the ulcerative process between the cavity in the lung and the sac of the pericardium; hence arose the pericarditis, the purulent secretion from the inflamed serous membrane passing into the cavity in the lung, and giving rise to the copious expectoration observed during life, whilst the escape of air from the pulmonary cavity into the sac of the pericardium, with the fluid then secreted, accounted for the production of the metallic sounds. Dr. M'Dowel remarked that no case similar to this had occurred in the extensive experience of Dr. Stokes, nor was it to be met with in the works of Andral or of Louis. Dr. Graves, in his "Clinical Medicine," has recorded an interesting case where an hepatic abscess opened through the diaphragm into the cavity of the pericardium; but here the physical signs of pericarditis revealed the lesion which had taken place; whereas, in the case which Dr. M'Dowel had submitted to the society, no such signs existed to throw light on the nature of the case.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct from the Office of the Medical Times *to Annual Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town,* One Guinea *IN ADVANCE, which will free them for twelve months. Half-yearly Subscription,* 13s.; *Quarterly,* 6s. 6d.

Communications and letters acknowledged.—*Mr. Noble., Bristol; Dr. Palmer, Birmingham; Mr. Rowbottom, Brighouse; Mr. Spence Manchester; Dr. Alcock, New Ross; Dr. Flynn, Clonmel; Dr. Steed, Southampton; Mr. Hearne, Gloucester; Mr. Earnshaw, Manchester; Mr. Robinson, Bishops Auckland; Mr. Sherwood, Wantage; Mr. Pugh, Coulpert; Dr. Davis, Outerards Dispensary; Dr. Jeffreys, Liverpool.*

A. B.—*The usual fee used to be a* guinea *a mile. In making a charge of only seven shillings a mile, a discount has been allowed as large as the profession would be disposed to sanction. There is no authority to which we can refer* A. B.; *and uries, to whom the matter must be left even by the judges, would decide very arbitrarily and very capriciously.*

A Subscriber.—*As a surgeon, yes; as an apothecary, no.*

Agricola *will find his question answered in the* Pharmaceutical Times.

A Student—*Dr. Knox's lectures will be commenced on an early day, and continued, without stoppage, to the conclusion.*

The case of amaurosis from Liverpool, and some other contributions, are declined.

The letter on the abuses of Guy's Hospital shoud have been authenticated.

Par Vagum's *strictures on the College of Surgeons and their examinations are well deserved, but not new.*

We cannot decide wagers on the probable duration of the Apothecaries' Company.

Dr. Torbock's case of fracture was received.

Anxiety *is mistaken in supposing that we have expressed the opinion that surgeons cannot recover at law for their surgical attendance. There is no doubt they can. They cannot recover for* medical *attendance.*

M. B. H. *is thanked for his obliging communication; but it is on a subject we have no wish to discuss more fully.*

Mr. Chater. *We do not know any gentleman suited to the proposed task.*

Mr. Dutton's *letter on the Birkenhead case throws no new light on the matter.*

We are much obliged by the civil letter of Miles.

Early in the month will be commenced in the *Medical Times*, and continued uninterruptedly, A Course of Lectures on Surgery, by Professor Samuel Cooper, F.R.S., Professor of Surgery in University College, &c., &c.

THE MEDICAL TIMES' PRIZES FOR THE BEST REPORTS OF MEDICAL AND SURGICAL CASES.

The results of our last Prizes have been so far encouraging that we propose for Professional Competition, for the year 1847, the following Prizes:—

Twenty-five Guineas for the twelve best reports of original cases in hospital or dispensary practice.

Ten Guineas for the twelve reports of original cases, as above, second in merit.

Five Guineas for twelve reports of original cases, as above, third in merit.

In offering these prizes we repeat that our aim in this, as in other matters, is to promote the SCIENCE of our Profession. The groundwork of the best part of our *practical* science and of most of our subsequent Professional worth is laid down in our studentship; and the great and the only true teacher of the student must ever be—hospital practice. Lectures and books have their uses; but it is by the bed which holds a human being, with the joy of health or the pain of disease, the chance of life or the peril of death, depending on the aids of science, that we acquire our true knowledge. There is there for the student no listless ear, no dull eye of the lecture-room; it is not the memory alone that is appealed to, or some abstract love of a pedantic and inapplicable lore. Every power of his mind is engaged: he is forced by the sympathies of his nature to hear and see, to observe, to reason, to prognosticate, to be EXPERIENCED: each patient's case is a volume of medical science in its most practical aspect, forced on his acquaintance for life!

The authors must be students who shall not have received any medical diplomas or licenses.

Six of the cases are to be medical, and six surgical.

The cases must have occurred during the year; and the names of the gentlemen under whose treatment they may have principally come must be distinctly mentioned.

Three arbitrators will be appointed—one surgeon, one physician, and one general practitioner—whose names will be duly announced. The decision will be on the 1st of July.

The Prize Reports will be published in succession in the "Medical Times," with the names of their authors.

They are to be sent to the Editor of the "Medical Times" on or before May 1, 1847, accompanied by a certificate from a surgeon or physician to a hospital, declaring that the writer is *bonâ fide* a medical student. A motto or device must be inscribed on each report, to identify the author, whose name, with a duplicate of the motto or device, must be mentioned in a private note, which will be opened when the award shall have been made.

THE MEDICAL TIMES.

SATURDAY, APRIL 3, 1847.

THE LATE INQUEST AT GRANTHAM.

Our account of the inquest at Grantham, given last week, was headed "Fatal Effects of Ether"—a characteristic blunder, for the mistake of the commencement is faithfully continued to the end of the chapter. So disastrous is it to stumble on the threshold.

What are the real facts of Mr. Parkinson's case? and first, what are they as regards the ether?

The ether was judiciously tried before the operation, to ascertain whether it would affect her, and in what way. The first time it made her laugh very much, and, whilst under its influence, she was pinched very severely; and, when she recovered from its influence, she said she felt quite comfortable, and retained all her consciousness of mind, but had no feeling; she was aware she was being pinched, although she said it did not give her pain. The operation lasted about ten minutes, but the influence persisted about two hours and a half, during which time she was hysterical. On the following Monday evening she was again subjected to the vapour, when its influence was much more rapid, and she became quite unconscious in about four or five minutes. She remained so for about a quarter of an hour or twenty minutes, when she became conscious: *the effect of the ether did not cease for about an hour.* On her recovery she said, "She knew all that had passed in the room, though she was apparently unconscious; she could hear, though she could not see." She was not hysterical the second time. In these cases the ether had some effect, although an imperfect one; the patient did not feel pain when pinched, &c. Consciousness was not, however, suspended, although we had insensibility to pain; and no doubt deceased, under both these experiments, was in a state—we will not say fit for the operation, for the after effects were equivocal—but in which she would have had no sensation of pain.

The second phase of this question, and which overturns all the talk about "the fatal effects of ether," must now be stated: *the woman was not under the effects of ether at any time during the operation.* The ether was used, but it had failed. This is the answer to the assertion that she died from it. Mrs. Parkinson was "reduced to a state of unconsciousness," says one witness; and in the next breath it is added—"upon every incision made during the operation she moaned and appeared to feel it, as she struggled and nipped witness's hand." There is no wonder "she felt no pain when the different vessels were being tied up," because that process produces no pain when the ether is not used. This witness, on asking deceased whether she felt any pain during the operation, was answered—"she did when they cut, but not otherwise." To be under the effects of ether, and to be "hurt whenever they cut," and when being "hurt" to "moan, struggle, and nip witness's hand," are, practically, contradictions. Nay, Mr. Shipman, one of the surgeons, gives us his authority that "the deceased felt as much pain as if she had not inhaled the vapour, as she cried out and struggled at each cut." Here was an *effect* of ether! The poor woman was *conscious* during the two days and five hours intervening between the operation and her death: here again the *narcotic* effect of ether! Yet two highly respectable surgeons succeed in overlooking these facts, and tell the public—the responsibility belongs not to us, but the *ether!* Was there some mistake in the use of the ether tube? We have heard much of its fascinations and its oblivious agency. Did the medical men take it by mistake for the patient?

The tumour was malignant and must have become fatal; removed, she had a pretty fair chance of life. The operation, therefore, we justify—and likewise its manner. It seems to have been skilfully performed. Thirty-five minutes may, under some circumstances, be fairly spent by a good operator in the removal of a malignant tumour, for its attachments may prove extensive and intricate, and every particle must be removed, or we do worse than nothing. The malignant tumour of course, however, impaired health: it could not exist in a part "*not likely* to affect the patient's general health." Deceased, therefore, suffered constitutionally during the fifteen months of the existence of the tumour. One of the surgeons admits she was "delicate." She was, in other words, not in the best state for an operation, although that operation was necessary, and, the ether failing, she had to bear the horror of thirty-five minutes' torture. We are prepared, before hand, to say it is a problem, whether the nervous system can bear the shock apart from all influence of ether: the event proved that it could not. She died of the nervous depression resulting from a necessary operation performed with due skill; another proof of a too well-known surgical principle, that people will sometimes die, do what we may. Happy indeed will be the revolution in the healing art, when incisions six inches long, and vivisections of thirty-five minutes' duration, can be performed on a delicate subject without entailing at times the penalty of death!

The exhaustion noticed in this case is rarely felt where the ethereal inhalation is really successful; and there can be no doubt the deceased, so far from dying of ether, would have had a better chance of life had she been insensible, through its influence, to the pain of the operation. As no blood appears to have been lost, this exhaustion must be taken to result chiefly from pain, and in no small degree from mental emotion, especially from fear: a slight illustration of which every one must have had in the imper-

fect nausea and depression produced by any momentary agony. The nervous depression following the operation is spoken to by one of the surgeons, for he "attempted to produce reaction by the exhibition of ammonia and other applications without success." And the *treatment* points to this state in another part of the evidence. "Mr. Robbs desired that she should be kept quite still." This was very proper treatment for nervous depression after an operation, and proves that at the bedside of his patient the medical attendant was equal to his duties. But, at the same time, it was not the treatment for a person dying of the stupor produced by a narcotic.

It seems, too, that during and after the operation, the patient was perfectly sensible; that after the operation "she spoke in a very low tone of voice, and did not appear to rally" from that time. "She did not rally after the operation." Is anybody surprised at that, or dubious that this was the cause of her death? Under ordinary circumstances, the surgeons in attendance would have deemed this fact alone an adequate defence; but here were the poor innocent ether and "the heads of the profession," and it was extremely convenient to turn them to some account. The death of the woman created that sort of public excitement which requires, as in the Hounslow case, that blame should, justly or not, be cast somewhere. The moral courage of the surgeons deserted them. "Here is the ether," say the panic-stricken surgeons. "Much obliged to you, gentlemen," says that worthy *gobemouche*, the public. The many-headed monster likes a marvel, especially if a novelty: it took the explanation and was silent.

SANITARY REFORM.

Although Lord Lincoln assures us that the Sanitary Bill of Lord Morpeth is not more comprehensive nor more perfect than that introduced by himself a session or two since, we yet cannot forbear looking at it with more respect, and connecting with it happier auguries. Lord Morpeth has had the happy distinction of securing, not only the sympathies but the confidence of his countrymen; and, perhaps, there never was a statesman who, with the same freedom from meretricious distinctions, possessed at the same time so largely at once the good wishes and esteem of the public. There is a prestige of success, as of high desert, in the noble lord's enterprises; and, hopeless as we were a few years since of large social legislation, we are fain now to confess that the state of public opinion on the one hand, and the possession of so eminent a parliamentary exponent on the other, dispel despondency, and justify the highest expectations for the future.

We are not among those who would undervalue, either as regards classes or parties, the distribution of *political* power: we will even add, that when national contentions are, in fact, but adroitly disguised encounters of *individuals* for place and patronage, we can still not survey them with indifference; but the great truth still lies untouched, that the public weal of this country has been overlooked and seriously damaged by the ceaselessness and continuity of these interesting and interested struggles. While men have been wasting energies and time in lifting political *athletæ* into an eminence too often used for individual aggrandizement,—while a whole people has been agitated on the question, whether a man of this political designation or that political colour shall have a voice in the Parliament of a nation or the councils of a Sovereign—and all this without any result, direct or indirect, as regards the *material* interests of the excited multitude—evils actual, personal, physical—crushing individually, and weakening nationally—have been allowed to exist unnoticed, uncared for, without one single effort being made for their removal! The sectional interest submerged that of a country; and questions of speculative, abstract political economy gave the go-by to the most obvious teachings of common sense and ordinary prudence.

A change in this state of affairs has now come, and social ameliorations promise, if not to take the absorbing interest which is due to them, to compete at least with less practical discussions for the attention of the Government, the press, and the public.

It would be an interesting question to consider what annually must be the loss, we will not say of health, or life, or comforts, but of that mercantile item, CAPITAL, from the innumerable agencies at work in all our towns and cities, for the destruction of the source of all—industry and labour, and, therefore of wealth—physical vigour. We have only to suppose that of the four or five hundred or more who weekly die, through causes which have no existence but in a bad administrative Government, that one half are skilled mechanics, to see that the annual loss thus arising to a country would, if allowed to accumulate for centuries, be equivalent to the riches of many a continental nation. Calculated individually, either in reference to the expenses incurred in producing one man's skilled labour, or to the results which his industry and ability would generate in the course of a few years, the amount cannot even in a single instance but be rated considerable. In that individual's position let us suppose ten thousand, and what a vast loss have we of those results which aggregately make up national wealth! But it is not the destruction of life that alone entails these losses; that impairment of health which precedes death is almost as fatal to the fruition of the artificer's capabilities. Thus, then, we put it: the immense extent of sickness engendered by malarious agencies is a large loss in a country's means; the numerous deaths which not only diminish, but cut off altogether, so much useful labour, are still more destructive of national well-being. And if, taking into account the nature of those agencies—as confined workshops, unhealthy employments—we admit that they powerfully affect the most useful, the most wealth-making, the most skilful of this country's labourers, what further reflections must arise to us when, viewing them in their family relations, we think of the thousands thrown into destitution and dependence by that impairment of health and that loss of life! If we could analyze the facts of misery, wretchedness, and pauperism, how many of them might be traced home to those malarious influences which for so many years have been privileged as though they were vested rights, and legislated for as recognised and well-sanctioned calamities! Thus, on one side, the means of wealth are swept out of the country, as though they were its curse and affliction; on the other hand, pauperism and disease are legislated for, created, and extended, as though they were a blessing. And while this curse-making, calamity-breeding system is dominant over a whole country, the population, decimated by its influence, may be seen shouting for a party colour, or fighting for a factious by-word!

THE COLLEGE OF SURGEONS AND ITS FELLOWS.

We have another of the absurd acts of this misguided body to add to the multitude which has made it the most unpopular corporation in the kingdom. It appears that the Council, wishing to erect some collegiate monument to Hunter, and not venturing to proceed on their own authority, invited a select vestry of fellows—and with them entered on the important deliberation. The country fellows were of course omitted in the invitations: so were also many of the town fellows: the whole body of members were, of course, totally neglected. Great dissatisfaction has arisen; and the fellows have been taught to feel that, however proud of their *imperium*, there is in it another *imperium* which practically supersedes their corporate consequence.

INQUESTS ON MEDICAL MEN'S SKILL.

So many correspondents have addressed us on the inquest held on Sir Wm. Curtis, by the West Middlesex Coroner, that we are reluctantly obliged again to drag (to us) an odious topic under professional consideration. No extent of care, no amount of reluctance, can protect us from this inconvenience—not to say nuisance—in the discharge of our editorial functions. We must note, and noting cannot praise. The friends of Sir Wm. Curtis, on his attack by apoplexy, send for his medical attendant, Mr. Freeman; other medical men might not have been at home, most probably would have less understood the case of the patient: yet the friends are lectured in open court for sending to the surgeon who knew the case, and was at home alike ready and capable promptly to render assistance. They should have sent, forsooth, to the nearest medical man, without reference to the fact whether that nearest medical man might be at home, might understand the case, or would venture on the responsibility of its treatment.

Mr. Freeman, a most respectable practitioner, is not only promptly on the spot, but immediately resorts to efficient treatment; he does all which, on his responsibility as the patient's medical adviser, he feels it right and prudent to do. What does the coroner? He establishes

himself as the inquisitor into the surgeon's practice, and, finding by his questions that Mr. Freeman bled his patient, held up his hands before an open court, and the reporters who were to convey his censures to the world, at the alarming ignorance and dreadful mal-practice of this most respectable and accomplished surgeon.

Nay, the coroner went further: he favoured Mr. Freeman and the jury—and through them the public—with a valuable lecture on the superiority of cupping. Why Mr. Freeman had not a cupping-glass with him, and did not employ it himself forthwith, were to the worthy coroner matters of scientific wonder and magisterial reproach. In fact, if the medical orthodoxy of the coroner were beyond dispute, the jury might reasonably doubt whether bad practice or apoplexy killed the unfortunate baronet. And this is the way in which medical men have their practices criticised, and themselves held up to public obloquy and distrust, by a medical coroner of their own election! Were they *more* humble or *more* spiritless than we witness them on occasions, when Public Virtue makes her sure appeal to them, we should fancy they deserved the treatment they obtain. As it is, we must acknowledge that they get even more than they pay for! But, if we say more—we shall pay for more than we get!

MISCELLANEOUS CORRESPONDENCE.

THE ANNUITY FUND.

[To the Editor of the Medical Times.]

SIR,—The noble cause which Mr. Daniell, of Newport-Pagnel, has lately advocated in your journal (a) with so much zeal and eloquence, has long occupied my mind, and excited in it the deepest interest. Four years ago, I wrote respecting it to the editor of a leading medical journal. My reiterated applications were treated with an apathy and neglect, most assuredly unmerited by the cause, however they might be justified, in the editor's opinion, by the impotence and obscurity of its advocate.

In the commencement of the present year, utterly ignorant of the labours of Mr. Daniell in the great and good cause, to the advocacy of which it is devoted, I wrote the following letter. Severe indisposition has alone prevented its earlier appearance in your columns, on all occasions so liberally thrown open to those who labour, like myself, for the promotion of the honour and the interests of our profession. Although my embryo plan will now, probably, merge in the more mature and, in some respects, more comprehensive project of Mr. Daniell, I have decided on the publication of my letter in its original form, accompanied by this necessary explanation, especially as, with the same objects in view, it develops a plan somewhat differing in detail from that proposed by the Newport philanthropist.

With many thanks for the kindness and the courtesy which I have invariably experienced from you, I beg leave to subscribe myself, most obediently yours,

SHIRLEY PALMER.

Friday, March 26.

LETTERS TO THE MEDICAL PROFESSION OF THE UNITED KINGDOM.

LETTER I.

GENTLEMEN,—In commencing my address to you, I shall state three propositions; which few, I calculate, will be hardy enough to controvert.

A body of men better educated, more lofty-minded and enlightened, more benevolent, zealous, and useful, than the regularly-educated physicians, surgeons, and general practitioners of medicine in this country, society contains not within its bosom. In all these great and estimable qualities of intellect and character, they yield not a tittle to the members of the other learned professions. Let their noble and disinterested conduct, on the introduction of vaccine inoculation by the immortal Jenner, be contrasted with the selfish clamours raised by gentlemen of the law, against the late beneficent institution of county-courts for the recovery of debts; and the professors of our philanthropic art will suffer nothing from the comparison.

For the inestimable services rendered by them to society—for the labour, hardships, and privations, which they incur in the discharge of their important, harassing, and frequently perilous duties—no class of men is, in general, so miserably and inadequately remunerated as the class of medical practitioners.

When, as frequently happens, both in town and country practice, the income of the physician, or surgeon-apothecary, does not reach, or exceed, £500, and he possess no private source of emolument, it is utterly impossible that, in the sad event of his early separation from them by death, he can, even with the most rigorous economy, make a suitable provision for a wife and family. He is expected to sustain, both at home and abroad, the character and appearances of a gentleman; and it too often happens, especially in country-practice, that his time and energies are so exclusively absorbed by the acquirement of his moderate income, as to allow not of his paying the necessary attention to the details of its expenditure. Hence, when stricken by the hand of death, the medical practitioner too often leaves his worldly circumstances in a state of perplexing embarrassment, if not of utter and irretrievable insolvency. Many times, has it been my painful lot, within the last forty years, to see the dying moments of a generous and noble-minded fellow, who had sacrificed health and life to the service of those around him, embittered by the agonizing thought that the wife of his bosom, and a beloved and helpless family, would be left to the pity and neglect of a cold and calculating world.

For the widows and orphans of our clergy, many noble institutions have been provided. Of these, the fair edifice, raised by the munificent hand of the late Mr. Newton, in the city of Lichfield, affords a gratifying example. The "Ravens of the Law" line their nests too craftily, during even a short life, to require for their bereaved families any such forethought or provision. But, for the heart-broken widow and destitute children of the zealous and benevolent medical practitioner, cut off by accident or infectious disease, or worn down by incessant anxiety and toil, in the meridian of life, no such institution—no such haven of refuge yet exists.

There are, indeed, "medical benevolent societies" established in the metropolis, and in divers provincial districts of the kingdom, which proffer an allowance of some £50 a year to the widow of every medical man who, during a certain period, has regularly paid up his annual contribution to the general fund. But what will avail this paltry pittance for the maintenance of a lady who has frequently been bred up, not merely with the comforts, but with all the elegancies, of polished life around her; especially if she be left with a family of helpless children to provide for? Nothing short of a fund which shall supply an annual allowance of £120, or make up that sum if she possess a smaller income, to the widow of a contributor, and of £45, each, to one or two of his children, until he, she, or they shall be capable of self-support, or shall have attained a certain age, will remedy the evil of which I complain, and which every feeling mind must deplore. There are, at present, in the European dominions of the British Sovereign about 18,000 regularly-educated practitioners of medicine. If only one-third or two-fifths of this great body could be induced to subscribe from two to four guineas annually, what a noble fund would at once be raised for the most beneficent of all beneficent purposes! And I am not without hope that the childless and more opulent members of our own profession, might occasionally erect a monument, as splendid as imperishable, to their own memory; and the wealthy of other classes, who may have been rescued from suffering or death by the invaluable attentions and resources of our beneficent art, sometimes acknowledge services which no gold can remunerate, by pecuniary contribution or bequest to our widows' and orphans' fund.

There are few medical gentlemen in circumstances so needy and depressed that they will be unable to pay an annual contribution of from two to four guineas for such purposes. And with what ineffable feelings of peace and self-respect will the harassed practitioner lay down his head, at night, upon his pillow, when reflecting that, by the sacrifice of one convivial party, or self-denial in the indulgences of the table, to the amount *of one or two dozens of wine*, annually, he has been enabled to make a comfortable provision for his family, in the event of his own death.

I am about to embark in a literary enterprise, from which, considering the high practical value of its objects, some emolument may be reasonably anticipated. Such emolument, whatever it be, with the leisure and energies of the remnant of my life, I will zealously devote to the promotion of the great—I had almost said the holy—cause which I have here so earnestly, however feebly, advocated. Success in such a cause will constitute a proud and grateful recompense for the many difficulties through which I have been doomed to pass; for the cold neglect, the bitter calumnies and scorn, with which my professional services, character, and acquirements, by them who know me not, have too frequently been requited and assailed. And sweet will be the reflection that, whatever be the result of this earnest appeal to the highest feelings and interests of our noble but neglected profession, the voice of the widow and of the orphan will cheer me onward in my arduous path, and invoke the blessing of Almighty God upon my projected labours.

I have the honour to remain,
Gentlemen, your friend and fellow-labourer,
SHIRLEY PALMER, M.D.

Birmingham, Thursday, Feb. 18.

(a) Of this project a prospectus was very partially published last summer. A more detailed exposition of it will, ere long, be widely disseminated among the members of the profession.

CORONERS AND MEDICAL MEN.

[To the Editor of the Medical Times.]

Grantham, March 3.

SIR,—I take the liberty of addressing a few lines to you, relative to what ought to be the proper course for a coroner to pursue, as regards requiring, or dispensing with, the attendance of a medical man at an inquest, more particularly when a person has died from the effects of an accident, and a medical man has been in attendance upon him between the receipt of the injury and his death. The coroners here are frequently in the habit of dispensing with the medical evidence, it is said, to save the expense of the fee; and, as I am doubtful in my mind of the legality of such proceedings, I wish to know your opinion. My motive is not to obtain the fee, but, if my opinion is correct, to take proper measures that the law shall be obeyed, the more particularly as several jurors have remarked strongly upon the omissions I allude to. I will just relate two cases in point, upon which I hope you will be kind enough to give your opinion, and any other remarks you may think necessary.

1. A man, in a state of intoxication, fell into a copper of boiling wort, and was much scalded about the arms and chest, and a little on the head; I was called in, and saw him a few minutes after the accident. To be short

with the case, the man died the third day, from nervous exhaustion, and I was in attendance upon him up to the time of his decease. An inquest was held upon him the next day, and I received a note from the coroner, stating that my presence would not be required, as he was in the habit of dispensing with the medical evidence in such cases; at the inquest remarks upon my absence were made by several of the jurors, but I was not sent for.

2. A man was knocked down by a beast, which was being driven into the town to be slaughtered; I saw him about twenty minutes after the accident: he was then insensible, and had strongly marked symptoms of concussion, which quickly ran on into those of compression, and went on from bad to worse. The man eventually died about eighty hours after the accident; no fracture of the skull or depression could be detected, and it was doubtful whether the case was one of laceration of the brain, or fracture of the base of the skull. Unfortunately he had been four years blind of the eye on the opposite side to that on which he received the blow, so nothing could be gleaned from it, and the pupil of the other eye was very slightly dilated, but acted sluggishly upon the stimulus of light, until a very short time before his death. The friends would not allow his head to be examined. An inquest was held, and the jury were occupied more than three hours in the investigation; and remarks were again made by some of the jurors relative to my absence; but I was not sent for, nor did I receive any intimation from the coroner (not the same as in the previous instance), to say whether my attendance would be required or not. My own opinion is that the omission, in such cases, of the medical evidence, is, to say the least of it, incorrect, if not illegal; and I wish to know whether the coroner is empowered to dispense with it. If you think the matter of sufficient importance, I should feel obliged by your inserting this and your answer in your next number, as similar circumstances may have occurred elsewhere; or answer it as you may think fit.

Whilst my pen is in my hand, I may as well take the opportunity of expressing my pleasure at the result of Wakley's attempt to obtain a rule against you, and my approbation of the line of conduct pursued by you relative to the Hounslow case, and to say that I shall have great pleasure in adding my mite to any subscription that may be set on foot, as proposed by "Fiat Justitia," in your number of the 20th ult. To conclude, allow me to subscribe myself,

Yours, obediently,

A Subscriber and Wellwisher.

[We have reasons for reserving our opinions on this letter for a week or two. It is open to the remarks of any of our correspondents.—Ed.]

THE EDINBURGH INFIRMARY AGAIN!

[To the Editor of the Medical Times.]

Sir,—In your last week's "Notices to Correspondents," you remark that "A Medical Student's defence of the Edinburgh Infirmary forgets its object in wordy abuse of Dr. Thompson." And you add—"Either no defence was necessary, or our correspondent has wholly failed in his design." From this it would appear that Dr. Thompson's wholesale denunciation of the infirmary students—so *miscalled*, as he terms it—has awakened the ire of one of the neophites of the profession. This was scarcely to be wondered at, considering the very libellous nature of the charge, which confounded the implied mismanagement of the hospital with the students—the active and the diligent, the lazy and the loitering, being all put in the same category! Was not this, on Dr. Thompson's part, "forgetting the object," in something not far from being akin to "wordy abuse"? Let this, however, be as it may, did Dr. Thompson's letter really require an answer? Did it not, in truth, really answer itself? To me the letter appeared, to borrow a simile from the late Mr. John Bell, of Edinburgh, "a mere explosion, which, like that of an unskilful engineer, instead of scattering the enemy, or overturning their strong towers, blows his own ranks into the air! And I do love (adds Mr. Bell) to see the engineer hoist with his own petard." Has not, in reality, Dr. Thompson, set up a man of straw, for the mere purpose of showing how he can, by pointless vittuperation, demolish him?

Dr. Thompson denounces all connection (unless I very much misunderstand him) betwixt an hospital and a medical school. And are we, in the middle of the nineteenth century, to be told that all clinical instruction, as conjoined with hospital practice, shall henceforth cease, from some apprehension, real or imaginary—though the latter would appear to be its true nature—of evils never before heard of to the patients in our various humane establishments for the cure or relief of disease? That these evils are *imaginary* seems beyond a doubt, so far at least as applies to the Edinburgh Infirmary: for, notwithstanding all the vituperations that have been unscrupulously indulged in since the famous *docquetting* affair came above board in March, 1844, the reader will be astonished to learn that, neither before that period, nor since, has a *single instance or charge of neglect* been brought forward against physician or surgeon of the Edinburgh Hospital. To what, then, do Dr. Thompson's implied charges amount? or, in fact, do they contain anything farther than that the *sic volo, sic jubeo* (as we hinted at in a former letter), of managers *annually elected*, ought, without reasons assigned, to be held as the whole rule of conduct and direction to hospital surgeons and physicians? If so, Dr. Thompson has strange opinions of what is due to the members of a liberal and, as we have been accustomed to consider it, independent profession.

Away, then, with such spurious humanity, as, while it would reduce our best hospital surgeons and physicians to the condition of mere ciphers, would deprive the public of one of those very means that can alone ensure either able surgeons or good physicians. So thought not the biographer of our venerable Pott—for half a century, or "man and boy," as he termed it, surgeon to St. Bartholomew's. "The beneficial influence of hospitals is not shut up within their walls, nor confined to the objects who are there relieved; the blessings which are there distributed revert to their opulent and noble supporters, and are extended to all ranks and conditions of men, by the improvements which the medical art receives from the students who frequent them." And, Mr. Editor, as regards Dr. Thompson's more than implied charge of inutility—to say nothing of the inhumanity—of the clinical teaching and practice of the Edinburgh Infirmary, do not the lectures of a Fergusson and a Wright, which adorn your useful pages, afford ample refutation—seeing that both these gentlemen were pupils in that institution?

As regards some other points contained in Dr. Thompson's letter, it is not my intention to enter, seeing they are more of a personal than general nature. One thing, however, seems clear, that, till a specific charge is made and supported by something like tangible testimony, it would conduce more to the interests and honour of the profession, altogether to avoid troubling the public with matters tending to inspire anything but confidence in the afflicted sufferers, whose rank and situation compel them to have recourse for relief to our public medical institutions.

An Old Infirmary Pupil.

Banks of Lochleven, March 22.

AGENT FOR RESUSCITATING PATIENTS AFTER INHALING THE VAPOUR OF ETHER.

[To the Editor of the Medical Times.]

Sir,—For the last week, I have been, using as an agent for resuscitating patients after inhaling the vapour of ether, pure oxygen gas, with the most perfect success. To-day I operated in nine cases on the teeth; to each patient I administered a full dose of the vapour of ether; and subsequently a few inhalations of oxygen. In not one case did the patient complain of debility, &c., but recovered perfectly in less than a minute and a half, timed by the medical men present.

I will, by your permission, furnish, in a future number of your journal, the details of these and other experiments with oxygen.

I remain, Sir, your obedient servant,

F. Robinson.

7, Gower-street, Bedford-square, March 29.

HOUSE OF COMMONS—Tuesday.

HEALTH OF TOWNS.

Lord Morpeth, pursuant to notice, moved for leave to bring in a bill for improving the health of towns. He said, that though he felt the matter which it would be his duty to bring under their notice was one of very great importance, yet, not to mention his knowledge of the fact that some part of that evening had been occupied with other business, he wished, on different grounds, to avoid all unnecessary prelude or preface. The subject of public health was a matter which had occupied lately a great deal of attention; but, within most of their memories, the time had been when very little, if any, regard was paid to it. Now, however, the general sentiment seemed to be, that it was one which ought to occupy very seriously the thoughts of Governments and Parliaments; and the great body of the people were of that opinion, and very much busied their minds with its principles and details. He should, in the first place, proceed to mention the several stages through which the question might be said to have passed, and the inquiries to which it gave rise, and, with the permission of the House, he should now proceed to lay before them the following statement of the various steps taken in this inquiry:—

"1838. May 12.—Report made to the poor-law commissioners by Dr. Arnott and Dr. Kay on the prevalence of certain physical causes of disease, which might be removed by proper sanitary measures. A similar report by Dr. Southwood Smith, exemplified in the present condition of the Bethnal-green and Whitechapel districts, as ascertained by a personal inspection.

"1839. April 29.—Report on the prevalence of fever in twenty metropolitan unions by Dr. Southwood Smith. 5th Report of Poor-law Commissioners, Appendix C, No. 2.

"August 19.—Address to the Queen by the House of Lords for an inquiry and report similar to the above thoughout England and Wales.

"August 21.—Letter from Lord John Russell to the poor-law commissioners, desiring them to cause such an inquiry to be made.

"1840. Jan. 28.—Letter from the Marquis of Normanby, desiring them to extend the inquiry to Scotland.

"1842. July 9.—Letter from the poor-law commissioners, transmitting to Sir J. Graham the report made to them by Mr. Chadwick on the sanitary condition of the labouring population of Great Britain."

In 1843 a commission was issued by Sir R. Peel's Government to inquire into the same subject. In 1844 they made their first report; and in July, 1845, a bill was brought in by the Earl of Lincoln to provide for the sewerage and drainage of towns, which was ordered by that House to be printed. Thus, it would be seen that all political parties had contributed alike to the progress of this measure, and that, if any effectual measure on the subject were ultimately carried, the praise of having done so could not be monopolized by any one party in the state, but must be divided among several successive Governments, and among different parties—(Cheers). He (Lord Morpeth) would endeavour to place before the House the main facts on which the proposed measure would be founded—the results that had been developed in the progress of these inquiries, whether official, parliamentary, or sta-

tistical. He preferred now to give the leading facts and results rather than a mass of particular instances, which details he would reserve for a future period; and, in acquitting himself of this part of his task, he felt it was quite unnecessary for him to disclaim any pretension of using original matter, or even of giving to the matter he should use any novelty of form. The main strength of his case lay in the fact that the evils which had led to the introduction of the measure which he was now about to propose were so generally felt and so loudly complained of. Several persons of great accomplishments and ardent benevolence, both in and out of the House, had taken great pains, in a way that did them infinite credit, to inform and excite the public mind on the subject, and if he now, mainly by the accident of his position, found himself at the eleventh hour bringing forward a measure to accomplish their objects, he begged to proclaim that he was doing so because he had been a gleaner from their stores, and had been able to avail himself of their previous efforts. The difficulties of the case were too numerous, and the opposing interests that might be alarmed by the interference of the Legislature were too formidable, to allow him (Lord Morpeth) to dispense with any assistance he could bring to his aid, from the labours of those who had preceded him, in putting his case before the House and the public, which he would do as briefly as he could, consistent with the necessity for making a fair and honest statement. Before stating the nature of the measure he would first lay the foundation by stating the facts on which it was a superstructure: From a statement drawn up by Dr. Guy, physician to King's College Hospital, from the reports of the registrar-general, it appeared that the relative mortality in the town and country districts was as follows:- Population to the square mile, country, 199; town, 5,100. Annual deaths in 1,000,000, country, 19,300; town, 27,073; annual excess in town districts, 7,773. Rate of mortality, country, 1 in 52; town, 1 in 37. He also supplied further particulars as to the rate of mortality generally:—England, 1 in 45; Isle of Wight, 1 in 58; Anglesea, 1 in 62; London, 1 in 39; Leeds and Birmingham, 1 in 37; Sheffield, 1 in 33; Bristol, 1 in 32; Manchester (union), 1 in 30; Liverpool (parish), 1 in 29. Thus the inhabitants of London, compared with England at large, lost 8 years of their lives; of Liverpool, 19. The population of large towns in England being 4,000,000, the annual loss was between 31,000 and 32,000. But all towns were not necessarily so unhealthy, as appeared by the following statement:—Liverpool, deaths per 1,000, 35; Manchester, 32; Bath, Coventry, Derby, Dudley, Shrewsbury, and Sunderland, 26; Carlisle and Norwich, 25; Tynemouth, 23; Halifax and Kidderminster, 21. Lord Ebrington, in his inquiries on the effect of high wages and good food, said:—"That of the south-western district, which includes Cornwall, Devon, Somerset, Dorset, and Wilts, is only 1 in 52, not 2 per cent., while that of the north-western, including Cheshire and Lancashire, is 1 in 37. Now, let it not be said that this is owing to extreme poverty and want of the necessaries of life; the condition of the labourers of the west, the badness of their dwellings, the lowness of their wages, the consequent scantiness of their food and clothing, have been the subject of public animadversion. With the exception of the Cornish miners, the condition of the labourers throughout the western counties is described as nearly the same; yet in Wiltshire, the county of lowest wages, the deaths are 1 in 49; in Lancashire, 1 in 36. The average age at death in 1841 was, in Wiltshire, 36 years; in Lancashire, 22; at Liverpool, 17; that of the labourers in Wiltshire, 33; operatives in Liverpool, 15. At Manchester, in 1836, the average consumption per head of the population was 105 lb. of butcher's meat, about 2 lb. a week, exclusive of bacon, pork, fish, and poultry (what a different average would our county produce!); the average age at death was 20. The proportion of paupers in the 15 principal agricultural counties is 1 in 8; in the 12 principal manufacturing counties, 1 in 13; in Lancashire, 1 in 11; and of the deaths in 3,500,000 of town, and about an equal number of country, population were, respectively, in 1838 and 1839 together—country, 1 in 54.91, of whom above 70, 20 per cent.; town, 1 in 38.16, of whom above 70, 9 per cent.; all England, 1 in 46.00, of whom above 70, 14 per cent." The following was Dr. Guy's statement of diseases which occasioned the excessive mortality of large towns:—Deaths in 1,000,000 from smallpox, country, 500; town, above 1,000; from measles, country, 350; town, 900; scarlet fever, country, 600; town, 1,000; typhus, country, 1,000; town, 1,250; epidemic and contagious disorders together, country, 3,400; town, 6,000. Waste of life in towns under this head, 2,600 a year. Diseases of infants.—Teething, convulsions, water in the head, country, 1,300; town, 3,500. Waste of infant life under this head, 2,200 a year. Scrofulous diseases and consumptions, country, 3,800; town, 4,600. Total excess of deaths, 5,500 in the million. So that there was a waste of 22,000 lives in the 4,000,000 inhabiting large towns. Dr. Guy also said, that "The total number of deaths in England and Wales during the year 1841 was 343,847, or somewhat less than 1,000 a day. Now, this is at the rate of one death in 46 inhabitants. But if instead of one death in 46 inhabitants there had been one death in 50 inhabitants, or two per cent., no less than 25,107 lives would have been saved. Now, all men who have paid any attention to this subject agree in the opinion that, by proper sanitary measures, it is possible to ensure such a state of health among the community at large that the mortality shall not exceed that proportion. If the sanitary state of the entire country could be raised to the condition of the most healthy counties, so that instead of one death in 46 inhabitants there should be only one death in 54, we should have an annual saving of no less than 49,319 lives, or about one seventh of the whole number of deaths! At first sight it may appear extravagant to represent such an improvement of our sanitary condition as possible; but when it is recollected that, on the one hand, even our most agricultural counties have not yet attained to their best sanitary state, and that our large towns have been hitherto almost entirely neglected, and admit of immense improvement, the attainment for the whole country of a sanitary condition represented by one death in 54 inhabitants is at least within the bounds of possibility." Dr. Southwood Smith said:—"In some localities there was not a single house in which fever had not prevailed, and in some cases not a single room in a single house in which there had not been fever. The districts in which fever prevails are as familiar to the physicians of the Fever Hospital as their own names." Further still, Dr. Lyon Playfair calculates that for every unnecessary death there are 28 cases of unnecessary sickness; consequently, in our large towns, above 700,000 cases of unnecessary sickness. The same calculation in the metropolis would save 10,000 deaths, and 250,000 cases of unnecessary sickness. But were all parts of our large towns equally unhealthy? In one of the reports of the registrar-general it was stated that the metropolis is divided into three groups of ten districts each, under the title of the healthiest, the medium, and the most unhealthy districts. The result was as follows:—10 healthiest, with an allowance of 202 square yards to each person, have a mortality of 1 in 49; 10 medium, with an allowance of 102 square yards to each person, leaves a mortality of 1 in 41; 10 unhealthiest, with an allowance of 32 square yards to each person, leaves a mortality of 1 in 36. The Rev. Mr. Clay, of Preston, makes four classes of streets:- Well conditioned, mortality among children under 1 year, 15 in 100; moderately, 21 in 100; ill, 30 in 100; worst, 44 in 100, or three times as much as the first; and it appeared, from tables prepared by Mr. Chadwick, that in St. George's, Hanover-square, the average age at which the gentry die is 45; labourers, 27; St. Giles's and St. George's, Bloomsbury—gentry, 40; Liverpool working class, 17. Now, the documents of most authority on this subject were the quarterly returns of the health and mortality made up from 115 districts of England by the registrar-general for the quarter ending June 30, 1846. From this report it appeared that 43,582 deaths were registered in the spring quarter ending June 30—a number greater by 2,853 than were registered in the corresponding quarter of 1845, and 4,731 more than in the June quarter of 1844. If the mortality had not been higher in the towns than in the poor country districts, where the air is pure, the deaths in the quarter would not have exceeded 33,000. Within the last three months 10,000 lives have been destroyed in a part only of England by causes which there was every reason to believe might be removed. The report went on to say that "the inadequate supplies of wat[illegible] companies, the imperfect sewerage in t[illegible]s, the open drains and ditches, and the general neglect of cleanliness, leave everywhere large quantities of organic matter to decay and putrefy in the midst of crowded populations. In such circumstances the mortality, like putrefaction, is always increased when the temperature is high, and epidemics of diarrhœa, dysentery, and cholera prevail. He had felt himself constrained by the necessity of his position to trouble them with these proofs, this enumeration of existing evils, before proceeding, as he now would do, to mention the main provisions of the measure the Government proposed to introduce, in the hope of remedying those evils which could be remedied, and of mitigating those which could not. In such a state of things as that which he believed he had proved to exist, he took it that it would at once be admitted the state had a right to interfere. He knew there were many, for whom he entertained a high respect, though he did not agree in their opinions in this instance, who thought that the state had no right to interfere in education as to what concerned the domain of mind; but, in cases that were essentially physical and material in their nature, which concerned causes that affected the health of large masses of the population, and the happiness of persons in towns and cities, and which could not be removed except by some powerful intervening central authority—in such cases, he thought it would be a waste of words to prove that it was at once the right and duty of the state to interfere. Then the next question to be asked was through what agency should the state exercise that degree of interference, that superintending power, which he thought it would be admitted ought to be assigned to it? Lord Lincoln's bill, on which he did hope to found the greater part of the proposition he had the honour to submit, made use for this agency of the Secretary for the Home Department, with occasional assistance from the Privy Council. The committee of the Metropolitan Health of Towns Association, however, published a very full and able report on the provisions of that bill, of which a considerable portion was occupied by remonstrances against that use being made of the Secretary of State, on the ground of his time being already more than engrossed by the onerous and multifarious duties of his own department. They reported that, besides the general superintendence of the large internal affairs of England, Scotland, and Ireland, he had, also, the ultimate superintendence of the police, of prison discipline, and of the poor-law, in the United Kingdom. These statements were tantamount to proof that the Home Secretary could not properly be burdened with this addition to his duties, and her Majesty's Government felt that, whoever might be the person who filled that high department, whether he had the aptitude for business of its late occupant, or that of his right hon. friend who now filled it, it was not wise to that accumulation of business in that office to add the new and busy calls of an extensive and laborious duty. The same reasons, it was considered, would apply to any department which had a large amount of business of its own

Some persons, however, had suggested the committee of the Privy Council as a fit body, but that committee did not happen at this moment to stand in very great esteem with all classes of this country; and her Majesty's Government thought, also, that for duties that were required to be always in operation such a body were not adapted to the uniform discharge of them, especially if the members of the Government of the day were not also members of that committee. It was, therefore, thought that the business in hand was important and copious enough—(hear)—together with the functions which would be attached thereto, to justify the constitution of a special board for the purpose, framed on the same footing as the Railway Board of last session. It would consist of five members, three of whom would be paid members, one a member of the Government, who would not be a paid member, and the other the First Commissioner of Woods and Forests, who would be *ex officio* chairman of the board. This board, which would be called the Board of Health and Public Works, would be empowered, either on the petition of any town or without such petition, to direct an inquiry to be made into the sanitary condition of such town or district. They would be empowered to appoint inspectors or recommend them to the town in question, who would go down to the district and institute the necessary inquiries; they would make a sufficient and adequate survey, point out the direction of rivers, streams, and water-courses, suitable for assisting in the drainage, and define the proper area of any works to be carried on. The board, if necessary, would consider the reports of these inspectors, and the objections made to them; and they would then recommend that an order in council should issue, conferring the necessary powers upon some local administrative body. The questions which then arose were, what ought to be those powers, and how ought the local administration to be constituted? The Government might have taken the old and constitutional mode of appointing commissioners of sewers and drainage, which was as old as the time of Henry VIII., namely, by nomination direct from the Crown. But, as the powers ordinarily exercised by commissioners of sewers did not provide sufficiently for the construction of house drains in connection with main sewers, or a sufficient supply of water, and as the cardinal point upon which all the recommendations, inquiries, and representations turned was, that it was absolutely necessary that the powers of sewerage, drainage, paving, and cleansing the streets, and the supply of water, should be placed under the same control and jurisdiction, the Government proposed to give all the powers which he now enumerated to the body which would be appointed to carry out on the spot the necessary functions entrusted to them. But what would be that body? It had not been found necessary to embody all their functions in the present bill, because many of them had been included in bills brought in during the present session, some of which had passed that House, and which combined the powers heretofore held by conflicting local administrations. The bill of the noble lord (the Earl of Lincoln) provided for the election of a newly-elected body; and the greater portion of that bill was taken up by clauses which regulated the boundaries of electoral districts, divided wards for the purposes of elections, defined the manner of voting, and instituted a new and complete electoral system. The present Government thought, on the other hand, that there was quite enough of elections going on in the country, and that what with the elections of town councils and poor-law guardians it was hardly desirable to engraft an entirely new electoral system for the creation of a body analogous to the town councils in many respects. They considered that these bodies would be composed of very much the same sort of persons in most towns as these in town councils; that they would be elected, to a considerable extent, by the same constituency; that their attention would be directed to very similar purposes; and there was good reason to apprehend that jealousies would arise between two zealous, counteracting, and mutually repellent bodies. It had been suggested by some persons that these bodies should be appointed by the Crown, but a still more hostile and embittered feeling might be created between a body so constituted and the town council. Many persons had felt that it was both inconvenient and unnecessary to have the distinct superintendence of two sets of persons for municipal and sanitary purposes; and it would be acknowledged by those who had given their attention to the subject, in how few hands the practical philanthropy and active intelligence of a district were ordinarily found. This was the basis upon which the Government proposed that the various powers and functions heretofore exercised by these two distinct bodies should be consolidated, and conferred upon that body which was already elected by the inhabitants at large for the good government of their respective communities. Were not these, indeed, the very powers which seemed to be the appropriate object of municipal corporations and town councils? When the Municipal Corporation Act was passed the Legislature did not transfer to the new town councils the powers exercised by the trustees under the local acts. It was perhaps as well that Parliament had not done so. It appeared probable that the town councils would very much engage in party contests, and that any novel powers of this kind that might be given to them would be turned to political purposes. He would admit that the first elections under the Municipal Act did very much incline to one political side, but this could hardly be wondered at when it was considered that the electors were enjoying a new power, and that they had long laboured under a sense of exclusion from municipal power. Subsequent elections, by a very natural reaction, had perhaps given a bias on the contrary side. However this might be, it was clear that the intensity of political excitement had greatly subsided in these bodies, and although they were not wholly free from objections on this ground, yet there was good reason to believe that many more important and useful functions might be given to these bodies now and then when they were more divided by party demarcations—(hear, hear)—and that the effect of so doing would be to tempt valuable and useful men to offer their services. The only difficulty was in the annexation to existing wards of bits of suburbs and offshoots of land suitable for the area of drainage which were not at present included in the municipal boundaries. But the present bill proposed to take these bits of land, and either annex them to the wards contiguous, or make new wards of them when necessary. He was confirmed in the views he had just expressed by the Manchester Health of Towns Association, who made it one of their objections to Lord Lincoln's bill that it created a new electoral body, and who argued that the powers it conferred would be most fitly exercised by the town councils. In some districts tracts of country might be necessary to secure an outfal for the drainage of the district, and the bill gave the necessary powers to carry out this object. In towns which possessed corporations the Government proposed to make use of the existing town councils to carry out the act; but there were places of large size which had no town councils, and which were yet in great want of improvement—such as Brighton and other large towns. They might, in such cases, adhere to the old practice of nominating commissioners of sewers by the Crown, leaving the inhabitants to apply for a charter of incorporation if they thought proper. But they thought it better to give a popular election to the inhabitants of those towns which did not apply for a charter of incorporation. He proposed, accordingly, that the commissioners in these towns should be elected by the ratepayers, and that the Crown, on the recommendation of the Board of Health and Public Works, should nominate as adjuncts a number not exceeding one third of those appointed by popular election. This was in unincorporated districts. But, did the present act provide for the whole kingdom? It did not refer to Ireland and Scotland. He admitted that the evils which the present bill was intended to remedy were still more crying in those two portions of the kingdom, but he knew from experience that it was to the last degree complicated and perplexing, unless in some very general measure, to deal with all three countries in the same parchment. He hoped that his right hon. friends connected more especially with Ireland and Scotland would give their best attention to the construction and to the working of this bill, and that they would afterwards, furnished with the facts of the experience of England, adapt the present bill to those countries in the way they might think most expedient. The metropolis had been excluded from the operation of Lord Lincoln's bill, but it was proposed to include it in the present bill, and he did not see why it should be excluded from the operation of such a bill. The whole surface of London was now under the control of several distinct boards of commissioners of sewers. He believed there were no less than seven, who exercised their powers in an irresponsible manner. Some of them were complained of for the expensive and inefficient manner in which they discharged their duties, while others gave more satisfaction. He would not, however, go into that, but would state that, on an order in council being issued after the passing of this act, all existing commissioners of sewers would be superseded in the discharge of their functions. The ratepayers in these metropolitan districts would be empowered to elect, as their representatives, commissioners for sanitary purposes, and the Crown would have the nomination of one third the number so elected. It would be desirable to make the metropolitan commissioners more numerous than those of other places, and the Crown would have a proportionately larger choice to make of persons fitted by their knowledge, science, and philanthropy, to aid the deliberations of these boards. The powers given to the commissioners were for sewerage, draining, paving, and cleansing; and he believed it to be essential to the successful working of the scheme that as soon as the act came into operation, and the new commissioners entered upon their functions, all present conflicting local jurisdictions should cease. He therefore proposed that the Crown, by an order in council, should extinguish any local body of commissioners for sewerage, drainage, paving, or cleansing, who might heretofore, under any local act, have exercised any power in any locality. The present conflicting jurisdictions created nothing but confusion, and often nullified the entire proceedings of these bodies. The Manchester Health of Towns Commission had made the suggestion that all the sanitary regulations of a district should be under one and the same authority. Of course provision must be made for debts incurred under present local acts, for contracts made, and for compensation for existing officers. He was aware it was proposed by this bill to make a great swoop upon local acts, and to interfere with a swarm of local commissioners. But the House ought to settle in its own mind what would be, on the whole, the best local body for executing the powers of the act, and, having settled that, they ought not to consider who were in the way, but insist upon the unity of action which was so necessary. Some town councils, it might be said, discharged their duties ill, and, on the other hand, he heard of commissioners of sewers and paving who gave great satisfaction. But having consecrated the town councils for these purposes, having respect to the appointment of members appointed by the Crown, he hoped that the very importance and responsibility of their functions would elicit the intelligence and activity necessary for their due discharge. If, however, this in some instances should, unfortunately, not be the case, the House would have some security in the provisions of the bill.

The report to which he had before referred mentioned those checks and limitations which it was necessary to adopt in order to ensure the efficient working of a measure of this nature. The committee which reported on the bill of the noble lord the member for Falkirk (Lord Lincoln) recommended,—

"That the interests of the community should be protected by the supervision of a competent, impartial, and responsible public officer, named an inspector. That, before new works are undertaken, full and comprehensive surveys should be made by competent engineers. That plans of complete works should be prepared by responsible public officers, locally examined by them with the estimates. That expository reports should be drawn up for local publication, in order that the advantages of new works may be thoroughly canvassed by all parties interested in them. That the whole of the works should be maintained as well as executed by contract. That the performance of the contract should be supervised by a competent, paid, and responsible local officer; and that the true causes of disease and death should be ascertained, and the spread of diseases, more and especially of endemic diseases, should be checked, by the appointment in districts of a skilled and responsible medical officer, called an officer of health."

It was proposed by this bill that an inspector should be appointed, whose duty it should be to inquire what had been done in the towns and districts he might be required to visit, to ascertain what works were wanted, to examine or prepare plans and surveys, and to make reports to the central board. Besides this inspector-general, who he supposed would be an engineer of some eminence, it was proposed to appoint a medical inspector, who should in like manner be required to visit the districts placed under his charge. It had been deemed advisable that this medical inspector should not be actually connected with any particular district, but that he should be disengaged from any local influence that might be brought to bear upon him. In addition to the engineering and medical inspectors, the town councils and commissioners were to be empowered to appoint local surveyors, to be approved by the central board. These surveyors, he apprehended, would be civil engineers, and it would be their duty to superintend the contract works. The town councils or commissioners would also have the appointment of inspectors of nuisances, who would provide for the summary removal of all nuisances that might have an injurious effect upon the public health. Provisions would also be incorporated in the bill for preventing the nuisance of smoke—not smoking—(A laugh). It would be required that, in any building intended to hold great numbers of persons, due provision should be made for securing proper ventilation—(Hear). Provisions would also be introduced into the bill enabling the town councils or commissioners to contract with gas companies, if they should think proper to do so, for the lighting of their respective towns and cities. He would now refer to a subject to which he had before made a passing allusion—the importance of securing an ample supply of water. It would, he thought, be admitted on all hands that a sufficient supply of water was an indispensable accompaniment—indeed, a condition—of all real drainage; and that the existence of drains, if they had not water to carry the refuse matter away from them, would only tend to propagate and increase the evils which they were intended to remedy. The use of tubular sewers, and a proper supply of water, seemed now to be looked upon as indispensable to efficient drainage. He believed it would be generally acknowledged that the supply of water in many places, including this metropolis, was both too scanty and too expensive. There was a great accumulation of argument and of evidence to show how desirable it was to have a constant rather than an intermittent supply of water. He found it was stated by Mr. Toynbee, that "the water is generally laid on in the yard, and a supply given three times a week, and, at each time the water comes on, the film of dust and blacks that has been deposited on the surface is mixed up with the previous accumulations. The same water is used for making bread, by a baker, who supplies a great number of the poor." Dr. Aldis said, that "the water retained in the rooms of the poor for domestic purposes soon becomes covered with black scum, and there is generally a filthy accumulation on the surface of the water-butts. The fatigue of fetching a proper supply, which ought to be forty-five gallons a day for a cottage, is most wearing." Mr. Hawksley stated that "it is perfectly well known to those acquainted with the feelings and habits of labourers that they regard it as an intolerable nuisance, on their return home, tired with the day's labour, to have to fetch water from a distance out of doors, in cold or in wet, in frost or in snow." It seemed, indeed, that they had not advanced far since the days of Andromache,—

"to bring
The weight of waters from Hyperia's spring."

This bill would require that the town councils and the town commissioners should supply water to every house; and for this purpose they would be empowered to construct waterworks, to contract with water companies, and, if necessary, to compel the sale of waterworks, securing the full rate of their dividends to those companies from whom it was found necessary to purchase their works. Provision was also made that, in the case of permanent works being required, where any unusual degree of expense would probably be incurred, power should be given to borrow money, and that the principal and interest should be levied by a series of easy instalments, not upon the owner, but upon the occupier, who would be the person to benefit by the improvements. By this arragement he (Lord Morpeth) hoped they would remove the chief obstacle to the improvements in our towns—the opposition of owners of property to what they looked upon as a serious and immediate expense which was thrown upon them. He knew that it was this question of rates—the hard money to be actually paid—which had hitherto been the direct obstacle, and for some time to come, he feared, must continue to be an indirect obstacle, to the hope of seeing sanitary measures undertaken with vigour and good heart by the inhabitants of towns. There was something in the very sound of rates which was at fearful odds in the balance against health, industry, content, and all the virtues; but he feared that, in the first instance, some additional outlay must be incurred if they hoped to do anything effectual in the way of promoting the improvement of the public health. It was a necessary tribute which property must pay for the safety and lives of the poor, and for those who earned their living by the sweat of their brow, but a tribute which he believed in the long run contributed in no slight degree to the health and enjoyment of those upon whom it was levied. Besides the inestimable advantages which the improvement of the public health would carry in its train, he believed there was good reason to hope that even on the ground of economy the advantages it held out were not to be slighted. He was unwilling to rely very strictly upon any series of calculations which had been made on this subject, but he could not refrain from quoting separately the heads of some calculations which had been drawn up by persons of high and trustworthy character. Dr. Lyon Playfair estimated the loss from unnecessary death and sickness for England and Wales at £11,000,000, and for the United Kingdom at £20,000,000. These were the items of expense which Dr. Playfair reckoned were incurred under the present system, or rather want of system—direct attendance on the sick; loss of what they would have earned; premature death of productive contributors to the national wealth; and expense of premature funerals. Dr. Playfair estimated the loss for Manchester at nearly £1,000,000; Mr. Hawkesley calculated the loss for Nottingham at £300,000; Mr. Clay estimated the loss for Preston at £990,000; Mr. Coulthart took the loss for Ashton-under-Lyne at £235,000; and Dr. Playfair considered the loss of this metropolis to be above £2,500,000; and estimated the total loss to England and Wales at little short of £11,000,000. Dr. Guy, referring to the health of towns, said,—"I shall say nothing of the liquid manure which, as I have been given to understand, is suffered to drain away into the ditches, thence into the rivers, and from them into the sea, from fully one half of all the homesteads of England; I will speak merely of the unappropriated refuse of large towns. In Flanders, where manure is carefully collected, instead of being, as here, suffered to run to waste, the excreta of an adult is valued at £1 19s.; considering the enormous additions made to this manure in our towns, it will not be thought unreasonable to estimate the value of this part of the refuse which now runs to waste at £2 per head of the population, and, supposing that in England or in Wales the towns which are guilty of this extravagance contain in all only 5,000,000 inhabitants, we shall have an annual waste of at least ten millions of money." Mr. Smith, of Deanstone, also expressed his opinion that—"Taking a general view of the subject, we may assume a clear revenue of the sewer water of all towns of £1 for each inhabitant." Dr. Arnott said that "the value of town manure might be estimated by the fact, that a portion of the drainage of Edinburgh has increased the value of these lands by more than £5,000 a year, and that, if the whole drainage of London could be saved, at a sufficient distance from the town, the value would exceed £500,000 a year." Dr. Arnott observed that Milan had benefited to a great extent by the adoption of such measures as he suggested; and he then went on to say that "it has been calculated that whereas the cesspools cannot be emptied by nightmen for less than 17s. a year, and whereas water-carriers get ½d. for a pailful of water at the door, an addition of 2d to the rent, per week, will suffice for the expense of water-closets and of an unlimited supply of water for every house; and that the entire sanitary purposes contemplated under all the recommendations of the Health of Towns Commissioners may be procured for 3½d. a week per house." These calculations might be looked upon as sanguine, but those persons who were best acquainted with the subject knew that much was to be done with regard to economy by adopting efficient sanitary regulations. Mr. Holland, of Manchester, stated that in 20 streets in Chorlton-on-Medlock the mortality fell from 110 to 89 per annum, after, and no doubt principally in consequence of, the streets being properly paved and drained. Mr. Gardiner and Mr. Noble had confirmed the result by showing that in certain streets in St. George's district, Manchester, the deaths in 1838-1839 amounted to 495; but that in 1841-42, after the streets were paved and sewered, the deaths were only 432, being a diminution of 63, or about one eighth. In a district in Ancoats, a diminution of 40 deaths out of 270, or about one seventh, followed a similar improvement. But a still more striking illustration of the same fact might be found nearer home. It was contained in Mr. Liddle's evidence before the health commission:—"Windmill-court, in Rosemary-lane, was one of the most unhealthy in my district. It was unpaved and filthy, and with stagnant water before the houses. I used to visit it sometimes two or or three times a day for fever cases. About twelve months ago it was flagged; it was well supplied with water from a large cast-iron tank, which enables the inhabitants to have a constant supply, instead of an intermittent one, on three days a week. The court is regularly washed down twice a week, and the drains are so laid that all the water passes through the privy and carries off the soil, which was formerly a most foul nuisance, and a constant expense to the landlord. In the seven months ending March, 1843, I attended forty-

one new cases of sickness in that court; in the last four or five months I have had but two cases. The rent is better paid, and the landlord is considered to have made a good thing of the improvements, which are executed at his own expense. There is no doubt that sickness is the most common cause of the inability to pay the rent." He (Lord Morpeth) need not trouble the House at greater length by quoting from these documents. In a matter so large and complicated many imperfections would, no doubt, be discovered; and many oversights might have occurred in the bill which he now asked leave to lay upon the table. He could say, however, that that bill had been framed with an honest intention and a single view to the public good; and most unfeignedly thankful would he be if the result of that measure, and the consideration it might receive from Parliament, and the ultimate sanction it might obtain from the throne, should do anything to promote the objects which they aimed at effecting, namely, to diminish, as far as they could, those noxious influences within their reach which now so painfully afflicted a large majority of their towns and cities; to hunt down to their source, if it were possible, the prevailing causes of general unhealthiness; to let in more pure air and pure water, and thus to diminish, as far as they were able, those epidemic diseases which now and then had shown their effects in fearful ravages; to wage war, wherever they could, against filth and stenches, and to endeavour to avoid their sure attendants and consequences, bodily weakness, languor, and death-dealing pestilence; and thus, as they hoped, to lengthen the lives and add to the happiness of all classes of their countrymen —(Hear, hear). The noble lord concluded by moving for leave to bring in the bill.

Mr. Mackinnon, in seconding the motion, observed that, to show the great advantages arising from attention to cleanliness and ventilation, he might mention that when Anson circumnavigated the globe seventy years ago, he lost, in his ship the Centurion—owing to the want of proper food, ventilation, and accommodation—270 men out of a crew of 560 men; but it was computed that, if a ship of the same size and of the same complement were now to undertake the same voyage, she would not lose more than five per cent. of her crew from sickness. He regretted that no legislation had been adopted with reference to this important subject at an earlier period; and why, he would ask, had the question been allowed to rest? Because it did not affect either the upper or the middle classes of society, for the results of those causes which were prejudicial to public health were chiefly experienced by the poor.

Colonel T. Wood thought it would be unconstitutional to give to the Privy Council the power, as proposed, of repealing a variety of local acts.

The Earl of Lincoln thought he should be acting wisely in abstaining, on the present occasion, from entering at any length into a discussion of the noble lord's proposition. He concurred with the hon. member for Lymington in thanking the noble lord for the introduction of the bill; but he thought the hon. member's congratulation at finding the bill far more comprehensive in its nature than the bill he (Lord Lincoln) formerly introduced was somewhat thrown away, for the noble lord had himself admitted that most of the provisions of his bill were taken from that bill which he (Lord Lincoln) had brought in, and which, with the exception of the provisions for the ventilation of large buildings and for the prevention of the nuisance of smoke (two subjects which the noble lord would probably find more difficult than he contemplated), contained, he believed, all the main sanitary provisions of the proposed bill and many others. He would now only touch on two or three points in respect to which the noble lord's bill differed from his. The noble lord said it was necessary that there should be an intervening superintending central authority. To a certain extent he (Lord Lincoln) had already given a proof of his concurrence in that principle by introducing into his bill a provision to some such effect. He did not participate in the general condemnation of what was called centralization, but at the same time he thought that the noble lord by his proposal was running the risk of extending the principle too far, and he was afraid that the ultimate, if not immediate, result of the constitution of the body, which the noble lord proposed to create would be a far too minute interference and intermeddling with local affairs, which ought to be left to the parties on the spot, whose interests were involved. By the bill which he (the Earl of Lincoln) had introduced, it was proposed that this central authority should be conferred on the Secretary of State for the Home Department, but only for limited purposes, such as enabling him, upon representation from any locality where the act might be brought into operation, to send down inspectors free from local bias and interests to report, &c. The noble lord also proposed to alter the body to which the central power should be given, setting forth as a reason the vast amount of work which the Secretary of State for the Home Department already had to transact. If this argument were to prevail it would be almost impossible to introduce any bill imposing the discharge of new duties without at the same time creating a new Minister. It should also be borne in mind that it was proposed, by a remodelling of the poor-law commission, to relieve the Home Secretary of a portion of the work he now had to transact; and the duties which the noble lord's bill would impose would not be so onerous as those from which the Home Secretary would be relieved.

Mr. Aglionby rejoiced that the noble lord had undertaken to deal with this subject, and admired his moral courage, and trusted he would have the perseverance to carry this great measure through.

Mr. Greene begged to remind the House that there were now twenty bills for the improvement of towns before it, many of them creating new bodies of commissioners for, perhaps, only part of a town. It seemed to him important that those bills should be suspended until this should be disposed of.

Sir W. Clay was desirous to express his doubt of the expediency of including the metropolis in it.

Mr. Hume thought that the Government should regard the interest of the many in dealing with the conflicting and selfish associations that stood in the way of all these improvements. The object to be aimed at was not to establish a gas company or a water company for those who could afford to pay for such things, but to provide for the mass of the operative population those requisites to health of which they had hitherto been deprived. Those who would be the real friends of the working classes must grapple with the difficulties that might be opposed to this measure—a measure which would be the truest economy if it contributed to keep the mass of the people in health—(Hear). The principle of unity of controlling authority was of great importance in carrying out in any district the various operations referred to in this bill. If defects existed in corporations, let them be corrected, so as to allow the objects of the measure to be efficiently carried out. But, at all events, let there be a uniform system. The noble lord, if he persevered, could not fail to meet with the success which he deserved.

Mr. Brotherton thought there were many difficulties in the way, but they might be overcome by perseverance. The plan of bestowing certain powers on corporations was a very great improvement.

After a few remarks from Mr. P. Howard,
Leave was given to bring in the bill.

A handsome salver and breakfast service was presented to Mr. Vidal, of Avelerg, on his leaving that neighbourhood, by his patients and friends.

GOSSIP OF THE WEEK.

Middlesex Hospital.—At a special general court of the governors of this hospital, a report of the committee appointed to inquire into the government and management of the hospital was read, which stated that the committee, having examined the chaplain and surgeons of other establishments, had come to the decision that the order, discipline, and cleanliness of the hospital by no means equalled that of other metropolitan hospitals; that the nurses were not engaged with sufficient care; that these facts proved the constitution of the weekly board to be defective; the respective offices of matron, and secretary, and house-steward (the last two offices being held by one person), had not been properly filled; that there was a want of cordial co-operation among the officers; that there should be a weekly report as to the management of the hospital; and that Mr. Tuson, one of the surgeons, should resign his appointment. After much discussion, an amendment was carried, resolving, that four copies of the report and two copies of the evidence should lie on the table for the inspection of the governors until that day five weeks, until which time the meeting was adjourned.

The London accouchuers are amusing themselves with a rather unhappy diagnosis of one of their brethren. The story runs that a distinguished physician was called in to give his assistance in the case of a young lady suffering under a somewhat anomalous enlargement of what women are fond of designating as "the stomach." A careful examination having taken place, a fibrous tumour was "*discovered*" leeches were applied with characteristic despatch and decision: a few minutes sufficed to show the success that awaits efficient treatment: *the infant* cried!

Apothecaries' Hall.—Gentlemen admitted members March 25: James White, Richard Swan Finch, William Lascelles Norris, Henry Nicholson Settle, and T. Armstrong Cammack.

Naval Medical Appointments.—Surgeons: W. Folds, to the Royal Sovereign; Thomas H. Keown, to the detachment of Marines at Cork.—Assistant-Surgeon: Charles B. Wood, to the Caledonia.

MORTALITY TABLE.

For the Week ending Saturday, March 27, 1847.

Causes of Death.	Total.	Average of 5 Winters.
All Causes.........	1029	1068
Specified Causes...	1027	1061
Zymotic (or Epidemic, Endemic, and Contagious) Diseases...............	121	188
Sporadic Diseases.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat..........	103	112
Diseases of the Brain, Spinal Marrow, Nerves, and Senses.............	171	170
Diseases of the Lungs, and of the other Organs of Respiration	346	354
Diseases of the Heart and Blood-vessels..........	37	32
Diseases of the Stomach, Liver, and other organs of Digestion	84	70
Diseases of the Kidneys, &c	12	8
Childbirth, Diseases of the Uterus, &c.	24	12
Rheumatism, Diseases of the Bones, Joints, &c. ...	7	7
Diseases of the Skin, Cellular Tissue, &c.	..	2
Old Age................	57	81
Violence, Privation, Cold, and Intemperance........	65	30

No. 393. **SUMMARY.** April 10.

ORIGINAL LECTURES.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), Licentiate of the Royal College of Physicians, London; Fellow of the Medical Society, and Member of the Botanical Society of London; Lecturer on Therapeutics and Materia Medica at the Charing Cross Hospital; Physician to the Surrey Dispensary, and to the Royal Infirmary for Children.

Gentlemen,—At our last meeting I drew your attention to some guiding principles of diagnosis, with due attention to which, I told you, you would be able to arrive at a knowledge of the general nature of certain maladies under which the sick child might be labouring. I laid more especially stress upon particular points by which your attention might be at once directed to one or other of the great cavities of the body, so far as relates to certain common and acute affections having their seats in these important regions. I also noticed some other signs of a less general character, chiefly, however, to show you how your labours might be lightened by paying attention to such leading principles in endeavouring to arrive at a knowledge of any particular disorder. I shall take up your time to-day with the consideration of one of the most common maladies to which the child is subject—a malady which, wherever and under whatever circumstances you are placed, you cannot help having plenty of examples of it to deal with, not only as a disease, *per se*, as it were, but also as a *diathesis* or condition of body and vital energy which materially influences the course and complications of other disorders under which the patient may be suffering. This disease is *scrofula*, or *struma*.

Any morning that you are here observing the children that come in to us for our consideration, you will not fail to notice that amongst them are several whose complexions are much fairer than the rest, whose irides are of a light hue or bluish colour, whose pupils are often rather dilated, whose hair is the reverse of being dark, and whose upper lip is long, very often everted and swollen besides. All these circumstances are sufficiently prominent to strike you before the mother begins her history of any special complain—before you know, in fact, for what particular disorder the patient is brought to you for treatment.

On attending to these children you will find, perhaps, that they have eczematous eruptions on the scalp or behind the ears, or are troubled with otitis and discharge from the external passage of the ear, with inflammation of the conjunctiva or the tarsal edges, accompanied with *photophobia*, in other words, great intolerance of light, or with inflammation of the entrance of the nostrils, and scabby incrustations there; or they may be free from these, but have the submaxillary, or cervical, or other lymphatic glands enlarged or inflamed to various degrees and amounts of intensity. If you examine these children more narrowly still, you will generally discover that the extremities of the long bones are large and appear swollen, giving a very peculiar *articulated* appearance to the joints into the formation of which they enter; less frequently that the extremities of the fingers are *clubbed*, or enlarged and flattened, and that in extreme cases, inflammatory action of a peculiar character is going on round the proximate clubbed margins of the nails. In other cases, the abdomen is enlarged, or the patient is *pot-bellied*; or, if the child is a female, there is discharge from the genitals. If you were to step from the physician's room to the surgeon's, you might find children presenting like *artistic* characters labouring under important disease of the knee, hip, or other joints, or of the bones of the spinal column, &c. &c. Now, in these children you see examples of what I may call the open manifestations of scrofulous disorder, in respect to the diseases to which I have alluded; and in the artistic signs I draw a picture of, you have evidences that the body is endowed with the scrofulous diathesis, or that it may sooner or later suffer such or correlated affections as I have just alluded to, although it is free from them at present.

You observe I have made use of two terms, *scrofulous diathesis*, and *scrofulous disorder*, and given you the characters of both. The propriety of employing these terms, with the idea that they afford any tangible value distinct one from the other, has been, and still is, doubted. I must differ with this notion, and, although I admit the distinction in practice is more artificial than natural, yet it is of great practical utility notwithstanding. By the scrofulous diathesis we mean simply that there exists a disposition, state, or tendency of body which inclines it to become affected with particular forms of diseased action, regarded by every one as the open manifestations or irruptions of disease, and we believe that this tendency or peculiarity of vital endowment is signified to the careful observer by certain physical signs often long before such open manifestations and irruptions make their appearance. This appearance is scrofulous disorder or disease. It is true that the physical signs or artistic characters depend for their existence upon particular structural conformations which must have a cause; and to this, if we generalized still further, the term *diathesis* in one sense might be applied. And in practice it is constantly necessary to generalize thus far, and subject a child to the principles of preventive therapeutics and hygiene whenever he presents such artistic characters, because we know what they indicate, we know what they point to, and, unless infinite care is taken, we shall soon see the *open manifestations* of the disorder. But since too often the child is not brought to us under such circumstances, as to all ordinary appearance he eats, drinks, sleeps, runs about, and appears quite well, and is by its parents not thought labouring under any disorder, we have not this opportunity, and we are forced, by the views of society and general opinion, not to regard it as yet the victim of *scrofulous disease*. When we have, on the other hand, the physical education and the whole hygiene of such a child placed at our disposal, we are often enabled to guide it through its future career so successfully that never once shall it betray signs of *open* disorder. From what I have told you, you find that I believe in the existence of particular signs, such as fair skin, light eyes, &c. &c., as indicative of the tendency to important maladies, and as existing and evincing that tendency before, in generally accepted language, we can say that a scrofulous malady exists. I believe this notwithstanding what has been said, in past times and within the last few months, against it, and that my experience here fully warrants me in so doing. I should tell you that upon this subject, *scrofula*, we have lately had several books published, and in some of these works particular doctrines have been taught which are contrary to those I hold myself and wish to teach you. You know, perhaps, that, years ago, it was said that fair persons such as I have spoken of are not the victims of this disorder any more than persons of dark complexion are, and that in this, as well as in other climates, there are no mere *artistic* characters evincing a liability to the ravages of this disease.

What may be the characters of scrofulous persons in other climates I do not here pretend to tell you, but I must maintain that, whenever and wherever amongst us you find the characters I have already spoken to you about, you may depend upon it the patient exhibiting them is liable to that train of maladies called scrofulous disease; and that you may be sure of this, even though, contrary to Mr. Philips's opinion, the glands be not as yet enlarged. I of course willingly admit that scrofula constantly makes its appearance in children of a complexion, &c., quite opposite to fair, in fact, that it appears in others, presenting all casts and characters; but the point I wish to impress upon you is, that when you see a fair light-haired child, with bluish or light-hued irides, and perhaps a dilated pupil, with large, swollen, everted upper lip, you may with certainty be assured that that child is strumous, and I am certain that at this infirmary the scrofulous children are more often fair than dark. For various opinions upon this point I must refer you to the writings of Lugol, Philips, and Glover. If you refer to some books you will find a host of maladies, all called scrofula, or examples of scrofulous disease; and there can be no doubt but that plenty of such maladies exist

but I am not one of those who regard almost every disease occurring in an individual undoubtedly scrofulous as necessary examples of scrofula. Some writers have classed together the most opposite diseases as examples of scrofula, simply because they have occurred in persons who were of the scrofulous diathesis. We cannot deny that this state of vital tendency modifies most materially the symptoms of a large proportion of the diseases to which the frame is subject; but I do not believe we can assent to the propositions that "in persons of this diathesis *every* disease assumes more or less of a scrofulous nature." I rather incline with the doctrine, that various diseases and healthy inflammation, showing no unusual or specific character, may, under certain degrees of excitement, exist in persons of a decidedly scrofulous constitution. It is undoubtedly of the utmost importance to be aware of the modifications which the scrofulous diathesis induces in other affections, both as relate to their pathology and therapeutics; but it rather falls under a review of these affections to consider them, than to discuss them now as special forms of scrofulous disorder.

Admitting that scrofula occurs in persons the opposite of the fair variety of our race, and also that in certain cases of dark complexion, &c., we have artistic signs of as great value as we have in the fair, yet I think you will find that the fair and the dark labour under, as a general rule, different manifestations of scrofulous disorder; or, in other words, the fair variety is more liable to the scrofulous affections of the bones and joints; diseases of the glands; diseases of the skin, such as chronic eczema; impetigo eczematosa; impetigo sparsa; chronic scrofulous ozæna; chronic conjunctivitis: whilst the dark variety is more subject—mind, I refer to children—to general tuberculosis, pulmonary phthisis, chronic abscesses, &c. &c.

Now you will find, from referring to the table before you, that I have opened a very important subject for your consideration, in placing down *pulmonary phthisis*, in fact, *general tuberculosis*, as examples of scrofulous disorder. You all know, of course, that the essential lesional disturbance (so far as the scalpel can make it known to us) of pulmonary consumption is the deposit of a peculiar morbid product called *tubercle*. Now, many persons believe that scrofulous disorder and the deposit of tubercles are synonymous; that tuberculous deposit occurring in a patient is proof he is scrofulous, in fact, that it is a manifestation of scrofula. Some go so far even as to say that scrofula cannot exist as an evident disease without this deposit occurring somewhere. Whether scrofula and tubercular diseases are identical has afforded very lately much food for discussion, some denying their identity altogether; Mr. Philips even goes so far as to say, that they actually antagonize each other. I cannot here enter upon the arguments of this question, and it will be sufficient for my purpose to give you the results of my reading and practical experience on the point.

1. In a scrofulous individual there is a morbid state of the blood; and one of the most usual tendencies of such a state of circulating fluid is, that during the nutrition of organs, &c., or what is called by physiologists, the organic assimilation of tissues, *tubercle*, as a perversion of such act, shall be formed.

2. It is equally a law attendant upon this condition of blood that inflammation of a specific or peculiar character, often proceeding to exudation, to suppuration, or ulceration, is very liable to attack particular portions of the body.

Now, you will observe that I make both a specific inflammation and the deposit of tubercle the evidences of scrofulous disease—in short, that they are the disease. What I would now particularly impress upon you is, that this *tendency* to deposit tubercle in a scrofulous person may in many cases never be consummated by its actual deposit, and that the occurrence of the specific or scrofulous inflammation, &c., in various parts of the body, producing, however, disorder which may be even fatal, alone constitutes in many persons the disease. Thus, you will find children suffering under scrofulous conjunctivitis, otitis, lymphadenitis, disease of the bones and joints, in whom you have no evidence that deposit of a specific character has as yet ensued, and yet these children may be, if I am allowed the expression, *saturated with scrofula*. It is true that sooner or later, after inflammation of a scrofulous character has been going on in the glands and bones, deposits are found; but this inflammation may exist to a certain extent without them, and, when the latter are found, it is very doubtful in my mind whether the "yellow lardaceous deposit" of the cancellated tissue of the bones, and certain other deposits, are really tubercles or not. Many persons have examined the "cheesy matter" of the lymphatic glands, the "yellow lardaceous deposit" of the bones, under the microscope, and say that it is impossible to find any essential mark of difference between them and the tuberculous matter of the lungs. Be this as it may, it is not necessary, in my opinion, for the establishment of the existence of scrofulous inflammation, that it should be proved to be either followed or preceded by deposit of a specific character. Whenever scrofula is openly manifested as a *disease*, we *must* have either one or other of two things going on: we *may* have, or have had, or shall have, both, viz., inflammation presenting peculiarity of form and results, or the deposit of tubercular matter; the former may take place without the latter, and the latter without necessarily being preceded by the former—at least, in my opinion.

It is probable—I have stated my belief elsewhere, in other words, that it *is* so—that in different constitutions the disposition, more particularly either to the inflammatory forms or to the tuberculous, exists, whilst in others they may both run together. But that the two are antagonistic, instead of being different manifestations of the same general diathesis and constitution of body, is a view of the question I most entirely abrogate.

In allusion to the tuberculous forms of scrofulous disorder, there is a point of great interest and importance, in my mind, and to which I would direct your attention for a moment. It is to a means of diagnosis I refer—a means I have nowhere read about, nor did I hear anything of it until I alluded to it one evening at the London Medical Society, where, although certain statements were made, I heard nothing to warrant me in refusing myself the credit, if there is any, of its first promulgation. It is this: you shall have a child brought to you who has dark irides, no colour in the cheeks, and darkish hair; the eye is often very full and large—looking (to use the words of one of the late house-surgeons of the infirmary, to whom I was talking about the subject) "as if they would eat you;" the eyelashes very long, close together, so long as sometimes to be three or four times their common length: I have seen them so long that when the eye was closed they quite rested on the cheek. Now, if you examine the forehead of such a child, you will find it covered with close-lying hair, sometimes almost down to the eyebrows; if you strip the child you will find its arms covered too, and the back from the hair of the head down between the shoulder-blades quite hairy, the hairs often being very thickly placed, and dark in colour; in fact, the child is quite a hairy child—not quite an Orson, but still very hairy. Often indeed the whole appearance of the patient is cachectic as well. Now, in nine cases out of ten, such a child is tuberculous, it either has tubercles already deposited, or else is liable, is tending to it, and that perhaps in almost every organ of the body, and in the lungs especially. This hairy condition in a cachectic or unhealthy-looking child is a sign, generally speaking, of a constitution miserable in the extreme—saturated with scrofula.

Sometimes you will find this hairy condition in rather light-haired children too; I do not mean the very fair ones, but still not the dark; and then the hair has the peculiarly rough, scrubby, unglossy, dry, or harsh character you so often find that it has in light-haired girls or young men in the more advanced stage of pulmonary consumption.

DUMAS ON ORGANIC CHEMISTRY.
No. XVII.

ON THE URINE.

(Continued from p. 112.)

Calculi in Animals.—Animals of most kinds are subject to calculi. In cats we have found concretions of phosphate of lime and of the ammoniaco-magnesian phosphate. In the urinary calculi of dogs we not uncommonly meet with uric acid, earthy phosphates, oxalate of lime, and even cystine. M. Lassaigne analysed the calculus of a dog, which contained 97·5 of cystine and 2·5 of phosphate or oxalate of lime. In rats we very often discover calculi formed of a mixture of carbonate of lime and of the phosphate or oxalate of lime. The calculi met with in the herbivora are formed of the phosphates, invariably mixed with a more or less considerable quantity of carbonate of lime. Frequently even this latter salt constitutes almost the entire stone. Klaproth analysed a calculus found in a large sturgeon: it contained, besides phosphate of lime, traces of sulphate of lime, and a little albumen.

In the *treatment* of urinary calculi, various chemical means have been employed: such as dissolvents, &c., whether taken internally, or injected immediately into the bladder. But, if we bear in mind the complex structure of certain calculi and the varied nature of the materials which enter into their composition, we may readily conceive that the same dissolvent will not suit all cases. The concretions formed of uric acid or the urates will require the employment of alkaline solutions; whilst those which are formed of the earthy phosphates can be dissolved only by acid liquors. Hence, the necessity of knowing the nature of the calculus before adopting the treatment. The composition of the urine itself will form our guide in this research. Where phosphatic deposits exist, the urine will most probably be habitually alkaline; whilst the acidity of this liquor would rather be an index in favour of the existence of the uric calculus.

Where we have to dissolve a calculus formed of earthy phosphates, it has been proposed to inject into the bladder a very dilute solution of nitric or hydrochloric acid. We must, however, acknowledge that this practice is inefficacious in the majority of cases, and frequently even dangerous. We have still less chance of success where we endeavour to administer acids internally. We know, in fact, that the mineral acids do not pass into the urine, and that the organic acids are invariably decomposed in the economy. The administration of alkaline liquors, as, for instance, dilute solutions of carbonate or bicarbonate of soda, or even borax, have been long recommended for the purpose of dissolving calculi formed of uric acid. The Vichy waters have, according to some physicians, offered great advantages in the treatment of calculus; others, however, have altogether denied their benefit. Yet it appears that these concretions have sometimes become less coherent and more friable under the use of these waters.

Alkaline solutions may be especially employed as a prophylactic means. Not only do they dissolve the excess of uric acid, which has a tendency to become formed in the economy, but, also, they probably prevent its formation.

While discussing the causes of animal heat, we showed that it was by the intervention of bases that the phenomena of combustion were accomplished in the economy, and that products which otherwise would be incapable of absorbing oxygen, completely remove it from the air under the influence of these bases. In the treatment of uric-acid gravel, the bases act, then, either by dissolving a portion of this acid, or by preventing the transformation of the azotized materials of the economy into uric acid by effecting a more advanced combustion which transforms

them into urea. We must bear in mind, however, that by rendering the urine alkaline, we run a risk of favouring generally the production of acids, and consequently that of uric acid itself. M. Prunelle even states this to be the effect of the Vichy waters; but my own observations incline me to think the contrary.

From the action which the alkalis exercise over normal acid urine, some have been led to conclude that the use of Vichy water or that of carbonate of soda might give rise to the formation of calculi of the earthy phosphates. But is this fear well-founded? If the urine be secreted by the kidney with an alkaline reaction, whence come the phosphates, and why should they be deposited in the bladder?

An exciting regimen greatly favours the formation of uric-acid calculi. We may readily understand how it is that too succulent a diet, by introducing into the economy an excess of azotized matters, will give rise to the formation of a large quantity of uric acid. To this we must add, that the abuse of alcoholic drinks and fatty aliments will also favour the production of this acid, by preventing the complete oxidation of the azotized materials of the blood. By an analogous reason, sedentary occupations predispose to the formation of uric-acid calculi. It has been found with some patients, after their quitting town, and pursuing a more active kind of life in the country, that uric acid had ceased to be deposited in the bladder, and had given place to oxalate of lime. Uric acid may, undoubtedly, under the influence of an excess of oxygen, become transformed into urea and into oxalic acid. If the respiration, and consequently the absorption of oxygen, be still more active, the oxalic acid will in its turn disappear to become converted into carbonic acid. However, with regard to the calculi of oxalate of lime, we generally admit that their formation is due to oxalic acid or to the oxalates arising from the aliments. We have, in fact, seen that these bodies may pass into the urine. Persons who are subject to these calculi should, consequently, abstain from taking, as aliments, plants which, like the sorrel, contain oxalates.

Urine of Animals.—*Mammiferous Carnivora.*—The composition of the urine in the mammiferous carnivora greatly resembles that of man himself, in regard to the nature of the bodies which are found in it; in general, however, it contains less water, and is therefore of a denser character. According to Vauquelin, the urine of the lion and of the tiger is alkaline; it contains neither phosphates nor uric acid. Hiéronymi, on the contrary, states that the urine of these animals is transparent, of a clear yellow colour; its odour is strong and disagreeable; its taste bitter and nauseous; it manifests an acid reaction, which after a short time disappears, to give place to an alkaline condition, due to the disengagement of ammonia. Its specific gravity varies from 1·059 to 1·076. It gives on analysis:

Water		816·1
Urea, alcoholic extract, and lactic acid	132·2	153·9
Uric acid	0·22	
Mucus	5·1	
Sulphate of potass	1·2	
Sal ammoniac, with a little chloride of sodium	1·16	
Earthy phosphates	1·76	
Phosphates of potass and soda	8·02	
Phosphate of ammonia	1·02	
Lactate of potass	3·30	
	153·98	1000·0

Mammiferous Herbivora.—The urine of the herbivora in like manner contains urea, although in much less quantity; but, in place of uric, we here find hippuric, acid. What, however, essentially distinguishes this from the urine of man, is that it normally presents an alkaline reaction.

Horse.—The urine of the horse has been recently analysed by M. De Bibra. It was alkaline, and, after a few minutes, deposited a yellowish-white matter, principally formed of carbonates of lime and magnesia. The mean density of this urine ranged about 1·045, and the quantity of solid matter varied in it from 12·5 to 8·5 per cent.; the hippuric acid in like manner fluctuated between 1·5 and 0·5 per cent. It contained:—

	I.	II.
Water	885 09	912·84
Extractive matter soluble in water	21·32	19·25
" in alcohol	25·50	18·26
Salts soluble in water	23·40	40·00
Salts insoluble in water	17·80	
Urea	12·44	8·36
Hippuric acid	12·60	1·23
Mucus	0·05	0·06
	1000·00	1000·00

The saline residue contained, besides earthy carbonates, from 40 to 50 per cent. of alkaline carbonates. M. Bibra did not observe the generally acknowledged fact, that the hippuric acid contained in the urine of the horse, while in a state of rest, is during work replaced by benzoate of ammonia.

M. Boussingault analysed the urine of a horse fed on green trefoil and on oats; he found in it:—

Urea	31·00
Hippurate of potass	4·74
Lactate of potass	11·28
Bicarbonate of potass	15·50
Lactate of soda	8·81
Carbonate of lime	10·81
Carbonate of magnesia	4·16
Sulphate of potass	1·18
Chloride of sodium	0·74
Silica	0 01
Phosphates	0·00
Water and undetermined matters	910·76
	1000·00

Diabetic Horse.—The following were two analyses of the urine in a diabetic horse, made by MM. John and Lassaigne:—

	John.	Lassaigne.
Water	948 50	980·0
Aqueous and alcoholic extract	33·30	15·0
Urea	33·30	
Mucus, with a little carbonate of lime	0·80	
Hippuric acid	1·40	
Chloride of potassium	traces	
Urates of lime and potass	0·11	
Phosphate of lime	0·70	
Carbonates of lime and magnesia	3·92	
Oxides of iron and of manganese	traces	
Sulphates, alkaline phosphates, and chlorides	11·40	
Sulphate of potass	00 00	5·0
	1000·00	1000·0

The Ox.—The urine of the ox has been analysed by Sprengel, who found in it:—

Water	928·2
Urea	10·00
Albumen	0·10
Mucus	1·90
Benzoic acid	0·90
Lactic acid	5·16
Carbonic acid	2·50
Potass	6·64
Soda	5·54
Silica	0·36
Alumina	0·01
Oxide of manganese	0·01
Lime	0·65
Magnesia	0·36
Chlorine	2·72
Sulphuric acid	4·05
Phosphorus	0·70
	1000·00

M. Bibra has given us a more recent analysis of the urine of the ox. It is as follows:—

	I.	II.
Water	912·01	923·10
Extractive matters soluble in water	22·48	16·43
Matters insoluble in alcohol	14·21	10·20
Salts soluble in water	24·42	25·77
Insoluble salts	1·50	2·22
Urea	19·76	10·22
Hippuric acid	3·55	12·00
Mucus	0·07	0·06
	1000·00	1000·00

We are indebted to M. Boussingault for a perfect analysis of the urine of a cow, which had been fed on after-grass and potatoes. The following were the results he obtained:—

Urea	18·48
Hippurate of potass	16·51
Lactate of potass	17·16
Bicarbonate of potass	16·12
Carbonate of magnesia	4·71
Carbonate of lime	0·55
Sulphate of potass	3·60
Chloride of sodium	1·52
Silica	traces
Phosphoric acid	0·00
Water and undetermined matters	921·00
	1000·00

The saline residue contained 77 per cent. of carbonate of potass.

Goat.—The urine of the goat is limpid, of a peculiar, penetrating odour, having a density of about 1·008 or 1·009, and possesses, like the foregoing, an alkaline reaction. According to M. Bibra it contains:—

	I.	II.
Water	980·07	983·99
Extractive matters soluble in water	1·00	0·56
Extractive matters soluble in alcohol	4·51	4
Salts soluble in water	0·80	0·40
Urea	3·78	0·76
Hippuric acid	1·25	0·88
Mucus	0·06	0·05
	1000·00	1000·00

100 parts of saline residue contained 53 parts of carbonate of soda.

Camel.—The urine of the camel has been analysed by Professor Brande: 95 parts of this liquid contained.—

Water	75
Phosphate of lime	6
Sal ammoniac	
Sulphate of potass	
Urate of potass	
Chloride of sodium	8
Urea	6
	95

M. Chevreul, to whom we also owe an analysis of this urine, discovered in it neither uric acid nor any of the phosphatic salts. He found it very rich in urea, and he further proved the presence of carbonate of lime, carbonate of magnesia, sulphate of potass, chloride of potassium, carbonate of potass, chloride of sodium, hippurate of soda, carbonate of soda, sulphate of soda, and some traces of oxide of iron.

Pig.—M. Boussingault has recently published some detailed analyses of the urine of a pig fed on potatoes. In 1000 parts of this liquid he found:—

Urea	4·90
Bicarbonate of potass	10·74
Carbonate of magnesia	0·87
Carbonate of lime	traces
Sulphate of potass	1·98
Phosphate of potass	1·02
Chloride of sodium	1·28
Alkaline lactate	undetermined
Hippuric acid	0·00
Silica	0·07
Water and undetermined organic matters	979·14
	1000·00

The urine of the pig has also been analysed by M. Bibra, who found it limpid, almost inodorous, having a density about 1·010 or 1·012, and possessing an alkaline reaction. It contained:—

	I.	II.
Water	981·96	982·57
Extractive matters soluble in water	1·42	1·12
Extractive matters soluble in alcohol	3·87	3·99
Salts soluble in water	9·09	8·48
Urea	2·72	2·97
Mucus	0·05	1·07
	1000·00.	1000·00

The ashes contained 12·1 per cent. of carbonate of potass, 53·1 per cent. of chloride of sodium, 7·0 of sulphate of soda, and 27·8 of phosphates.

Hare.—The urine of the hare is alkaline, and contains a very small quantity of hippuric acid; ordinarily it is thick, and deposits a whitish globular matter, principally formed of phosphate of magnesia; its density is 1 050. According to M. Bibra's analysis, 1000 parts of this urine yield:—

Water	912·86
Extractive matters soluble in water	32·68
" " " alcohol	9·58
Salts soluble in water	23·70
Salts insoluble in water	12·64
Urea	8·54
	1000·00

The saline residue contained 8·73 of alkaline carbonate, and a considerable proportion of phosphates (39 per cent.).

Beaver.—In the urine of the beaver, Vauquelin has found the colouring matter of the bark of the willow, which is the chief substance on which these animals feed.

Birds.—The urine of birds is formed by a mixture of solid and of liquid particles, which are collected together in one common cavity, termed the *cloaca*. This mixture constitutes a white or sometimes greenish-coloured pulp, which quickly solidifies in the air, and which is chiefly formed of the acid urate of ammonia. The urine of birds of prey contains, moreover, urea and a green colouring matter. According to J. Davy, the urine of parrots presents an analogous composition to that of serpents. If we consider the great development of the respiratory system in birds, and the consequent activity of the phenomena of combustion, we shall necessarily be astonished at the large quantity of uric acid contained in their urine. We have, in fact, already stated that this product should be regarded as the result of an imperfect oxidation, or, in other words, of an incomplete combustion of the azotized materials of the organism. There seems at first sight to be some contradiction between these two facts. But this has been fully cleared up by an experiment performed by M. Boussingault, in which he proved that the dove parts with a considerable quantity of nitrogen in the state of gas. If, then, a part of the azotized materials undergoes in the organism of birds but an incomplete oxidation, this effect is compensated for, and the balance re-established, by the more perfect oxidation effected on some other portions of these materials, under the influence of respiration, by which they are transformed into carbonic acid and nitrogen.

Moreover, we know that the blood of birds is remarkably rich in organic materials, and that, in consequence, it contains a greater amount of combustible principle for the same proportion of oxygen.

A French chemist, at Grenoble, has taken out a patent for the manufacture of gas from excremental matter. The gas is said to be much superior to that from oil or coal, much cheaper, and perfectly inodorous.

Dr. Brownlow was, on the 31st ult., elected one of the physicians to the Metropolitan Dispensary, Fore-street, in the place of Dr. Garrod, resigned.

ORIGINAL CONTRIBUTIONS.

OBSERVATIONS ON THE USE OF ETHER FOR PREVENTING PAIN DURING SURGICAL OPERATIONS, AND THE MORAL ABUSE WHICH IT IS CAPABLE OF BEING CONVERTED TO.

By JAMES BRAID, M.R.C.S.E., &c.

Painless surgical operations, performed under the influence of ether, have now become so common, and so many have already been recorded, that I should not have proposed to occupy your valuable space by the following case, merely as a proof of the potency of ether for suspending consciousness and preventing pain during an operation. There are other points, however, connected with it which appear to me to give it great value, as being suggestive of important practical reflections, and which render it worthy of being recorded at the present time, when awkward results are being made known, including the death of several patients shortly after being thus operated upon, with the distinct admission of medical men, that the fatal results were produced by the ether, and *not* by the *surgical operation*. It is obvious that under such circumstances we cannot use too much circumspection in the use of an agent alike potent for good or for evil, according to the manner in which it is managed; and my object in submitting the following observations to the consideration of the profession is to urge such suggestions as seem to me calculated to guard against the recurrence of such untoward results—results which might very soon excite in the public mind the idea that the remedy was worse than the disease, and thus deprive suffering humanity from benefiting by this important boon, and perfectly safe antidote to pain, when applied in suitable cases, and with due care, skill, and attention.

In the *Medical Times* for the 27th ultimo you published some remarks which I had ventured to propound on this subject. The precautions which I considered necessary and prudent were there pointed out, the most important of which were, that it should be considered altogether unsuitable in certain forms of cerebral disease, as well as in some diseases and disorders of the heart and lungs. I also stated that I never undertook any important surgical operation under the state of ethereal narcotism without having tested the susceptibility of the patient to its influence by one or more experimental trials prior to the day when the operation was to be performed. I ventured to recommend this precaution to the consideration of my professional brethren as a certain and safe mode, and as one calculated to elicit information which might prove alike valuable to the operator and patient during the important crisis of the operation. It may be worthy of consideration whether some of the unfortunate results which have since occurred might not have been guarded against had these obvious and reasonable precautions been duly resorted to prior to the performance of said operations.

In my former paper I referred to a most satisfactory case in illustration of the propriety of my having had recourse to such experimental trials. Had I not used such precautions, in that case I had good reason to believe that the results would have been very different; and the following case will be found equally instructive, as it proves that by experimental trials we may not only escape serious inconveniences, or prevent fatal results, but that by such means we may render a patient *tolerant of the ether*, and ultimately capable of deriving the full benefit of its narcotizing influence during an operation, where it could not have been attempted, in the first instance, without the greatest inconvenience and danger.

On the 18th inst. I was consulted by Mrs. S. for an affection of the left mamma of five months' standing—at least it had attracted her attention for that length of time. She had been under the care of a respectable and experienced physician up to the period of consulting me, but he intimated to her that she must place herself under the care of a surgeon, as it had now assumed the character of a surgical, rather than of a medical, case. On examination I found a scirrhous tumour of considerable size, occupying the upper part of the mamma, and a smaller one, in the course of the absorbents, towards the axilla; the nipple slightly retracted, with a little discharge issuing from the nipple. The tumour was exquisitely tender to the touch. As there was no indication of constitutional affection, I advised the amputation of the mamma, as the most prudent measure, and the sooner the better, in order to guard against constitutional contamination. The lady agreed to abide by my decision, but wished to be saved from the suffering of such an operation, by being put under the influence of ether during its performance. I told her the usual precautions resorted to by me, of making experimental trials, prior to the day of operation—a precaution of which she highly approved, and she agreed to call again that afternoon, to try the effects of the ether in her case. She breathed the ether at the temperature of the room, for I always commence with it in a diluted state, and gradually increase its strength, according to its effects on the patient. In four minutes she became quite insensible to severe pinching on the back of the hand, and the breathing became slightly stertorous, but at the same time excessive irritability of stomach took place, and harassed the patient in the most distressing manner, by severe retching and vomiting, which continued to recur for an hour and a half, accompanied by considerable prostration of strength. It was quite obvious that, if she did not become more tolerant of the ether at future trials, it would be most injudicious to attempt the operation during the state of ethereal narcotism, as the violent and constant retching would prove a great obstacle to the proper use of the knife in performing the operation, would be likely to excite an unusual degree of hemorrhage, and, besides causing more arteries to require the application of ligatures, must also render it difficult to secure them properly. It was therefore my determination to perform the operation in the usual manner if, on a second trial, the prostration and sickness of stomach continued as intense as at first trial. At the second experimental trial, however, the sickness and vomiting were much less than on the former day, and, consequently, I was induced to give the ether a further trial, and the result was, that at a third, fourth, and fifth trial, my patient was affected *precisely as I wished*, having neither sickness, vomiting, nor extreme prostration, at the time of the etherization, and no uncomfortable feelings afterwards. We had, moreover, got another most important point gained—for the patient, who had slept very badly for the previous four months, had slept comfortably from the *first time she was etherized*; and the pain in the mamma was so much mitigated as to enable her to lie on either side, which she had been unable to do for several months previously. An important question thus suggests itself: Might the use of ether, properly conducted, if applied at an early stage of such affections, not tend to check their further development, and that before they have attained to the stage when they are liable to contaminate the system? I hope this hint may not be lost sight of, and that we may thus be enabled to do more service by *preventing* the development of such diseases, by the use of ether, than we can possibly hope to achieve by extirpating them, even without pain, during ethereal narcotism. On two nights, when my patient was *not etherized* prior to the operation, I hypnotized her, with the like happy results of securing her good sleep.

On the 25th ult., a week from the day I first saw this lady, I performed the operation, in the presence of Dr. Robertson and Dr. Hoskin, medical officers of the Scotch Royals, and Mr. Daniel Noble, Dr. Bowman, and others. The patient was etherized, and, on recovering from its influence some time after the completion

of the operation, was quite unconscious of any operation having been attempted. Indeed, her first expression was—"Give me some more ether, that I may have the operation performed *now.*" After being fully aroused, she assured us she had felt nothing, and was most thankful to be assured that it was all over; and well she might, for, on examination, there was no doubt as to the malignant character of the tumours. Every symptom since the operation has been most satisfactory.

On the first application of the knife, the patient moved her body a little, which those unacquainted with such cases, and similar automatic or reflex actions during the primary stages of hypnotism, might naturally enough have mistaken for emotional manifestations, or indications of the patient suffering *pain* at the moment, although not remembered after she awoke. The movement in question, however, was only *spinal* or *reflex*, and was manifested in the same manner at the *same stage of the etherization*, at every one of my *experimental trials*, when there was no source of irritation to the spinal nerves, unless what arose from the laboured breathing of the patient. When consciousness and volition become impaired or suspended, reflex movements become more easily excited, as was the case in the present instance; but, had we carried it further, so as to have torpified the spinal function, we should have been certain to have had no muscular indication whatever; but such condition is not always free from danger, as recent experience has proved. I, therefore, consider it much more prudent to run the hazard of exciting automatic indications of pain, but which are not attended with positive feeling of pain, than to push the process so far as to be certain to prevent present appearance of suffering, but which may issue in the most grave or even speedily fatal consequences after the operation.

There is one other caution which I wish to advert to, as it appears to me to be one of great importance, whilst, at the same time, so far as known to me, it has not yet been formally adverted to by any of the numerous writers who have shed so much ink on the ether question. I refer to the *moral* abuse to which ethereal narcotism is capable of being turned by cruel and unprincipled individuals. Much has been said and written on this point *against mesmerism* by dogmatic sceptics and unscrupulous fanatic opponents of mesmerism; but no such allegations have been made to the prejudice of the indiscriminate use of the narcotizing fumes of ether. Now, nothing can more clearly demonstrate the power of prejudice in rendering its victims incompetent observers, or uncandid reasoners on facts brought before them, than this conduct of the opponents of mesmerism and hypnotism on this important point. It would naturally be supposed by those unacquainted with the facts of the case, and who have read the lucubrations of some of the anti-mesmerists, that the former methods were directly calculated to excite the animal passions in an uncontrollable degree, and that unfortunate and virtuous females might be victimized by designing and unprincipled men, even without their consciousness of the fact when restored to the waking state, or their possessing any mode of bringing home to the unscrupulous culprits a charge of their villany. I say all this we are led by such individuals to infer as a just source of charge against mesmerism, whilst there is not a whisper against the use of ether, as liable to be converted to such unholy purposes. Now, what are the facts? Why, *quite the contrary*. I am bound in candour to say, from my experience of both, that there is far greater danger of *ether* being converted to such immoral purposes: for, of all the cases I have ever seen hynotized (my mode of mesmerizing), I have never seen a patient whilst in the second conscious state who was not more tenacious of resisting any apparent attempt at taking a liberty with her, either in the way of asking her to take off a shawl, or neckerchief, or stocking, or to give a kiss to a gentleman (this may be an imaginary gentleman, suggested as actually present, and, as in dreaming, they always take suggested ideas for realities), I say I have never yet seen a patient in that state who would not repel such proposed aggression with more energy than in the waking condition. I do not suppose it would make a vicious person virtuous, but I feel confident that mesmerism has no *direct* tendency to make a virtuous person vicious. What might be achieved by systematic and persevering attempts to corrupt a virtuous person during that state, I do not pretend to tell, and should never condescend to be a party to witness such attempts being systematically made, but my present convictions are that the same individual might be more readily demoralized when awake, than when in the second conscious state of nervous sleep, which evidently has a tendency, with virtuous people, to quicken their perceptions and heighten their notions of what would be immoral or highly indecorous, whilst at the same time it renders them most docile and obliging, in all which is reasonable and seemly in their estimation. Thus, while they will indignantly repel the proposal to kiss an imaginary gentleman, they will be quite willing to do so to an imaginary *child*.

A libidinous manifestation I have never seen during hypnotism, but I have witnessed the most intense manifestations of erotism arise spontaneously on several occasions during the primary or exciting stage of etherization, and that even in a patient of high respectability, and of the most modest and virtuous conduct, and pious disposition, in her general deportment when awake. I beg also to appeal to the answer given to the nurse of the Baron Dubois's patient, lately recorded in your pages, as well as to the fact of her drawing the nurse towards her and kissing the nurse during the process, as cogent proof in support of my opinion on this point. So fully satisfied am I of the fact, that I deem it a duty to call special attention to it, and to recommend the propriety of always having a third party present when etherizing ladies, so as to guard against the possible risk of imputations of criminality being brought against the operator from parties, which might arise in the mind of the patient, and bring disgrace, perhaps undeservedly, against the operator, and excite an invincible prejudice in the public mind against the use of ethereal narcotism, because of its real or supposed abuse (a). I would recommend the same caution in regard to hypnotism; as then there can be no room for wicked and malevolent individuals to assail the characters of innocent people with crimes which they allege against others, no doubt from feeling their own vicious propensities and want of moral control are such as would lead them to attempt the perpetration of, if placed in similar circumstances. I would beg leave, however, to offer a word of caution to such individuals. Supposing they were placed in the most favourable circumstances for the perpetration of such crimes, and that, by systematic and persevering attempts, they had at length achieved their purpose, and that, on awaking, the patient had no remembrance whatever of the injury inflicted on her, and that there was none but the eye of Heaven to witness against them, let them not indulge in the delusive hope that they could not possibly be inculpated. From the well-established and most beneficent law of double consciousness, it is quite certain that, however completely the transactions which occurred during the sleep may be forgotten, on awaking, she has only to be hypnotized or mesmerized, when put into the witness-box, to render her as competent to give accurate testimony of all which occurred in her former state of nervous sleep, as in the waking state she could testify to facts which occurred in her waking condition. Now, I maintain there is not a like security for the person who might be victimized during ethereal narcotism. By this means patients might be rendered speedily entirely oblivious of what was occurring, and that without the benefit and security of the double-conscious memory to be summoned to the conviction of the perpetrators of their wrongs. The most judicious mode, however, is always to etherize or hypnotize females whilst a third party is present, as then all quibbles will be guarded against of ether being abused and turned to immoral purposes.

In conclusion, I beg leave to urge in the most earnest manner:—

1. That no important surgical operation should be attempted under ethereal narcotism without one or more preparatory experimental trials having been made prior to the day of operation.

2. That well washed and purified ether alone should be used for such purposes.

3. That the air breathed at first trials should always have a moderate charge of ether vapour, either by the temperature of the air being regulated, or the apparatus provided with double-working valves, so as to regulate the proportion of ether, the strength of which to be gradually increased, so that the proper strength and quantity should be determined on for each individual case prior to the day of operation.

4. That when any circumstance may render it necessary to perform the operation without delay, it should rather be done with the risk of slight manifestation of pain to the patient, than be carried so far as to endanger his ultimate safety.

5. That the tubes and valves of the inhaling apparatus should be sufficiently large and easy in their action to permit the respiration to be carried on with the least interruption possible.

6. That the nostrils should not be stopped for the few first respirations, so that the respiratory organs may become tolerant of the etherized air at a low charge, before being inhaled at what may be considered sufficiently strong for fully narcotizing the patient; and, when the respiratory organs are very irritable, a slight admixture of watery vapour should be used, as recommended by Mr. Startin.

7. That etherization should never be attempted in the case of *females, without the presence of a third party*.

8. That in no case should the narcotizing influence be carried, immediately preparatory to the operation, beyond that stage which previous trials have proved are readily recovered from.

9. That in protracted operations the patient should be caused to breathe a less concentrated form of the vapour after the first incisions; or made to breathe pure air and etherized air alternately, in such proportions as may seem requisite to keep the patient slightly under its influence, but carefully guarding against inducing such degree of collapse as may seriously interfere with the function of respiration; as, if that becomes seriously depressed, we have no cer-

(a) Besides the possible danger which might really occur to the patient, or the mere dread or suspicion which might take possession of her mind on the point, a danger might arise to the operator in the following manner:—A vivid dream might occur during that stage of ethereal narcotism which would render it certain to be forgotten after the patient recovered, but this might recur on a future occasion with all the force of reality, and as the remembrance of a previous fact which had actually taken place; and this latter dream, having occurred at a less intense state of narcotism, might be remembered by the patient on recovering, and be believed and related by her as a fact to the great distress both of herself and other party implicated. It is in this manner that many an innocent person has, during a fit of delirium, inculpated both herself and others, and which those ignorant of the true explanation are ready to set down to the power of an awakened conscience, which would not suffer the person to die without making such disclosures and confessions. When the patients allege they have committed impossible crimes, the true solution may be admitted; but, when possible or probable ones are alleged, they are two frequently set down as facts. It is therefore important to guard against the possibility of the occurrence of such awkward results.

tain means of rousing the patient and removing the impending danger, as it is through the lungs chiefly that the ether is eliminated from the blood.

10. That an operation should never be undertaken when the patient is only partially etherized, and still capable of feeling acute pain, as in such condition with, many patients, the pain and emotion and shock to the nervous system are likely to be greater than if they were in the natural state (a)

I think the above precautions embody all which is essentially requisite for the safe and efficient use of ether in surgical practice, according to my own experience and the recorded opinions of others which have fallen under my notice; and, with a due regard to these precautions, we need not fear that its use will be as hastily proscribed as it was at first zealously adopted.

I quite concur in the opinion, so well expressed by you in your last week's leading article, when you say, "It is our privilege to contend that ether, while it is neither so magical nor safe as some zealots would describe it, possesses in prudent and enlightened hands clear and incontestible advantages which should for ever attach it to medicine as one of its most valuable and precious adjuvants. It is not, nor ought it ever to have been supposed, an agent without danger under all circumstances. It is a law of nature, that whatever is greatly valuable in its use must be proportionately mischievous in its abuse; and it is impossible to survey the powerful effects of ether on the human frame—producing a total revolution in the whole physical and, we may add, psychical system of the patient—without feeling that the extremity of beneficial influence beneath our eyes must be lying very near the confines of that power which wields the sceptre of lethal disease and death. But it is the distinction of the true physician that out of the nettle danger he plucks the flower safety—that he can advance to the very boundaries of peril to secure the elements of conservation; and that, though the right path be narrow, his knowledge and skill enable him to walk it with as much certainty and assurance as though it were the broadest and safest highway."

3, St. Peter's-square, Manchester, March 26.

(a) I strongly suspect that the fatal result of the Grantham case arose from this cause—not from *too much* of the ether, but from *too little* being used, when used at all.

OBSERVATIONS ON THE ACTION OF MERCURY IN INFLAMMATION, AND ITS EFFECTS ON THE SYSTEM.

By HENRY SMITH, M.R.C.S.,
Late House-Surgeon to King's College Hospital.

In the beginning of the year 1845 I read before the Medical Society of King's College a paper in which I endeavoured to prove that mercury acts beneficially in inflammation by becoming absorbed into the blood, and altering the quality of its constituents. The additional experience of two years' study of diseases, and the effects of this remedy, has enabled me to strengthen my observations, and to put my ideas together in a more clear and satisfactory manner to myself; and I now lay them before the readers of the *Medical Times* with a hope that they may not prove uninteresting to those who are willing, like myself, to add their share, however small, with the view of advancing our knowledge, and rendering our profession more of a science.

Of all the remedies which are employed in the treatment of disease no one has been so much abused as mercury. A weapon of immense power and usefulness, it has too often, when wielded by the unskilful, careless, and unscrupulous, become one of injury and destruction. It is so much employed, and so universally admitted to be one of our most powerful therapeutical agents, that much has been written about it, and many experiments have been made by careful and eminent observers, with a view to determine its precise mode of action, and to find some satisfactory explanation for the symptoms which it produces; and although theories have been propounded, and no satisfactory conclusions have been obtained, nevertheless much benefit has resulted from these inquiries, insomuch as the nature of the remedy itself, and its good or evil effects, have become more clearly understood, and more caution has been used in its employment; and this mineral, which may well be said to have been rendered by man a curse to mankind, is now found to be most efficacious in restoring him to the most inestimable blessing, health. Thus we seldom see the disastrous consequences of mercury, as were daily noticed before the time, and even after the time, of John Hunter; who was the chief means of bringing about a revolution in its employment in the treatment of the venereal disease.

These sad mistakes occurred in consequence of an erroneous opinion being entertained as to its action. It was thought that it acted chiefly through the salivary secretion, and drove out at that point the morbific poison; it was, therefore, given to such an extent that profuse salivations were brought about; and, until this effect was produced, it was not considered that the disease was sufficiently overcome; to use the words of John Hunter, "Formerly, where the management of mercury was not so well understood, nor its effects in syphilis well known, it was generally supposed to act by evacuation from the salivary glands, and was, therefore, always given till that evacuation took place; and, as its effects in the cure were imagined to be in proportion to the quantity of this evacuation, it was pushed on as far as possible without endangering suffocation."

At the time John Hunter made these observations, mercury was used in no other complaint but that of the venereal disease; therefore his inquiries were made principally with a view to determine its mode of action in that disease alone; nevertheless his observations will be found to bear upon the point I am going to consider, namely, its action in inflammation. Before, however, proceeding to this I will first review the effects produced by it on the healthy body.

When taken in moderate doses, it increases the action of the various secreting glands and organs, and stimulates some in a particular manner. Thus its powerful action on the salivary glands is perceptible to the senses, and from this fact we may have reason to believe that a somewhat similar influence is exerted upon the remainder of the secreting glands and organs; we are certain that the liver is stimulated to an increased secretion of bile, as is noticed after mercurial purges have been given, when there has been a suspended secretion of bile; this fact is best exemplified in a disease in which the liver, not primarily, but secondarily, is in fault, namely, cholera. In this disease profuse watery discharges, deprived of bile, occur. After the exhibition of large doses of calomel, a considerable flow of bile is observed to take place, and the symptoms are relieved.

Mercury directly increases the secretions of the intestines, independently of its action on the liver, and thus it acts in two ways in producing evacuations from the bowels.

Thus, then, we see that mercury acts chiefly on the different secreting apparatus of the body; and it proves beneficial in this way in a variety of disorders, and becomes a valuable medicine. But is this its only mode of action? Does mercury have the powerful effect of overcoming inflammation, and of causing the removal of materials deposited from the blood, by increasing the secretions of the various tissues only? Is this an adequate explanation of its salutary effects? By no means: we must go further, and seek some other view of the matter; and, in order to do this properly, we must first sketch the phenomena of inflammation.

The chief characteristics of inflammation are, that the relative quantity of the constituents of the blood is altered, and that these constituents are thrown out as abnormal products. The fibrine is increased in quantity, and it is the fibrine that is thrown out in the shape of lymph. Serum also is thrown out, and it is found to be richer in albumen. As regards the state of the vessels themselves engaged in this process, it has been pretty accurately determined that they are enlarged and relaxed, and allow a larger quantity of blood to accumulate in them. The nervous system is much disordered when there is any severe attack of inflammation. Now, let us inquire how it is, mercury produces its beneficial effects; but, first, let us look at some of the theories which have been entertained on this point.

From the fact of the vessels being enlarged and dilated in inflammation, it has been considered that those remedies which do good in this state produce quite the opposite condition, namely, contraction, whereby accumulation of blood, and the results of this accumulation, are overcome; amongst these mercury is placed. But how can we explain the various phenomena following upon the administration of mercury by this hypothesis? Will mere action on the vessels themselves be sufficient to produce salivation; the great disturbance of the system, the great tendency to gangrene, and the change in the blood itself, which we will presently see takes place under the influence of mercury? We must go further, I think, and seek in the blood itself for an explanation of these effects.

Nevertheless, although I do not think that mercury acts as an antiphlogistic by acting on the vessels, there can be no doubt that a diminution of their calibre takes place after any treatment calculated to overcome inflammation. Thus, bleeding will produce this effect; because the quantity of blood itself will be diminished in the part. Tartar emetic will probably have the same effect, but not directly, by any constringing or stimulating action on the vessels, but by depressing the action of the heart, and thus preventing an increased flux of blood to the part. Mercury also, by overcoming inflammation, brings about a contraction of the vessels; but that this is produced through some other means than mere action on the vessels, I shall endeavour to show directly.

Again, it has been supposed that mercury acts by producing an impression upon the nerves. Mr. Swan, who holds this view, has made many experiments on the lower animals, which have caused him to come to this conclusion. After injecting mercury into the veins of these animals, and administering it to them in other ways, he found that the nerves of the ganglionic system were highly inflamed, and he ascertained that there was a similar state of these nerves in a man whom he dissected; from this fact, and from the circumstance that his face and mouth appeared much swollen, he comes to the conclusion, without knowing it for certain, that the man had been salivated previous to his death. In these experiments it is probable that the appearance of the nerves, noticed, was produced by the mercury; but, even if such is the case, we are not warranted in believing that its mode of action is through this channel, and this alone. Mr. Swan, in an ingenious manner, even attempts to account for the salivation, by inflammation and irritation being propagated to the salivary glands, through the nervous twigs which are distributed to them. I am afraid little reliance can be placed on this gentleman's experiments; as such a large amount of mercury was given, and such a state of poisoning produced, that one would not be surprised to find inflammation anywhere. We know well that, when mercury has been given to a large and intense amount, inflammation may be excited in various parts of the body. The skin, mucous membranes, periosteum, cartilages, and bones, are all attacked, and inflammation is produced; but, because this is the fact, we do not conclude that mercury acts beneficially, by producing this artificial and abnormal state.

Many are of opinion that mercury acts as a

derivative; there is no doubt that it acts partly in this manner. We see that it produces local inflammation, and greatly increased secretion from various organs; it therefore must necessarily derive from other parts and organs, and act beneficially when they are in a state of inflammation; but these effects are not adequate to explain its full action. If we look to the blood itself, we shall find, I think, a proper explanation; at all events, one much more rational and satisfactory than can be come to from the theories I have detailed. I think that it is *through* the blood, and *upon* the blood, that mercury exerts its powerful and beneficial influence; and it is only by taking this view of the matter that we can explain *all* the phenomena following upon its administration. We have seen the effects of mercury when taken in moderate quantities; let us now inquire into the symptoms which it produces on the system when it has become affected by it. The health of the person gets gradually out of order, a species of poisoning is produced, the animal and organic functions are both greatly interfered with. The body becomes weak and irritable; there is loss of appetite and thirst; emaciation takes place sometimes rapidly. The pulse becomes frequent and feeble; the face thin and pale, and presents a peculiar appearance. There is a great increase in the flow of saliva; and sometimes a profuse secretion from other organs, as the bowels or skin. These are the symptoms perceptible to our senses; but is there any effect on the blood, and, if any, what change is produced? There is found to be a change in this fluid: it is altogether of a much less healthy nature; the clot is less solid and more easily broken down, there is less cohesion between the parts which form the vital part of the blood. In some cases it will not show any tendency to coagulate, in others it is found to be thick and tarry. Generally speaking, the blood drawn from a patient under the influence of mercury is buffed and cupped; experiments have been made with a view to determine whether the constituents of the blood have been altered in quantity, and it has been found by M. Andral that the fibrine has somewhat increased. This we should not at first expect to find; but, when we come to consider the febrile state of the system which is produced by large doses of mercury, we are not surprised to find this fact, and I think we may clearly explain it on this alone. Although we may not be aware of the essential change in the blood produced, yet I think we may come to the conclusion, that it acts as a direct poison upon it, and, therefore, exerts an unhealthy influence over it, and impoverishes it; and, in order to illustrate this, let us go further, and inquire into the symptoms of fatal poisoning by mercury. They all indicate an altered state of the blood, and a great want of vitality. There is great irritation and prostration of strength, excessive salivation, ulceration of mucous membranes, and, finally, gangrene. Sometimes there is hemorrhage from the nose and mouth, or hemorrhagic spots under the skin.

We cannot, I think, resist the conviction, that, in order to produce these symptoms, a decided change must take place in the blood itself, independent of any action through vessels or nerves; and it is in this way, by producing this change in the constituents of the blood, that I believe it acts in inflammation. We know that the system must become affected with the remedy before it has any beneficial effect on an inflamed organ; and that a longer or shorter time is necessary before this takes place, as it is more quickly or slowly absorbed; this would not be the case if it acted merely through the nerves, or upon the vessels, for we know that medicines that act sensibly upon the nervous system and on the blood-vessels are by no means a long time in showing their effects. We know that this remedy acts most beneficially in inflammation, by preventing the deposition of solid and fluid substances from the blood, which is richer in fibrine and albumen; and it is by producing a change in the quality, and probably in the quantity, of these constituents, that, in all probability, mercury acts. We see by the emaciation, loss of appetite, and general weakness produced by this mineral, that it exerts a most powerful and depressing influence over nutrition; and the fibrine and albumen thrown out are the products of the disordered state of the nutritive function in inflammation; and, therefore, we may justly conclude that these constituents are so altered, when they come in contact with mercury, that they are not in a fit state to become the products of inflammation.

Mercury not only acts by preventing the deposition of lymph, but it appears to have the additional power of causing the speedier absorption of abnormal products which have been thrown out; and the results that we observe in practice warrant us to come to this conclusion. How often does the physician observe the beneficial effects of this medicine in pneumonia, when the lung has become solid, by the effusion of febrine in its parenchymatous structure! Under the influence of mercury, the lung, which has hitherto been almost impervious to air, gradually returns to its healthy function; day by day, air enters it more readily, the morbid sounds are lost, and freedom of breathing is restored; and how does this happen, except by reabsorption of those inflammatory products which have spoiled for a time the texture and function of the lung? How often does the surgeon see the gradual restoration of a joint take place, when it has been crippled by inflammation and its consequences, under a mild and beneficial course of mercury! What satisfactory results he notices to take place in inflammation of the joints of the vertebræ, when products have been thrown out which press upon the nerves as they emerge from their canals, and produce paralysis of the extremities! He finds, after all other measures have been tried, that mercury is, indeed, "the one thing needful."

Notwithstanding, however, we observe these facts, we often in vain attempt by the use of this mineral to produce the absorption of lymph, or serum, which have been deposited, and have existed for some length of time. How often does the physician see that mercury produces no benefit, nor has any power of getting rid of the products which have been deposited upon the valves and lining membrane of the heart, nor of reabsorbing the fluid which has been poured into the cavity of the pleura or abdomen! It is therefore highly probable that mercury causes the removal of these inflammatory products, in many cases, not by any direct stimulating effect upon the absorbents, but by stopping that action which tends to produce effusion. It so alters the qualities of the substances likely to be effused, that this act is prevented. Inflammation, therefore, being overcome, and effusion prevented—the absorbents readily and rapidly take up any material which can be absorbed; and thus it is that we only see the recent products of inflammation got rid of; and why we see no change effected upon those deposits which have existed for any length of time, such as incrustations on the valves of the heart, and chronic collections of serum in the pleura, pericardium, and sac of the peritoneum. And I think a useful practical fact hinges upon this point, as regards the employment of mercury in inflammation. There are some who recommend it to be given only after the acute stage of inflammation has somewhat abated, and effusions have taken place. Thus, for instance, in a case of pneumonia, blood-letting and tartar emetic are recommended in the primary stage, when the inflammation is more severe, and there is more liability of effusion of lymph; but when the lung has become solid we are told to give mercury, in order to produce absorption of the fibrine. But in all cases, "prevention is better than cure." We should recollect that the chief power mercury possesses is its stopping that action which tends to effusion, and not curing that effusion when it has once taken place. The idea, that mercury acts chiefly by promoting absorption, has led to the practice of not giving it directly in inflammatory diseases; this appears to me to be in a considerable degree faulty and mischievous, as the time is allowed to go by when the remedy may produce its best results. Our object, I think, should be to endeavour to prevent the effusion of lymph and serum, and we shall gain this by giving mercury directly, and thus, as quickly as possible, producing that beneficial change in the quality of the blood which I maintain is necessary for the inflammation to be overcome, and the deposition of these substances to be prevented. Blood-letting and other evacuants should be premised, or used at the same time, as there is no doubt that the system becomes much more easily affected by mercury when these remedies have been previously used; as they tend to diminish that febrile state of the body which exists with all acute inflammations, and which every practitioner knows is inimical to the influence of mercury. There is another fact which, I think, will go far to prove that mercury subdues inflammation, by changing the condition of the blood, namely, that its beneficial effects are noticed mostly in those forms of inflammation where there is a tendency to a deposit of healthy lymph, and not pus or imperfect lymph; and this deposit is found to take place in inflammation of the solid organs of the body and the great serous membranes, excited by common causes, such as wounds or cold. But, on the other hand, when the inflammation of the same parts is caused by some morbid poison circulating in the blood, and therefore unhealthy, the products are of a different nature: the lymph which is thrown out is imperfect, and serous fluids are more or less mixed with pus, and the constitutional fever is generally of a low or typhoid type; and there is a great tendency to further destruction of the tissues by ulceration, suppuration, and mortification. In such cases mercury rarely does good, and then only when it is most carefully given, and combined with such remedies as are calculated to strengthen the energies of the system. In a great majority it will only do harm; as an instance, I may mention the inflammation which attacks the liver. In that form where there is a tendency to a deposit of fibrine, namely, in the cirrhose, mercury does much good, particularly when given at an early period; but when the inflammation is of that kind which speedily runs on to circumscribed or diffused abscess, mercury will not only do no good, but will tend to aggravate the already existing mischief. Dr. Budd, speaking of the injudicious use of mercury in disease of the liver, says—"There can be no doubt that much of our uncertainty as to the action of this and other medicines arises from our confounding under the same name, and treating in the same manner, diseases different in their nature. It seems to me that mercury is peculiarly unsuited to the disease we have been considering—suppuration of the liver."

Again, in erysipelas and diffused inflammation of the cellular tissue, where no lymph is thrown out, but suppuration and rapid disorganization take place, mercury will fail in doing good, and in many cases will exasperate the disease. The blood is already sufficiently poisoned, and its healthy qualities broken up, to permit a more powerful poison doing any good.

In my next paper I shall speak of the evil results which follow on the administration of mercury.

(To be continued.)

PRACTICAL OBSERVATIONS RELATIVE TO CERTAIN POINTS AT ISSUE BETWEEN TWO OF HER MAJESTY'S COMMISSIONERS IN LUNACY AND THREE NON-MEDICAL GOVERNORS OF THE LINCOLN LUNATIC HOSPITAL.

By WILLIAM SMITH, M.R.C.S.E.
Formerly House-Surgeon to the Lincoln Lunatic Asylum, and to the County Hospital at Lincoln.

"My object is, by every possible effort, to reach the truth; and, if error lie in my way, I must touch it—tear it—trample it under my foot."—ARMSTRONG.

Considerable interest has been excited of late

among those who have turned their attention to the management of hospitals for the insane (myself amongst the number), by a controversy which has taken place between certain members of the Lunacy Commission and a committee comprised of three non-medical governors of the Lincoln Asylum. Having formerly held the responsible office of president medical officer (house-surgeon, as designated by the rules) to that asylum, during a period of three years, and afterwards taken a considerable interest in its management for a further space of more than eighteen months, I may perhaps, without presumption, venture to offer a few remarks on the subject.

That discussions like the present, carried on in our medical journals, have a beneficial interest as regards the welfare of the insane, by removing popular prejudices relative to their supposed ungovernable dispositions and ferocious habits, and thus paving the way for a more humane and enlightened management, no one practically acquainted with the treatment of insanity will deny. In proof of my assertion, I would direct attention to the protracted discussions which took place in the *Lancet* and other medical journals, relative to the humane system of non-restraint, as successfully carried out at Lincoln and Hanwell. To the force of public opinion (directed to the subject through the medium of these journals) the insane are indebted for this and numerous other kindred improvements, notwithstanding the strenuous opposition of parties more studious of their own ease and comfort than the welfare of the patients intrusted to their care, or others, whose hostility was directed against those improvements simply because they did not originate from themselves. It would appear that two of her Majesty's learned commissioners in lunacy inspected the Lincoln Asylum on the 23rd and 24th of September, 1846. They remark, *inter alia*, "We were informed that about fifty patients were employed; that twelve attended the cathedral service on Sundays, and that about sixty are generally present when prayers are read in the hospital. There is no chaplain or clergyman who attends the hospital; but the house-surgeon reads prayers every evening." The three non-medical governors, in their counter-statement, remark-- "Prayers are read every evening by the house-surgeon or matron, and the aid of a chaplain for family prayers is contrary to the general custom of families, and quite unnecessary. It must not be forgotten that the patients belong to various sects of religion, and that some of the patients have been brought to their unhappy condition by fanatical excitement; and that no exclusion of ministers of any particular form of religion could be maintained; all who are in a condition to derive benefit from public worship are encouraged to attend it, and no clergyman in this city would refuse his attendance where it would be useful. The average number attending family prayers is not sixty, as stated by the two visiting commissioners, but ninety-seven, as appears from the weekly return." The governors (to my thinking) commence their argument on false premises, by comparing the asylum to a private family; whereas there must be a wide difference between a public hospital, containing 130 insane persons, and a private family. Moreover, if the Lincoln governors would take the trouble to look around them, they would find that chaplains are thought necessary in most of our best-regulated public asylums, and amongst such, I presume, they wish Lincoln to have a place. At the Surrey Pauper Asylum and at Northampton (I perceive by the annual statements), the chaplain's report is published along with that of the physician: proving the estimation in which the chaplain's services are held in those institutions. The Lincoln governors, in place of referring to a report of the Lancaster Asylum, bearing date so far back as September, 1826, might, with more consistency, have referred their readers to the practice now pursued in our best-regulated public asylums, such as Hanwell, Lancaster, Northampton, the Royal Hospital of Bethlem, and many others. If "the average number attending family prayers is not sixty, but ninety-seven, as appears from the weekly return," what stronger proof can we require of the necessity of appointing a regular paid chaplain? The county gaol has its paid chaplain, as also the county hospital; the latter contains about sixty beds, whereas the hospital for the insane, containing 130 beds, has no chaplain. With reference to the assertion that "no clergyman in this city would refuse his attendance where it would be useful," I can speak from my own experience (of nearly four years and a half in Lincoln), acquired during my house-surgeoncy at the asylum and the county hospital; that the clergymen of the ancient cathedral city are by no means so zealous in rendering their gratuitous services to the public charities as the governors would lead their readers to infer; in proof whereof I would refer to the very irregular manner in which the duties of readers to the county hospital were performed during my stay in Lincoln, whilst under the system of accepting the gratuitous services of those clergymen who offered themselves; and to the still more important fact, that the governors of the county hospital have recently appointed a paid chaplain, proving thereby that the practice of having honorary and unpaid chaplains (or readers) had not been altogether satisfactory. I trust the day is not far distant when the absurd and mischievous practice of having honorary and unpaid physicians and surgeons to our public medical charities will be entirely abolished; when that happy event arrives we may hope to find those honourable posts filled by men of undoubted ability, in place of (in too many instances, I fear) raw inexperienced individuals, whose only recommendation has been the strength of their family connection, or the length of their purse. The commissioners further observe—"The house-surgeon, or superintendent, is Mr. Walsh, who, however, according to the rules, is not allowed to prescribe for any of the patients, unless an extremely urgent case should occur, and, indeed, he has no share whatever, apparently, in their medical or moral treatment. His time seems chiefly occupied in making up any medicine which the physicians may prescribe (there being, however, very little medicine given); in keeping the various registers prescribed by the Legislature; in superintending the keepers and nurses; and attending the strangers who visit the establishment, and who (as will be seen hereafter) are very numerous." Herein I am of opinion the commissioners have just cause for complaint. What can be a more palpable absurdity than to require from their house-surgeon that he "shall be a member of the College of Surgeons, or of the Company of Apothecaries" (rule 6, section 10), and yet restrict him to the exhibition of salts and senna; and further compel him to accompany through the wards every Johnny Raw who may be prompted by idle curiosity to procure an order for the purpose of staring at the mad folk, actuated, in too many instances, by no higher feeling than would induce him to pay half-a-crown for a peep at Wombwell's menagerie, or to hear the melodies of the American niggers? These are strong remarks, but they result from what I have myself seen and heard whilst accompanying parties of *literati* through the wards of the Lincoln Asylum. Let me be clearly understood on this point: I do not deny the right of inspection of a public hospital for the insane to the meanest individual in existence; the forlorn beggar in common with the highest peer in the realm "has a deep personal concern in the mild or harsh treatment of a complaint which may affect any, either personally or through relatives and friends." The commissioners remark further on this subject:—"Having adverted to the large number of strangers who are allowed to inspect this establishment, we beg to say that we examined 'The Strangers' Memorandum Book,' in which, according to the rules of the institution, all visitors are required to enter their names, and we found that the number admitted in one month only (August last), by the orders of governors, amounted to 311. A large proportion of these names were evidently written by uneducated persons; and we were thereby induced to suppose that many of the visits arose from mere curiosity—a supposition which the answers given to our inquiries tended very much to confirm. We think that system of (apparently almost indiscriminate) admission is extremely objectionable." With this opinion I am inclined to concur; and, moreover, a similar opinion, or something even stronger, was entertained by the late Dr. Wm. Cooksen and Samuel Hadwen, Esq., a former house-surgeon I may further observe, that this same indiscriminate admission of strangers called forth some not very favourable comments from Dr. Hitch, at that time the resident medical officer of the Gloucester Asylum, a gentleman whose zeal in the cause of the insane, and general urbanity of manners, has gained for him the highest reputation amongst the superintendents of our best conducted asylums. The unjustifiable and ungenerous plea of the three non-medical governors, "that the only complaints of the visits of strangers have been from some house-surgeon who neglected his duty, and passed half his time out of the house," reminds me somewhat of the practice pursued in our criminal courts, and which is usually termed, in legal parlance, "an Old Bailey plea." An honest cause usually stands or falls by its own merits, and does not require the equivocal support obtained by blackening the characters of the opposing witnesses. I have recently paid a visit to the Lincoln Asylum (April 2), and was informed by the two resident officers, that the number of visitors has greatly diminished of late; perhaps the governors have adopted the plan of their old antagonists, the advocates for mechanical restraint, who opposed the theory of "the humane system of non-restraint" *vi et armis*, yet gradually adopted the practice!

The commissioners next observe, "There is essentially no classification whatever amongst the male or female patients. Some distinction is observed as to accommodation between the private and pauper lunatics; but they all meet in the same airing grounds (the males in one and the females in another), and the quiet and tranquil the dirty and clean patients are intermixed; and, during our progress through the house, we heard several complaints, made by female patients, that they were forced to hear blasphemous and obscene expressions, and see violent and indecent acts, emanating from patients in the same ward, from whom they had no power to dissociate themselves. We are disposed to think that the list of injuries and acts of violence which we have set forth in the schedule appended to this report, and which we extracted from 'The Daily Return Book,' is of itself almost sufficient to condemn the system of non-classification that prevails in this establishment." On this head, I am inclined to coincide with the governors in a great measure, if not *in toto*. My object in visiting the Lincoln Asylum, on Friday last (April 2) was to satisfy myself, by personal observation, as to the result of the system which has been so boldly introduced and so firmly defended by the governors at Lincoln. I profess myself to be one of that class "who pin their faith on no man's sleeve"; if any man can strike out an improvement upon an old system, why, I would say, "a' God's name" let him do it. It has been a source of much pleasure to me to reflect that the abolition of the depressing influence of solitary confinement was first introduced to the public through my instrumentality, and this, like every other improvement, of course met with considerable opposition. I view the late experiment at Lincoln as a kindred improvement; in truth, it can only be in asylums of limited extent, like that of Lincoln, that such experiments can safely be ventured upon. The "humane system of non-restraint" could scarcely, by any possibility, have originated at Hanwell; but, once found practicable at Lincoln, it was successfully carried out at the more extensive establishment at Hanwell. And here, let

me remark, is a most powerful argument in favour of the opinion which I have held (ever since the second year of my house-surgeoncy at Lincoln), and which I am glad to find the commissioners recommending to the notice of the Lord Chancellor, viz., "That in any county asylum or hospital, hereafter to be erected, into which curable lunatics (either alone, or together with incurable patients) shall be received, the number of patients shall not exceed 250 in the whole." But to return to the assertion of the commissioners. Without positively contradicting their statement, I must confess that I saw nothing to bear out their assertion. One or two of the female patients were rather talkative, and perhaps the conversation of one might not be altogether suitable "for ears polite"; but can this be remedied in any hospital for the insane? A tyro might exclaim, "Oh, put the patient into seclusion!" Would that remedy the evil? Insane persons, like children, are possessed of considerable mobility; they must get rid of their accumulated excitability in some way and possibly the tongue in females may act the part of a safety-valve. I saw not a single indecent act; the patients appeared lively and contented, and their physical condition appeared to be good. I was much struck with the improved appearance of what was formerly the refractory gallery for the males: the window-guards had been removed, and I understood from the house-surgeon without any inconvenience having resulted. The only occupants of the day-room attached to the gallery were nine or ten patients, whom I understood to be epileptic, and, therefore, requiring extra supervision. The only thing I noticed at all bearing upon the subject complained of by the commissioners was this ("part of the airing-ground appropriated to the male patients runs under the windows of wards appropriated to females"), that the part herein named, which was formerly flagged to allow of the patients walking there, had been dug up, and stakes set down, which would deter the patients from approaching the windows of the females' apartments; so that the objection formerly raised by the commissioners has been removed. In this one case only the commissioners appeared to have been supported by facts. That persons not practically acquainted with the habits of the insane should advocate harsh measures or seclusive classification, in order (as they suppose) to overcome the noisy vociferation and restless habits of the insane, I am not at all surprised at. Two cases are forcibly recalled to my mind; both of them occurred at Lincoln during my house-surgeoncy. The first happened thus:—Whilst accompanying three or four of the governors through the females' refractory gallery, on the morning of a general-board meeting, one of the patients made use of threats and abusive language; a governor present, not very conversant with such matters (but certainly by no means possessed of a harsh disposition), recommended something very like the employment of the gag, but was taken up rather sharply by another governor present. The second instance occurred to me whilst accompanying a church dignitary through the wards in his capacity of weekly visitor. A female patient became noisy and abusive, when this gentleman, who was of a timid nervous disposition, recommended her being placed in seclusion; to this proposition I respectfully signified my repugnance, giving as a reason my belief that the patient, on being left to herself, would speedily recover her composure. The weekly visitor thought it his duty, however, to report the case specially to the board; and the matter was fully investigated at the next meeting of the governors, who decided in favour of the view which I had taken of the case. I mention these incidents, not from any feeling of hostility towards the gentlemen concerned, but simply to show how easy it is for persons of the most humane disposition to advocate measures replete with mischief and cruelty to the insane, simply from a want of proper knowledge of their habits and peculiarities; and amongst this mass of persons (I regret to state) the commissioners, or some part of them, must certainly have a place.

The commissioners further report:—"This dietary does not seem objectionable, except that water is given instead of malt liquor; which is prohibited as an article of diet; contrary, we understand, to the opinions of Dr. Cooksen (who preceded Dr. Nicholson as one of the physicians of the hospital), of Dr. Nicholson himself, of Mr. Graham (the late house surgeon), and contrary also, to the practice of almost every public institution for the cure of lunatics in England." Now, *primâ facie*, it would seem that the commissioners had a strong case against the governors; but this is not so in reality. There is "much ado about nothing." I will venture to repeat the assertion of my belief conveyed in a letter addressed to a general board of governors, January 11, 1843:—"That the substantial nutritious dietary of the Lincoln Asylum is not surpassed in any other public asylum in this kingdom;" and, with reference to water being given instead of malt liquor, I would further remark, that a more extended experience (not only in private practice, but after a careful observation of the treatment pursued in our largest and best-regulated asylums, visited since the writing of that letter) has only strengthened my faith in the soundness of the principles therein advocated; and so long as I find the physical condition of the patients at Lincoln to be in such a satisfactory state as appeared on my visit the other day—so long as I find them gaining flesh during every month of their stay there, and on their discharge (as I have witnessed in many cases) weighing considerably more than on their admission—I would earnestly but respectfully deprecate any attempt at returning to the system of stimulants, and the withdrawal of the increased allowance of animal food, so happily substituted in that establishment.

The commissioners next remark—"And here we think it right to call the attention of the board to the mode in which the medical department of this hospital is conducted. It will be observed that there is a president house-surgeon, or medical superintendent, who is prohibited, except in cases of extreme urgency, from prescribing for the patients; and also that there are three physicians, to whose skill and care the patients are intrusted, and who visit the hospital by rotation. It happens, unfortunately, that great differences of opinion exist between these three physicians as to the medical and moral treatment to which the patients should be subjected. One of them, Dr. Nicholson, advising classification, prescribing opiates occasionally to allay the restlessness of patients who are sleepless or in an excited state, and recommending the adoption of beer or wine as part of the ordinary diet, and frequently ordering them for particular patients: the other two (Dr. Charlesworth and Dr. Elmhirst) being adverse to classification, rejecting opiates in all cases, and ordering beer and wine very rarely, and then only as medicines in extreme cases, where stimulants or tonics are imperatively required.

"As each of these three gentlemen visits the hospital for a month only at a time, and during that period prescribes for the patients according to his own peculiar views, and apparently without reference to the plan pursued by his predecessor, the consequence is, that the patients in this hospital can never have the benefit of any uniform system or mode of treatment. Where a physician (Dr. Nicholson, for instance) has adopted a certain mode of treatment during his month of visitation, upon his retirement his system is immediately discontinued by his successor; he is not permitted, as in common hospital practice, to continue his mode of treatment until the patient is relieved or recovers, but his authority is immediately superseded by a practitioner whose opinions are known to be entirely opposed to his own.

"It appears, by 'The Physicians' Journal,' that Dr. Nicholson visited the hospital throughout the whole of August last, and that he was succeeded by Dr. Charlesworth on the 1st of September. It appears also (amongst other things), that Dr. Nicholson, on the 30th of August, directed porter to be given daily to sixteen patients, and wine to one (named R.). On the 1st of September (the first day of Dr. Charlesworth coming into office) he ordered twelve of these patients to discontinue the porter, and R. to discontinue the wine. Now, this order of Dr. Charlesworth must necessarily have been given with a very imperfect knowledge, if any, as to the amount of benefit which the patients had received from Dr Nicholson's order. Mr. Walsh, the house-surgeon, did not, as he stated, in answer to our inquiries, report against the wine and porter ordered by Dr. Nicholson; and it was impossible that Dr. Charlesworth could judge accurately as to the effects of those tonics (are they such?) or stimulants, inasmuch as he was not in attendance at the asylum, and could not, therefore, know the previous condition of the seventeen patients to whom the porter and wine had been given."

Now, what say the defendants, the governors, to these weighty and serious charges? And here allow me to compliment them upon the critical acumen and profound sagacity which has urged them to retain as counsel the high intellectual acquirements and great moral worth of a retired barrister and two very pious divines! Some persons, in their unsophisticated ignorance, might have deemed this a proper subject for the medical staff, which boasts of three physicians, three surgeons, and a fully-qualified resident surgeon! But no; the Lincoln governors are a race *sui generis*; ay, marry, they are a far-sighted generation!

In reply, the governors passed resolutions four and five:—

"That the regular attendance of the physicians of the establishment is one of its most peculiarly commendable features; and that, so long as it continues, no advantage can possibly accrue from adding to the power or altering the duties of the house-surgeon.

"That the custom of three physicians attending the asylum in monthly rotation, as has been practised since the opening of the institution, secures to every chronic case the advantage of multiplied medical opinions, and does not require alteration."

Now, were I requested to point out the principal defect in the Lincoln establishment, I should at once refer to the anomaly of having three physicians, three surgeons, and a fully-qualified resident-surgeon to an establishment containing 117 patients (*vide* "Weekly Return," Dec. 29, 1845), whilst the immense asylum at Hanwell, containing 1000 patients, has but one visiting physician and two resident surgeons. I need not refer to Hanwell alone; what obtains at Lancaster, Northampton, Gloucester, Chester, Nottingham, and many other large and well-conducted establishments? The management of Lincoln, in this respect, is certainly unique; hence, probably, arose the *sobriquet* of the "Nonpareil Establishment," by which it is known amongst the superintendents of similar institutions.

If we may "judge of the tree by its fruit," what must we think of the bickerings and angry discussions which have agitated its medical staff for a period of nearly twenty years, almost without any interval of repose? Have not its medical officers been continually at variance from the days of Mr. Thomas Fisher, the first director, through those of Dr. Cooksen, *primus et secundus!* And further, the apple of discord appears nowise diminished in the hands of Dr. Nicholson, one of the present physicians! What shall we say of a public medical charity which, in the short space of sixteen years, has had no less than six resident medical officers, viz.: Messrs. Henry Marston, Samuel Hadwen, Robert Gardiner Hill, Wm. Smith, Wm. Graham, and Mr. Walsh, the present house-surgeon? The attendants too (or, as the learned commissioners would style them, the keepers and nurses) have fared very little better. Of twelve attendants whom I left behind me in June, 1841, three only are now remaining! viz., the head male attendant, the

house-porter (who also acts as an attendant), and one female attendant; and, what still further demonstrates the absurdity and mischievous tendency of the Lincoln rules, this very house-porter (who, by the way, is a most valuable servant) had a narrow escape of dismissal in consequence of having committed the unpardonable error of getting married. So much for their Malthusian doctrine! Dr. Corsellis, the experienced and much-esteemed director of the Wakefield Asylum, gives a severe but I fear too truthful sketch of Lincoln management—*Lancet* 1839-40, vol. 2, page 247:—"I know so well the difficulties which encompass the path of the superintendent of a lunatic asylum, the liability of his best exertions to misrepresentation, his exposure to attacks emanating only from feelings of personal malignity, and motives of which every honest man would be ashamed; the petty cavillings and opposition he is often called to undergo, from those who wrap themselves up in fancied notions of their own excessive wisdom, and practically know nothing; whilst censure, the lowest exercise of the understanding, is considered as fairly employed on him, by would-be authors, devoid of talents capable of any higher range; and, feeling this, it is with delicacy I allude to the Lincoln Asylum. Without particularizing my motives, I would merely remark, that the very frequent change of officers and servants in that institution does not speak much for the working of the system. I would say of a public institution as of a private family, where such changes are unusually frequent, your fault is less in your men than your system. Look to it that your main-spring be not wrong; you are perpetually introducing novices, by which the interest is broken and confidence destroyed; and no sooner do they become initiated in the discharge of duties the most difficult to which man or woman in any station of life can be called, than the benefit of their experience is lost to the patients, and other novices take their place. The superintendent of a lunatic asylum requires to have his zeal tempered by extraordinary prudence, his exertions supported by extraordinary coolness and patience, otherwise he will only increase his difficulties until they are altogether insurmountable." Now, be it observed, these remarks are not from the pen of a raw youth or an idle theorist; they are the deliberately recorded sentiments of a gentleman who has passed nearly twenty years of his life in the active duties of medical director to a large public asylum,—Wakefield contains more than 430 patients,—a gentleman who is esteemed by his compeers, not only for his zeal and humanity in the cause of the insane, but likewise for the courtesy and general urbanity of manners which he displays towards those who may entertain views somewhat opposed to his own. The Seventeenth Report of the Lincoln Asylum, page 29, contains in a foot-note the following remarks:—"Without efficient officers, honestly and zealously willing to co-operate with the authorities, no superintendence, no rules, can be of any permanent use. An unwilling officer can thwart the best-arranged plans, without subjecting himself to any specific charge: he can contrive that an improved system shall not answer, or can arrange that any convenient plan of his own shall become necessary, or can affect to misunderstand; or can distress officers who are honest in their duty, or can countenance a faction of an opposite character, or can raise difficulties, and may always avoid offering expedients." Now, if the Lincoln physicians be arrayed two against one, if the house-surgeon be fresh to his duties, if he keep having a constant succession of attendants unacquainted with the management of the insane, what, let me ask, can be the state of the establishment? Dr. Conolly, the talented physician of the Hanwell Asylum, has so admirably described what the management of an asylum ought to be, that I cannot resist giving an extract from his seventh lecture (*Lancet*, Oct. 3, 1846), "On the Construction and Government of Lunatic Asylums":—

"An asylum ought to be neither a prison nor a workhouse; but a place of refuge and recovery from all the mental distractions incidental to mankind. Comfort in all cases, and recovery in many, are the attainable results of proper agencies directed to the remains of affection and intelligence, existing in every case, and varying in all cases. The object, therefore, of every care and regulation of an asylum, of its whole constitution, should be to bring to bear on all the patients such an amount of intelligence and benevolence as may soothe many and direct all, and raise each patient to the point of cure attainable in each particular case. All the details should be part of one harmonious whole. The patients should be accustomed to look on the attendants as their constant friends and guardians; the attendants should expect the visit of the officers with pleasure, and rely upon them for advice and encouragement; the officers should be animated by the example of a humane and intelligent medical superintendent, and he and they should look forward to the occasional visits of the directors with confidence. If the patients fear the attendants, and the attendants dread the officers, and the officers look forward to committee days as days of insult, all must go wrong.

"The medical superintendent himself should deserve the fullest confidence of the governing body, and should possess it. His representations should always be received with respectful attention, and his complaints of neglect of duty, or of departure from his plan of managing the asylum, should be investigated promptly, openly, and with care. His authority cannot be impaired without detriment to the asylum, through every part of which his influence must be continually in operation. Whatever diminishes his influence, and whatever discomposes his mind, disqualifies him for the task of superintending the whole working of the asylum, and for consoling, enlivening, animating, and, by undisturbed kindness and calmness, ever guiding, supporting, and controlling, more or less directly, the minds of all the rest of the establishment. It is to him that the whole house must at all times look for the principles by which everything done in it is to be regulated. His supposed or his known wishes should be present to the mind of every officer and every attendant in every variety of accident, and his character of mind and heart ever in their view. Indifference on his part must lead to negligence on the part of those who execute his commands; severity exhibited by him must lead to brutality on the part of the attendants. His steady discouragement of negligence, his known abhorrence of cruelty, and his real and deep sympathy with his patients, may be reflected from every humane heart in the asylum.

"His duty is difficult and peculiar, and comprehends a wide and careful survey of everything that can favourably or unfavourably affect the health of the mind or the body. He has to regulate the habits, the character, the very life, of his patients. He must be their physician, their director, and their friend. The whole house, every great and every trifling arrangement, the disposition of every officer and servant, should be in perpetual conformity to his views, so that one uniform idea may animate all to whom his orders are intrusted, and the result be one uniform plan. Nothing should be done without his sanction. The manners and the language of all who are employed in the asylum should but reflect his; for everything done and everything said in an asylum is remedial or hurtful; and not an order should be given, or a word spoken, except in accordance with the spirit of the of the director of the whole establishment. By such a system alone can it ever be proved to what extent the cure or improvement of the insane is practicable."

Now, if this be a faithful picture of what the management of an asylum should be—and undoubtedly it is so, since it was sketched by a master-hand, and emanated from the mind of one who has, for more than seven years, ably presided over the largest establishment for the insane in this kingdom—if these views be correct, what must we think of Lincoln management, where the three physicians are at open warfare, and scarcely agreed upon any one point of treatment, medical or moral; where the house-surgeon has the semblance of power without the reality; where attendants are constantly going and coming; and where the governing body itself is divided as to the merits of its rival physicians? Would any man, possessed of one iota of common feeling or common sense, send an afflicted relative to an establishment where such unnatural divisions exist? Let the governors look to it; they have lost the confidence of the public, and the management of the Lincoln Asylum has become an object of ridicule amongst the superintendents of similar institutions. The credit of a public medical charity cannot be supported by self-laudatory reports written and passed by a certain clique, *ad captandum vulgus;* the public expects to find unanimity prevailing amongst the governing body; the whole establishment placed under the management of an able and experienced (not under the auspices of a succession of raw youths just emerging from their *alma mater*) medical superintendent who is worthy of, and possesses the entire confidence of, the governing body and supplied with a set of well-informed and steady attendants; and last, though not least, that every individual of the governing body, shall refrain from interfering with the orders and directions of the resident officers, who have, or ought to have, the entire control of the establishment in the intervals between the meetings of the board.

As it appears highly probable that Dr. Nicholson, one of the present physicians, will be sacrificed for the part which he has taken in the late encounter with the commissioners in lunacy, I would earnestly recommend the governing powers to pause ere they elect a fresh physician, for by so doing they will assuredly keep alive the flame which has burnt so fiercely (with one or two short intermissions) for upwards of sixteen years.

Were I offered the post of honorary physician to the Lincoln Asylum to-morrow deeply as I feel interested in the treatment of insanity, on condition of carrying out the present system, and turning over all my patients to a fresh physician at the end of the month, I would respectfully decline the honour, feeling thoroughly convinced after seven years' practical acquaintance with insanity, three of them spent in the active duties of house-surgeon to the Lincoln Asylum, that the system as at present pursued at Lincoln is prejudicial to the welfare and cure of the patients, unfair alike to the medical officers and those under their authority, and in one word entirely opposed to common sense; and such undoubtedly (could it be ascertained) is the candid opinion of three-fourths of the medical superintendents of our largest and best-conducted hospitals for the insane.

King-street, Belper, Tuesday, April 6.

PROGRESS OF MEDICAL SCIENCE.

France.

ACADEMY OF MEDICINE.

Meeting of March 30; M. BEGIN in the Chair.

INHALATIONS OF ETHER.

The debate continued on this subject:—M. Blandin insisted upon the dangers of the inhalation, particularly when complete insensibility was produced; he contended that a method which caused a conversion of arterial into venous blood could by no means be looked upon as innocent, and was of opinion that it should never be employed in operations performed on the mouth, on account of the additional danger of complete asphyxia, from the passage of blood into the trachea and bronchi.

M. Velpeau and M. Roux could not agree

with M. Blandin in his fears; they considered the dangers alluded to as in a great measure theoretical; and M. Roux stated that complete insensibility was far preferable to the condition produced in the second period of the effects of ether, during which irritability had on various occasions been evidently increased.

M. Denonvilliers presented a cerebriform tumour, removed from the leg of a woman of seventy. Ether had been employed, and complete insensibility obtained during three quarters of an hour. The first two days which followed the operation were marked by stupor and quickness of the pulse, but the circulation had since then descended to its natural standard, and the patient was now doing well.

EXTRACTS FROM MEDICAL PERIODICALS.

DIAGNOSIS OF CEREBRAL HEMORRHAGE FROM RAMOLLISSEMENT OF THE BRAIN.—The sudden occurrence of paralysis from apoplexy, its gradual appearance in ramollissement, are the circumstances upon which the diagnosis is generally founded. Admitting the value of this sign, M. Chomel does not consider it sufficient in all cases to establish positively the diagnosis. The learned professor is of opinion that temporary return of activity in the cerebral functions after the seizure, or preservation of the intellect coinciding with complete and intense hemiplegia, indicate ramollissement, and not hemorrhage.—*Journal des Connaissances Medico-Chirurgicales.*

TREATMENT OF ARTICULAR RHEUMATISM WITH SULPHATE OF QUININE. — This method was first introduced into practice by the Italian school, who considered the drug as a powerful contro-stimulant, exercising a depressing influence on general irritability, and acting specially upon the heart and arterial system. In France, M. Briquet, M. Guérard, and Professor Fouquier have employed sulphate of quinine for the treatment of acute articular rheumatism, with the most satisfactory results, the dose varying from ℈j. to ʒj. daily.—*Ibid.*

Sulphate of quinine can be deprived of its bitterness by being taken in coffee: M. des Vouves, who recommends the method, has found the medicine equally efficient in this form, and asserts that its bitter taste completely disappears. —*Revue Medico-Chirurg.*

TREATMENT OF BURNS.—M. Guérard recommends in burns the application of caustic hartshorn; the application of cloths steeped in ammonia immediately relieves the pain, and must be continued for one hour after the accident. When the burn has produced any destruction of the skin, ammonia should not be used; but in the erythematous form, or when phlycteriæ are present, it is of the greatest advantage. —*Annales de Thérapeutique.*

FACULTY OF MEDICINE.

LECTURES ON GENERAL PATHOLOGY, BY PROFESSOR ANDRAL.

The word crisis (so often used) means separation or judgment. Hippocrates gives various meanings to the word: in one book he tells us that a crisis is constituted by increase, diminution, transformation, or cessation of a malady; in another book a crisis is stated to be any change whatever occurring in disease; elsewhere it is the solution of disease. Galen admitted the existence of a good, a bad, and an imperfect crisis. The first was constituted by a sudden return to health immediately after or simultaneously with a certain disturbance. The crisis was bad when the perturbation was followed by death; incomplete, when partial relief only was obtained.

The doctrine of the ancients on this subject involves an entire theory on the expulsion of the morbid principle through the various emunctories. The appearance of phenomena of four orders marked the crisis:—1st, hemorrhages; 2nd, discharge of certain matters, such as abundant perspiration, or of urine, of considerable sediment in that fluid, diarrhœa, expectoration, ptyalism, &c.; 3rd, excretion of morbid products, such as pus, formation of abscesses, &c.; 4th, exanthemata.

Some phenomena were said to usher in all sorts of crises indiscriminately, *e. g.*, general uneasiness, sleeplessness—a delirium; chills, flushings, pain, or a tertiary exacerbation of disease. Other symptoms were considered as announcing more particularly the approach of each particular variety of crises, such as congestive appearances before hemorrhage, itching of the skin previously to perspiration, and an undulating pulse, which was also looked upon as premonitory of the same issue. A crisis furnished by the urine had no precursory signs; Galen believed this kind of crisis did not cause any disturbance in the system. Flatulency, and lumbago, gave warning of an intestinal crisis.

Each malady was supposed to have a special form of crisis peculiar to itself: in essential fever without any local alteration, the urines were critical; in inflammatory fever, that secretion contained a white deposit; in bilious fever, a red sediment. Cerebral affections were judged by three forms of crises—epistaxis, parotidian swelling, or perspiration; thoracic affections, by the sputa. Affections of the convex surface of the liver presented a singular sort of crisis, viz., hemorrhage from the right nostril. Diseases of the concave aspect of the liver were judged by bilious stools. Age, sex, temperament, seasons, reigning epidemics, were as many circumstances which caused the various crises to vary in their form. Thus, for instance, the same disease which might be judged by mild epistaxis in a child, would in the adult be terminated by hemorrhage, or in woman by uterine flux.

But this was not all: certain days were admitted to be more favourable than others to the appearance of critical symptoms, and in this respect the theories of ancient writers present a considerable degree of complication. The seventh, fourteenth, and twentieth days were of all the most fortunate; the ninth, eleventh, and sixteenth were less so; a happy issue was still less to be expected on the third, fourth, or fifth days; the 6th was decidedly a bad day.

It was also believed that some days presented symptoms indicating the coming crisis: thus on the fourth day it was said that the crisis of the seventh and its nature might be foretold; the eleventh day indicated the crisis of the fourteenth, the seventeenth, of the twentieth. Medicines were exhibited only on those days which were neither critical nor indicative of crisis; they were medicinal days.

After this rapid glance at the doctrines of the ancients on this subject, let us now examine if they must be rejected *in toto*, or if they contain some truth in the midst of many errors.

Some diseases, eruptive fevers for instance, present fixed periods, a determined length, and during their course it is possible to assign peculiar phenomena to certain days; but it is not so in all diseases: observation does not authorize us to say that on a given day a malady will assume a peculiar form, or present a favourable or unfavourable termination. The ancients, not being always able to point out the exact day on which the disorder began, could not number the days with any satisfactory degree of precision, and were much divided amongst themselves on the subject of the crisis of the twentieth or twenty-first day. The Hippocratic doctrine of critical days is therefore not admissible. Celsus, who does not believe in it, says that his predecessors had been led astray by the dogmas of the followers of Pythagoras; and we find in reality that Hippocrates was much attached to the science of numbers, which could, in his opinion, indicate the progress, crisis, and transformations of disease. Galen has not a very strong faith in the doctrines of crisis; in one passage he goes so far as to say that he admits them, on the pressing solicitations of his friends.

We must not, however, refuse to believe in the existence of critical phenomena, *i. e.*, of occurrences coinciding with an improvement in the symptoms of disease: for instance, hemorrhage frequently relieves plethora or local congestions; critical perspirations have been observed to terminate various maladies, and amongst others, serous effusions. Mucous fluxes also occasionally coincide with improvement of some disorders: thus Pinel and Esquirol state that in mania much advantage is often derived from the presence of diarrhœa; hence, the indication of purgatives. Bilious or urinary fluxes may also be observed, but they should not be admitted as critical, without much severity of observation: for instance, urine was for the ancients the chief vehicle of critical appearances; when, during the progress of acute disease, the urine became turbid and sedimentous, they concluded that the intensity of the malady had yielded. Observations teaches us that precisely the contrary is the truth; it is a fact which cannot admit of doubt, that the urine is turbid and sedimentous when febrile excitement is at its height, and returns to its natural transparency when fever is diminished. Chemical causes also, of which the ancients had no idea, exercise on the appearances of the urinary secretion an all-powerful influence. Cutaneous eruptions sometimes succeed in arresting concomitant disease. We may, perhaps, give also the name of critical to those violent nervous disturbances which occasionally interfere with the progress of existing maladies.

From these remarks we conclude that crisis is a possible but by no means a necessary phenomenon of acute or chronic disease; that in eruptive fevers the doctrine of crisis adopted by the ancients is fully borne out; unfortunately they were not acquainted with smallpox, which illustrates so perfectly Sydenham's definition—"Morbus, naturæ conamen meteriæ morbificæ exterminationem, in ægis salutem, omni ope molientis."

We have said that disease may terminate by death, or by a return to health; it may also pass, if chronic, to an acute state, if acute to a chronic form; and, lastly, by conversion into another malady.

This last termination is practically most important, and is frequently observed in phlegmasiæ; thus, after acute inflammation, the cause of phlogosis having ceased, the vessels still remain dilated, an accumulation of blood continues to take place in the affected part, and passive hyperemia is established, together with new practical indications; an increased secretion—a flux—may also remain, as the trace of inflammation in a mucous membrane; dropsy occasionally follows departed inflammation of serous textures. Œdema, or accidental products, may also be observed after phlegmasiæ of parenchymata: an alteration of function, neurosis, may be likewise observed after acute inflammation.

This transformation is not particular to phlegmasiæ; neurosis may also change its nature; congestion or inflammation may succeed neurosis. A nasal or lachrymal flux is not uncommon after facial neuralgia. After continued disturbance of the function of an organ by neurosis its texture may become altered—a fact, perhaps, less rare than it is generally supposed: for instance, hypertrophy of the heart certainly sometimes results from nervous palpitations. Pulmonary emphysema has occasionally its origin in a succession of purely nervous attacks of orthopnœa, &c.

Without being changed in nature, a disease may occupy a different seat; this is metastasis, and is frequent in congestions and inflammations. This metastasis or délitescence is common in erysipelas, in gout, in the family of herpetic diseases; the skin and mucous membranes seem to have a great tendency to be alternately affected—an analogy in disease explained to a certain extent by the analogy of their relative functions.

The intermediate state between health and disease is called convalescence: it begins with the disappearance of the symptoms of disease, and ceases when the various functions are restored to their freedom and regularity. We will study its various phenomena in the different functions, and with their description close our course for this session.

Digestion.—In some cases appetite returns as soon as disease is terminated, and the stomach appears to be unusually active; in others the

appetite is more easily satisfied; and in a third set, dyspepsia is present; and, although the desire for food is strong, the gastric organs cannot elaborate the nutriment. Occasionally the appetite does not return: in these cases bitter draughts, associated with gentle purgatives, are of the greatest benefit. Diarrhœa, during convalescence, is far from rare; prolonged abstinence may be the cause of some suffering; in general, when the stomach has not been the seat of disease, prolonged diet has weakened the stomach, and that viscus requires a stimulus.

Circulation.—On the slightest exertion, palpitations of the heart are frequently observed; with regard to the pulse, it usually returns to its natural standard; but it may remain frequent during digestion, or after motion, or mental excitement. This is frequent in children and women. But when the pulse remains quick during repose, and does not diminish by the daily exhibition of food, some anxiety is warranted. Anemic murmurs are heard in the heart and carotids when debility has been considerable; it is a singular fact, that often these vascular bruits appear for the first time some days after the establishment of convalescence; the circumstance is due to the diminution of the blood discs, which continues to take place for a certain period beyond the duration of the original complaint. The capillaries, during convalescence, generally remain pale; in repose it is not a favourable sign to see them assume a red colour, which would indicate the persistency of febrile excitement. The paleness of convalescents lasts sometimes very long.

Temperature.—During recovery from disease, loss of heat is repaired with considerable difficulty, hence convalescents, like children, should be carefully protected from cold. It is for the same reason that convalescents are chiefly exposed to those maladies which result from the influence of cold, viz., pneumonia and rheumatism.

Respiration may be more or less difficult, as in chlorotic patients, particularly after slight exercise. The voice is generally extremely weak, and may remain so for ever.

Secretions.—Serous infiltration, merely attendant upon debility, is less common than it is supposed. When œdema acquires by its extent any degree of importance, it is almost always connected with particular affections already noticed in these lectures. The secretion of fat is often extremely active during convalescence; indeed, it is not unusual to see patients become after a severe fit of illness stouter than they had ever previously been. The perspiration is frequently abundant, and gradually diminishes in proportion as strength is acquired. The hair may fall, or be modified in its colour; desquamation of the epidermis is sometimes observed. The urine is remarkable by its abundance and pallor. When that fluid is turbid or sedimentous, some internal cause of suffering should be sought for, and, if possible, removed.

Cerebral Functions.—The intellect is at first weak, and may even for a time be, to a certain extent, perverted. Changes of temper are common, and a special mania of convalescents has been described: the sensibility of the patients is usually much excited, and the neurosthenic state established. Muscular contraction is weaker than in health, and is often attended with pain; cramps are also very often observed. The menstrual function is often suspended for some months after severe illness. Convalescence lasts a very variable time. In this respect it is influenced by many causes; amongst which we may notice ages, constitutions, the nature of diseases or of the treatment resorted to, and the seasons.

D. M'Carthy, D.M.P.

SURGICAL SOCIETY OF IRELAND.

Saturday Evening, Feb. 20.—J. Kernan, Esq., in the Chair.

INJURY OF THE SHOULDER-JOINT.

The following case, transmitted by a physician of Portarlington, in a l to Professor Hargrave, was laid before the so .

A short time since B., a slight, spare girl, aged sixteen, applied he physician for relief under the following ci istances:—She stated that between two and weeks before, while crossing the kitchen, s tumbled and fell, the upper part of her left r coming across the edge of a large iron pot t happened to be in the way. Though feeli uch hurt at the time, she endeavoured to bea till now, when, not finding the use of the a returning as rapidly as she expected, she app for advice. On examination, some of the m unequivocal signs of dislocation into the axilla esented themselves, viz., a hollow beneath acromion and the head of the bone, distinc felt in the axilla; but the arm was not se bly lengthened, nor was the elbow thrown ou om the side; rotation of the bone at the e w also rotated in a slight degree the head o he humerus. Regarding the case as one o ommon dislocation, the necessary proceedings r reduction were adopted, and in about two nutes, after gradual and steady extension had n made, the physician was sensible of its effe and then a sudden giving way; the bone, howe , was not reduced, on the contrary, he had pr ced a fracture of the neck—no very pleasing ellection at the moment. He considered, ho ever, that there was now nothing to do but re e the head into the glenoid cavity, as by the b ch of the shaft all antagonizing power of the uscles was removed, and then treat the frac e; but in this he was totally failed, not being ble to accomplish it by any means. On furth inquiry, it was ascertained that, two years be e, the girl had met with some injury of the join om a fall over a ditch, and for which she never ught advice, but from that to the present iod she never could raise her arm horizontally, r keep it close to her side, the only use she h of it being backwards and forwards and und her. The true nature of the case was now ev ent, namely, the dislocation had existed two y rs, an adventitious socket having, of course, fou d on the inferior costa of the scapula; the rec injury fracture of the neck—was caused by th fall across the edge of the pot, and was in progress of reunion when it came under observation, and was broken up in the effort to reduce the dislocation. The case was then treated as one of simple fracture of the neck of the humerus, and in due time got well without any untoward event, the girl stating that she had as perfect use of the limb as ever she had since the first accident, but, of course, not as extensive as of the right, the dislocation still existing, as it was not deemed practicable or prudent again to attempt its reduction.

There was one defect remedied, namely, enabling her to place her arm closer to her side, by allowing the union to take place at a slight angle, and which she says is a great matter to her, as she never could lie comfortably on that side. This, perhaps, could not have been prevented, and certainly no attempt was made to do so.

DISSECTION OF THE EAR, LIGAMENTUM NUCHÆ, ETC., OF THE ELEPHANT.

Professor Harrison next directed the attention of the society to the anatomy of certain parts of the elephant: he first exhibited the "ligamentum nuchæ" to which he had alluded at the last meeting as being so essential in sustaining the head of this animal, which, on account of the tusks and proboscis, is of considerable weight. This ligament is a mass of elastic yellow tissue adhering to the spinous processes of the upper dorsal and lower cervical vertebræ; as it passes forwards to the head it divides into two deep vertical plates separated by cellular tissue and bloodvessels, and these are inserted into the fossæ of the occipital bone on each side of the prominent crest. While this structure possesses prodigious strength, it is also eminently elastic, as might be seen by separating a small portion and extending it. It consists of numerous fasciculi parallel to each other, and, although these are partially distinct, yet each fasciculus gives off processes to join each adjacent fasciculus, whereby the whole structure co-operates in sustaining the weight and obviating any great strain on any one portion. The mode of attachment to the occipital bone is peculiar and worthy of observation; within three or four inches of this, each yellow fasciculus ends in a small round silvery tendon, in the same manner as the fleshy fibres of a muscle join the tendon of insertion. Each of these tendons is deeply inserted into a rough depression in the bone, the design of this arrangement being to condense or concentrate into a small space the attachment of this large mass, and to secure a more intimate adhesion to the bone than the elastic tissue could effect. Although each tendinous cord is continuous with each elastic fasciculus, yet the tissues are perfectly distinct; immersion in acetic acid causes the most decided difference, the tendon being converted into a transparent hyaline pulp, while the yellow tissue is but little affected, being merely opened out or unravelled into its elementary elastic fibres.

Mr. Harrison next presented a dissection of the ear of the elephant; the meatus externus, the membrana tympani, the ossicula auditus, the stapedius and tensor tympani muscles, the chorda tympani nerve, the Eustachian tube, &c.

The external bony meatus is remarkable for its great size and length—between six and seven inches, leading inwards and a little downwards with but a little obliquity, and surrounded by the cells which separate the two tables of the skull. At its inner extremity is the membrana tympani, larger than a shilling, and placed very obliquely, being rather on a line with the posterior wall of the meatus than directly opposite to this tube. By holding the preparation before the candle the membrane was very distinctly seen, the tympanum being opened on the inner side and a portion of the bony meatus having been removed. This beautiful septum presented a deep concavity towards the meatus, and a convexity towards the tympanum, the strong manubrium of the malleus setting it firmly in that form. When examined against the light the radiating fibres are very distinctly seen, converging from the outer border towards the centre of the membrane and the handle of the malleus. These fibres have been considered muscular by Sir . Home, who has given a minute description of t m in "The Philosophical Transactions" for the ye 1823, and in his "Lectures on Comparative Anatomy," vol. iv., page 98; it is by no means clea however, that these fibres are muscular; in the first place, the existence of such a structure in a vibrating membrane does not appear to be requisite; and in the next place, if the fibres be carefully pursued, they can be traced into the periosteum lining the external meatus, where they present the same radiated and glistening appearance, nd appear to be also a continuation of that tissue. Mr. Harrison, therefore, expressed a strong doubt as to the muscularity of this structure, and felt disposed to regard it as white fibrous tissue; his reluctance, however, to injure the preparation had precluded him from testing any of the fibres in the microscope, which, however, he was determined to do in some little time. As a great similarity exists between many parts of the elephant and of the human subject, so there is a striking correspondence in the membrana tympani; in each it is very concave externally, and this concavity cannot be effaced by pressure from within. This led Mr. Harrison to notice the opinions of some writers who consider that this membrane is convex towards the meatus externus during life. Mr. Harrison conceived that the strong illumination caused by the rays of light passing down the speculum auris, together with the projection of the upper part of the manubrium of the malleus, gave to the eye of the observer the appearance of a full or convex surface, and he proceeded to show by a simple experiment that the concavity so constantly found in the dead body depends not upon any *post-mortem* change, but on a fixed and determined form owing to the attachment of the malleus. The experiment was this: the recent cranium of

a child was placed before the meeting, with the external ear and meatus on each side removed, and the two membranes exposed without any violence or injury. A blowpipe was then introduced into the Eustachian tube, first on one, and then on the other side; a slight inflation immediately moved the membrane, elevating and rendering its circumference a little full and convex, but not producing any effect on the central depression. By alternately increasing or lessening the distending force, the movements of the membrane were quite distinct, but no degree of force could raise the central depression; on the contrary, it appeared increased in depth as the circumferential portion of the membrane became distended, and it was obvious that the structure would burst before the central concavity could be effaced.

Mr. Harrison then pointed out the position of the three auricular bones (there being no appearance of the fourth, or orbicular); he remarked that there was one very important difference in the relative position of these parts in this animal as contrasted with man. In the latter, the membrane of the fenestra vestibuli is opposite to the membrana tympani, and the chain of ossicula, which connects these bones like a curved spring or a bellcrank, traverses the cavity of the tympanum. But in the elephant, the vestibule is above and rather behind the tympanum, and on a level with its outer wall; the bones therefore do not cross the chamber, but are placed obliquely behind it, and the long crus of the incus is bent outwards, and the stapes has the same aspect. The stapedius muscle was next exhibited, and was a distinct fleshy mass exposed by opening the pyramid; its silvery tendon was seen inserted into the neck of the stirrup; any doubt entertained as to the true muscular nature of the stapedius could was therefore removed by inspecting it in this dissection. The tensor tympani holds a different position from what it does in man: it is placed external to the membrana tympani, in the bony meatus between the bone and the lining membrane, and is inserted as usual into the upper part of the malleus. The Eustachian tube is about eight inches long; the bony portion is wide as it opens into the tympanum; the calibre contracts very much as the osseous and fibro-cartilaginous portions join; it dilates again anteriorly, but its nasal aperture is smaller than its tympanic. Mr. Harrison also remarked that the external cartilaginous meatus is much smaller than the osseous tube; the cartilages of which it is composed admit, however, of considerable motion, and can be acted on by different muscles, so that the canal can be dilated or contracted.

Mr. Harrison next made some general and physiological remarks tending to explain some of the peculiarities seen in this dissection, as contrasted with the human ear, and concluded by stating that the highly developed condition of the acoustic organ in this animal tends to establish the fact noticed by many observers—namely, that the elephant possesses the sense of hearing in an eminent degree.

DEATH FROM STARVATION.

Dr. Leeson said that he had been called upon on the previous Monday to make a *post-mortem* examination, in conjunction with Dr. Brady, Professor of Medical Jurisprudence in the College of Physicians, on the bodies of two individuals, a man and woman, who had died suddenly, and, as was reported, from starvation. One of them died on Saturday evening, the other on Sunday morning. Upon external inspection both bodies presented appearances of extreme emaciation. All the features of the female were remarkably contracted, the eyes sunk, nose pinched, and cheeks drawn in, giving her the appearance of a person upwards of sixty years old. The rest of the body was proportionally emaciated; the spaces between the metacarpal bones were perfectly hollowed out; the abdominal parietes, when cut, were totally devoid of the fat always met with in other subjects, and all the abdominal contents were perfectly bloodless: every organ was completely anœmic.

On cutting into the stomach, its rugæ were observed to be remarkably developed, and there was not a trace of food in it. The whole track of the intestines, though cut into in several places, had not the slightest trace of fæcal matter—containing only a little fetid mucus. There was some ulceration of the intestinal glands at the lower extremity of the ileum. When the chest was opened, both lungs were emphysematous and perfectly anœmic. The left ventricle of the heart contained half an ounce of remarkably thin fluid blood.

The body of the male presented similar appearances, but the external emaciation was even much greater. The stomach contained a very small quantity of fluid, with a few grains of meal, but no trace of feculent matter was observed until near the termination of the intestine, and even here its amount did not exceed a teaspoonful. The lungs were in a similarly emphysematous and anœmic condition, and the heart contained a small quantity of fluid blood. The gall-bladder, as usually observed in cases of death by starvation, was remarkably full, and the liver was lobulated, its eminences, however, being of a healthy kind.

In giving an opinion as to the cause of death here, Dr. Leeson remarked, that from hearing the facts of the case—that up to the last period of their existence these poor creatures had something to live on—it could hardly be distinctly stated that they died of starvation; nor, indeed, do we find death from absolute starvation to be by any means a common occurrence, taking as an example, for instance, death by starvation in consequence of several weeks total deprivation of food, as in cases of shipwrecked mariners, &c. In the present instance, however, it appeared that this poor man and woman, with six children, lived in the county of Leitrim, and, seeing the destruction of the potato crop, made their way up to town, where the whole family were huddled into a miserable apartment, not more than six feet square, with a damp floor and a roof that admitted the rain, a wad of straw, that might now have passed for any other material, being its only furniture. Reviewing all the facts of the case then—their destitution previous to coming to town—their bare subsistence while here, having only a sum of 1s. 3d. a day for the support of six children and themselves—life, in fact, as well remarked by Dr. Brady, gradually ebbing away—the opinion given was that death had arisen, not from actual starvation, but from the state of general destitution in which they had so long existed—in want of lodging, fire, clothing, or proper nourishment.

He might here observe that it is well known the soup obtained by such poor creatures as the above from the soup shops is entirely insufficient for the support of life, without some addition of solid material; and this is more particularly true in reference to Paul's parish, where this man and woman lived, the soup there, from the poverty of the parish, being little more than meal and water, which, in the entire absence of solid food in the stomach, passes through the intestinal tract as it is taken in, or gives rise to diarrhœa. The facts of these cases led him to suggest that a certain quantity of solid food might be allowed once or twice a week, to the suffering poor, in addition to the distribution of soup, and to hope that some notice of the subject might be taken by the public prints.

After finishing the *post-mortem* examination of the above cases, they proceeded to an adjoining apartment, the area of which was certainly not more than six feet square, and here lay (if he might use the expression) a mere living skeleton, stretched on a portion of straw, the eyes sunken, and their whites suffused, cheeks hollow, nose pinched—in fact, absolutely famishing, unable to move, and just able to call, in a voice that reminded him of the voice in cholera, for a little water, stating that her mouth was like the burning fire, and it was perfectly parched. The emaciation was so great that her arms were no thicker than candles, and the legs were swollen. She was unable to say when she had tasted food.

In reply to a question, Dr. Leeson stated that no urine was contained in the bladder in either case. Delirium, he believed, too, is only observed in cases of absolute starvation, not in those of gradual starvation as here.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct from the Office of the Medical Times *to Annual Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription,* 13s.; *Quarterly,* 6s. 6d.

A HANDSOME PORTFOLIO *for holding the* "MEDICAL TIMES"—*very desirable to those who would keep the numbers clean for binding, and easy of reference—may be had, by order of any Bookseller, or at the Office, price* 5s. *An allowance is made to the trade.*

Medicus, *on the Birkenhead Hospital, is making a storm in a puddle. Surely so small an affair might be below* personal *acrimony, especially* "in annis celestibus"

Dr. John Thompson *affirms that* "*Mr. Syme, under a clumsy mask, has induced us to make an* improper *use of Dr. Thompson's name,*" *in our last number, and wishes us, to escape a* "*harsher mode of exculpation,*" *by* reprinting *a pamphlet of his,* "*On Cruelty in the Infirmary.*" *The pamphlet is no answer to the letter published by us; and, secondly, if it were so, we are not the people to do favours* "*on* compulsion."

Mr. Kendall *informs us that Mr. Vidat, of Arely, is not leaving that neighbourhood, and that the testimonial to him was given out of esteem from long acquaintance.*

R. L. D.—*Mr. Renshaw is the publisher of Dr. Guy's* "*Medical Jurisprudence.*"

P. B.—*The feat inquired about is rarely or never possible.*

Inquirer.—*The* dresser *is not justified in good sense, though he may be in morality, in assuming the title* Inquirer *speaks of.*

A. M., *who asks if chloride of lime might not have as good an effect in a diseased stomach as in a foul pit or well, cannot do better than renounce all his medical opinions for which he has not the sanction of some medical friends.*

Dr. Hilbers's reply has been received.

Mr. Halle is thanked for his offer which is declined. His views are fully expressed in the extract sent, and which we shall content ourselves with printing—

"Nervous substance, we repeat, is but the recipient and vehicle of external and internal impressions. To every phase of emotion there is a coincident phase of mind or emotional conception, of which the former is the immediate consequent and expression; the instrument of expression, or the means by which the mental impression becomes palpable, being in every case nervous structure. The nervous adaptation is, in one respect, to the intellectual type or idea, as wax to an engraved type, or as the prepared recipient to the calotype. The recipient of an emotional type, like the retina, merely reflects the impress of the appropriate agency. Hence, the emotions are not inherent in the region where they are usually felt. During the absence of their corresponding types or ideas the nervous media of manifestation are as blank as was this paper before the compositor made it significant. So soon as the emotional type or idea appears in the mind, the nervous adaptation takes it up and expresses it; in other terms, renders an emotion palpable. But as the presence of any idea or type is altogether dependent on a human volition, and cannot be present or absent except the mind so wills it, so every emotion, being merely the consequent of its corresponding idea, can only be present or otherwise as its intelligent cause, however unwittingly, shall have given the fiat. Hence, the

secret of self-government. Hence, also, the power of example, and the assimilation of character to character in childhood and at other periods of life. Hence, the remarkable expressions of tragic and comic art. Hence, even the phenomena of what is nicknamed Mesmerism. We suspect also that forms of insanity are much more dependent on this extraordinary law of emotional existence than physiologists may be disposed to believe. If Dr. Davey has witnessed 'in one individual,' under what he calls 'magnetic excitement,' 'more forms of monomania than he has ever seen within the walls of Hanwell,' and these 'so splendidly illustrated that he doubted whether the reality could have excelled them,' physiologists have yet much to learn respecting the power of a dominant idea, conception, or phase of mind, in relation to that particular condition which is at present termed insanity."

Mr. Harney.—*We are afraid the party is a begging-letter impostor. Having succeeded with ourselves and one or two others, he seems determined to follow up the vein. We are far from recommending the applicant. The same note for 30s. on the plea of "redeeming clothes from pledge" won our* tribute.

We are obliged to Mr. Watson for his obliging transmission of the report.

Ostrick.—*We know of no such physiological miracle. In the only case we know of, where a knife was swallowed, death speedily followed. Men, it has been said, may by habit swallow marbles with impunity—not knives.*

Dr. Torbock's case in our next.

We really do not see the force of the authorized contradictions to the views expressed by our correspondents on the Birkenhead case. The jury may meet and vote themselves quite right—and nobody ever charged them with thinking too little of themselves—but the main facts remain as they were —very much against them.

M. P. H.—*Mr. Payne's custom of holding inquests after every case of suspicious fire is not well suited for comment in our journal. Of course every coroner should do the like.*

Ch.—*The long letter on John Hunter's monument is rather too personal for publication.*

Our correspondent Galen, *who rails at what he calls parallel novelties*—M—— H——, *and his discoveries—would only tell a thrice-told tale by the publication of his letter. If "the ambitious rushlight be burning out—and hence a little additional stir and fume," the less we should care about diffusing the bad odour.*

We have received several letters and communications which will be noticed next week. Among many we have to acknowledge the following:—Dr. Hollis, Yarmouth; Mr. Waldash, Canterbury; Mr. Wigginton, Wadhurst; Mr. Frail, Arbroath; Mr. Monckton, Brenchley; Mr. Joy, Maidstone; Mr. Davies, Pershore; Mr. Irving, Lockerbie; Mr. Turner, Kendal; Mr. Stuart, Dunse; Dr. Wallace, 76th Regt.; Mr. Markwick, Langham-place, Dr. Willshire, Cecil-street; Mr. Smith, King's College Hospital; Dr. Wright, Birmingham; Dr. Palmer; Mr. Braid, Manchester, &c.

THE MEDICAL TIMES' PRIZES FOR THE BEST REPORTS OF MEDICAL AND SURGICAL CASES.

The results of our last Prizes have been so far encouraging that we propose for Professional Competition, for the year 1847, the following Prizes:—

Twenty-five Guineas for the twelve best reports of original cases in hospital or dispensary practice.

Ten Guineas for the twelve reports of original cases, as above, second in merit.

Five Guineas for twelve reports of original cases, as above, third in merit.

In offering these prizes we repeat that our aim in this, as in other matters, is to promote the SCIENCE of our Profession. The groundwork of the best part of our *practical* science and of most of our subsequent Professional worth is laid down in our studentship; and the great and the only true teacher of the student must ever be—hospital practice. Lectures and books have their uses; but it is by the bed which holds a human being, with the joy of health or the pain of disease, the chance of life or the peril of death, depending on the aids of science, that we acquire our true knowledge. There is there for the student no listless ear, no dull eye of the lecture-room; it is not the memory alone that is appealed to, or some abstract love of a pedantic and inapplicable lore. Every power of his mind is engaged: he is forced by the sympathies of his nature to hear and see, to observe, to reason, to prognosticate, to be EXPERIENCED: each patient's case is a volume of medical science in its most practical aspect, forced on his acquaintance for life!

The authors must be students who shall not have received any medical diplomas or licenses.

Six of the cases are to be medical, and six surgical.

The cases must have occurred during the year; and the names of the gentlemen under whose treatment they may have principally come must be distinctly mentioned.

Three arbitrators will be appointed—one surgeon, one physician, and one general practitioner—whose names will be duly announced. The decision will be on the 1st of July.

The Prize Reports will be published in succession in the "Medical Times," with the names of their authors.

They are to be sent to the Editor of the "Medical Times" on or before May 1, 1847, accompanied by a certificate from a surgeon or physician to a hospital, declaring that the writer is *bonâ fide* a medical student. A motto or device must be inscribed on each report, to identify the author, whose name, with a duplicate of the motto or device, must be mentioned in a private note, which will be opened when the award shall have been made.

THE MEDICAL TIMES.

SATURDAY, APRIL 10, 1847.

STATE OF MEDICINE IN ENGLAND.

THE trial, or rather the triumph, of Dr. Denis Cronin came off on Wednesday last. The learned gentleman had only to look at the judge and jury to get his acquittal, which—the public reciprocating the sentiments of the court —we are told by the newspaper report, was received with loud cheering.

The circumstances of the trial have an insignificance quite proportioned to the importance of the facts of the case; and the fair conclusion to be derived from them is, that Dr. Cronin, in being the unhappy instrument of the death of his unfortunate patient, ought never to have had a moment's uneasiness on his legal responsibility for that calamitous result. Denis Cronins may practise by the dozen, Miss Colliers may die by the hundred, and the law of England, as it at present stands, has nothing in waiting but acquittals, cheers, and triumphs for the lucky agent.

The details of the trial, in another column, have a sort of designed tendency to bring the administration of justice into contempt. The facts brought before the court were, probably, the very facts of least consequence in the case. The witnesses examined were exactly those whose knowledge least revealed the merits of the case. The witnesses kept back and not heard were precisely the gentlemen who, if there were any case at all, could have alone established it. In short, from the selection of Dr. Cronin as physician, to his acquittal by the jury as a prisoner, there seems, as by a fatality, to have been no incident in the whole tragedy which, as influenced by the law of this country, can provoke any opinion, save one of censure and indignation.

In the beginning of February a young lady of large possessions, in the prime of life, and, with the exception of some slight leucorrhœa, apparently in the most perfect health, was imprudent enough to aim at lightening the *tedium vitæ* by consultations with a physician whose consumptive trophies had been blazoned forth, in unacknowledged advertisements, through most of our general newspapers. Before she had acquired the luxury of more than two visits, at the expenditure of the moderate sum of one guinea, she paid the penalty of her foolish restlessness, and offered for the tablets of Esculapius another inscription like that of the honest tombstone:—"I was well, and was not satisfied: took physic, and died." On the first visit the physician condescended to make up his own prescription, and by this accident was saved some bad Latin on his part, and, for a time at least, *life* on that of his interesting patient. On the second occasion the gentleman was more orthodox professionally, and less successful practically—a coincidence less uncommon than is probably imagined. He wrote out his prescription *secundem artem suam*, and, exemplifying at least one honourable distinction between himself and some prescribing practitioners we have heard of, left it to be dispensed by *any* druggist his patient might like to choose. The following was his recipe:—

"℞.—Spt. ammon. arom. ʒij.; tinct. opii M. xvj.; acidi prussici (Scheele's) gtt. iv.; pulv. strych. comp. gr. ij.; aquæ amygd. amar. ℥ij.; fiat mist. e quâ sumatur. coch. ij., ter in die.—Feb. 3, 1847.—Miss Collier.—D. C."

We must in charity imagine that Dr. Cronin aimed at giving a new illustration for the chapter of chemical decompositions. It would seem as though the learned doctor sought to make potencies inert, and out of many energetic medicines to get the effect of none. In disguise—apart from the one ingredient, the cause of the calamity—the French expectant system seems anxiously looked after, under the disguise of the most energetic English treatment. Judging from this single instance, we should say there is no more expert artist in the kingdom for "pouring ingredients of which he knows little into bodies of which he knows less." If there were no tragedy connected with the prescription it would justify endless cachinnations from every medicinal tyro in civilized Europe.

It is obvious that a blunder of the greatest magnitude is committed, in the vague way in which we have bitter-almond water prescribed. On its absence from the Pharmacopœias we make no complaint; though illegal, there is no physician who confines himself to the preparations of the three Pharmacopœias; to do so, indeed, would be to show greater confidence in the three colleges than we entertain, and practically to put a stop—in one department at least —to the progress of medicine. But Dr. Cronin, in using his new and extraordinary remedy, ought to have been aware of the circumstances of its preparation and sale. If he were ignorant of these, he was dealing with a deadly agent, with a culpable unacquaintance with its qualities. There was no justification for such ignorance, and for every calamitous result arising from it he was morally, as well as legally, responsible. If he were unacquainted with the nature of the drug he prescribed, or of the circumstances of its preparation and sale, there is no excuse for the evident peril which his mode of prescribing it necessarily involved. He prescribed what, in many of its forms, must inevitably have

killed his patient, and had no protection against that catastrophe but qualities in the druggist on which this case too clearly proves he ought not to have counted—discretion, intelligence, and science.

But this improper reliance on the druggist did not end here: the prescription actually containing three points of difficulty on which any druggist would be left at sea for a solution. The compound strychnine powder, by that description, is one of the most indefinite preparations a druggist could have to deal with. Dr. Cronin tells us that he meant a simple compound of sugar and strychnia; but no such preparation is recognised in any pharmacology that we are acquainted with. The only one authorized at all is a totally different composition; and then, finally, as if the vagueness of the almond-water was not of itself sufficiently perilous, we have a total omission with regard to the amount of the dose. A spoon is mentioned preceding the doctor's initials; the size is wholly omitted. Thus it was a prescription which no man in his senses ought to have written; and thus, too, was it a prescription which no man out of bedlam ought to have dispensed.

Mr. Corfield, of High-street, Camden-town to whom the prescription was first brought knew nothing of the compound strychnia, nor of the almond-water, and had neither in his possession. How does he aim at supplying the defect? He sends to Mr. Morson. Mr. Morson, who is a vice-president of the Pharmaceutical Society, seems to have had neither preparation, and little, if any, knowledge of them. Mr. Jacob Bell is next applied to, who sends a private form for the compound strychnine powder, and twelve ounces of almond-water, an ounce of which represents, he tells us, sixty-one (seventy?) minims of the Pharmacopœal prussic acid. Mr. Bell—the editor of a Pharmaceutical Journal, the founder and ruler of a Pharmaceutical Society—though he knew that Continental Pharmacopœias showed eighteen different varieties of bitter-almond water, all varying in strength, from comparative inertness to a proportion in which one ounce will equal sixty-one minims of prussic acid, sends a brother chemist twelve ounces of this fearful liquid, in this strongest form, without marking the preparation as poisonous, or defining its strength! Of the eighteen preparations known to Mr. Jacob Bell, the chemist Corfield was left to speculate whether the preparation was the weakest number one, or the strongest number eighteen; and thus provoked and partly justified Mr. Corfield in the supposition that it was an innocuous preparation, requiring no extraordinary care.

The prescription—which had thus first a blundering origin, then encountered pharmaceutical ignorance on the part of a vice-president of a Pharmaceutical Society, and then is blunderingly dispensed by a founder of that society—now meets its *finale* of blunder from Mr. Corfield, who, we believe, is a member of the same learned society. Knowing nothing of the strength of the concentrated poison sent to him by Mr. Bell, he unhesitatingly purveys it in a dose that must necessarily kill the patient; he just as unhesitatingly slurs over the difficulty as to whether the spoonful of the poison ought to be large or small; and, having no compound strychnine powder, he coolly makes up the prescription without it, although a formula for its preparation is at that moment in his hand!

The poor girl takes the poison and dies almost immediately. The blunder of her physician and her druggists had brought on her, in the midday of life and health, a crisis which neither the strength of her own constitution, nor the scientific skill of Mr. Weathers, could carry her through. She perished a martyr to a bad state of physic, and, if possible, a worse state of pharmacy. Would that we could say that she was the only victim!

Before indulging in the general remarks which this dreadful case naturally suggests to us, we must be allowed one word on the defeat of justice which this trial so strikingly manifests. From the moment we had read the details of the inquest we were quite certain what would be the issue. How could a jury or the public connect fairness or value with a coroner's proceedings, when the parties who were little, if at all, less blameless than Dr. Cronin, were brought forward against him as applauded and unexceptionable witnesses, and when, above all, Jacob Bell, who had so largely contributed to the fatal result, was empowered to make a *scientific* analysis of the poison actually supplied by himself? A more extraordinary procedure we cannot conceive; and if Mr. Jacob Bell is, has been, or is expected to be, as the founder of pharmaceutical societies, in relation with that coroner as a member of Parliament, in reference to the question of medical reform, and its adjustment to suit pharmaceutical interests—if Mr. Jacob Bell shall be found, as the editor of "The Pharmaceutical Transactions," acting in concurrence with that coroner as a journalist, the public will not be slow in demanding on what grounds of *public* policy so anomalous and so suspicious an appointment was made.

Mr. Bell enters on the analysis in the laboratory of the Pharmaceutical Society. The coroner—fair enough to entrust—he sufficiently delicate to accept—the disposal of the fate of his copartner in misfortune—Dr. Denis Cronin, what, do our readers think, were the media by which this eminent chemist sought to ascertain whether or not more than four drops of Scheele's prussic acid—yielding a precipitate of cyanide of silver of say $\frac{1}{200}$ part of a grain—were contained in a six-ounce mixture? Scales made for pounds, but which *would* turn with a grain! and a pair of dispensing scales which would turn, *perhaps*, with the twentieth of a grain!—but no weights smaller than tenths being forthcoming in this Royal Pharmaceutical Society, even this quasi-delicacy could not be ascertained! The scales, of course, had no glass case; and we were informed by an eminent chemist present, that, though every instrument necessary for so minute an investigation was absent, Mr. Bell and Mr. Morson, both great authorities in the world of pharmacy, would insist—notwithstanding the delicate responsibility under which they were acting—that the apparatus would "afford results that were near enough"!

Placed in such hands, we can condole with even Dr. Cronin; but what shall we say of British pharmacy *condemned* to no better protectors! The Pharmaceutical Society affects to be the head-quarters of practical chemistry in this country. Mr. Morson is one of its presidents, Mr. Bell has the higher honour of being its founder and *literary* exponent. If we may judge of the *chemical* attainments of other functionaries of the body from those manifested by the leading duumvirate, we should say that this pharmaceutical congeries would be just as appropriately designated if called "The Astronomical Society." It is impossible that they can know less of one science than of the other.

MISCELLANEOUS CORRESPONDENCE.

HOMŒOPATHY.

[To the Editor of the Medical Times.]

SIR,—The discussion on the subject of homœopathy to which, with your usual liberality, you have opened your valuable pages, and more especially the remarks of Mr. Close in your number of Saturday last, have induced me to trouble you with the following observations. I must premise, however, that I do not present myself as the advocate of homœopathy, my experience in the science having been too slight to enable me to enter the lists against those who regard it as based upon unfounded principles; but, leaving its advocacy to others, I do not hesitate to affirm that, in my judgment, the propositions of Dr. Hilbers have not been at all affected by the arguments of his opponents. On the other hand, orthodox physic not unfrequently receives a side-blow from the unconscious hands of its own supporters, and I am inclined to believe that many of the remarks in Mr. Close's paper are as fatal to allopathic as to homœopathic doctrines:—"Gravitation, electricity, and magnetism," observes he, "are general laws which coexist with, and depend upon, the integrant constitution of bodies themselves; so likewise the healing law, it may, *à priori*, be anticipated, should be sought for, and will be found, in the organic construction of the living being itself, and not in the extrinsic *materiel* which may be brought to act upon it. This law has been long recognised as the *vis medicatrix*, and not the *similia similibus*. To watch, to assist, to control its operations, make up the sum of the true philosophy of medicine."—"In some instances it succeeds partially, in others it fails; in some it seems to act too powerfully, and, like the viper, inflicts upon itself the sting of death. In *all*, under circumstances favourable to observation, its benign influence may be more or less recognised."

Now, Mr. Close, in attempting to indoctrinate his readers into the assumed connection existing between the healing law and the general laws of matter, should at least have taken care to instruct himself fully of the nature and properties of the latter. The general physical laws, gravitation, electricity, &c., *do not* "depend on the *integrant constitution of bodies*," they coexist with *matter itself*, and are inherent in its minutest atoms as well as in its largest masses; and thus, starting with a false fact, he runs into the false assumptions and hasty generalizations of which he, I think rather unfairly, accuses his opponents. What can be more absurd than the figurative representation of a *vis medicatrix* inflicting upon itself, viper-like, the sting of death? If there exists in the living organism a power or quality which enables it to remedy its lesions, according

to a law as unfailing and unchangeable as the laws which govern the phenomena of inert matter, it appears to me contrary to all analogy to suppose that the great Author of nature would permit the operation of that law to counteract the benign intention with which it was so wisely framed. Again, if such an innate power exist, I much fear that few of our allopathic forms of treating disease can be considered as adjuvants to its operations: when, for instance, we apply leeches, blisters, &c., to the abdominal surface in peritonitis, we can hardly be said to be aiding the operations of the *vis medicatrix*, which is lavishly pouring into the membrane an excessive quantity of blood, while we are endeavouring most strenuously to induce its metastasis by the action of powerful derivatives. It appears to me that it is only in the healthy healing process *succeeding* a disease, or the infliction of a wound, that we witness anything which can be positively affirmed to be an inherent sanatory process, or *medicatrix* of the organism. We know that a wound will heal, or a solution of continuity in bone be repaired, by vital processes, provided the surrounding tissues be *healthy*: for there appears to be a wide distinction between a traumatic and an organic lesion, although organic disease may be evoked by a simple wound under peculiar circumstances; but in both instances the efforts of the system appear to be evidently reparative or reconstructive, not antagonistic. When the seeds of a disease have found a *nidus* in the system, it will surely run its course if not checked by the action of what Mr. Close would call "extrinsic *materiel*;" and if the constitution of the patient, aided by idiosyncrasy, and perhaps by the action of medicinal agents, is capable of withstanding the disease, then the action of the *vis medicatrix*—that is, the constructive or reparative action—is observed to progress with rapidity under favourable circumstances, until the injured tissues are remodelled or built up; their constructive perfection constituting health. In this view of the question, which I believe to be the correct one, the organism presents but a *passive* resistance to the encroaches of disease, and the action of the *vis medicatrix* is purely *reparative* and reconstructive. Disease we unfortunately know but little of, irrespective of the symptoms it produces; pathology exhibits its ravages in particular organs, but with regard to its origin our hypotheses are of a very unsatisfactory nature; and the same may be said of the action of remedies in subduing or eradicating it. Indeed I much fear that most practitioners would be induced to echo the affirmation of the late Dr. J. Johnson, at the close of his professional career, to the effect that, in the exhibition of remedies, he believed he had done more harm than good.

As an independent and unprejudiced reviewer of the arguments between the advocates and opponents of homœopathy, I must say that I do not think that its opponents have bestowed sufficient attention on the subject, nor do I think that Mr. Close discusses the question with due fairness. "Facts," observes he, "are the *only basis* of accurate knowledge, though not in themselves *sufficient* without collation and comparison with themselves, and with general laws." Now, leaving the grammatical accuracy of the above sentence out of the question, I am inclined to believe that its logic is scarcely sufficient to warrant us in placing implicit reliance on the powers and judgment of the writer, for if facts are the *only* basis of accurate knowledge, they should be in themselves *sufficient*. Again, his assertion that the opponents of homœopathy are bound by the *ipse dixit* of a person who half a century ago experimented with certain drugs, is unfair and erroneous, for he must be aware, if he has studied the subject, that it is not to the experiments of a single individual he is bound to give credence, but to those of a great number, both contemporaries and post-temporaries of Hahnemann. Nor has it ever been asserted, that I am aware, that homœopathic doses of belladonna have ever produced a scarlet rash, or homœopathic cinchona the ague. Why, then, resort to the miserable shift of a *petitio principii*, when the real question is within reach? It would be extremely easy to prove, by a reference to the writings of Hahnemann and other homœopathists, that the effects of the medicines used in homœopathy have been tried in almost the usual allopathic doses, the minute doses having only been employed as the result of gradual experience in the treatment of disease. It is not at all improbable, indeed it is only ignorance or obstinacy that will lead medical men to sneer at the fact, that, in particular states of the system, certain medicines will act more powerfully than usual, and *vice versa*. The 12th of a grain of tartar emetic will produce violent emesis in an individual usually unaffected by twelve times the dose; and I have frequently seen it administered to infants in croup to the extent of three or four grains in divided doses, within a quarter of an hour, without producing even apparent nausea; and calomel may sometimes be given in enormous quantity, as in acute inflammatory attacks, cholera, &c., without inducing its usual effects. Again, some there are who can bear the strongest and most repulsive odours with ease, while some may

"Die of a rose in aromatic pain."

These are facts bearing, as they do, so strongly on the subject of idiosyncrasy, that the truly interested explorer of medical science will not be inclined to slur over with a pshaw! or dismiss with a sneer. Who knows not that peculiar constitutions are more susceptible than others of the action of particular medicinal agents? or that at one time the system will become affected by a dose much more minute than it will ordinarily tolerate?

Indeed the doctrine of pathogenesy, as introduced by Hahnemann, is of a deeply interesting character, and in a physiological point of view may lead to the most important discoveries.

If in the *argumentum ad hominum* "fair play is a jewel," in the discussion of subjects connected with science, and, above all, medical science, it is indeed a jewel of infinite worth. The avenues to the Temple of Truth are effectually guarded against the footsteps of prejudice, bigotry, and intolerance. We should enter the fields of research with a desire to aid and not oppose each other in our scientific explorations; by such means alone the progress of science will be advanced, while, on the other hand, it must be most certainly retarded by the antagonism of conflicting interests, and the brawlings of party strife. It appears to me strange indeed that not one of the opponents of homœopathy have essayed to repeat the experiments on which its law is said to be founded; and although I think I hear Mr. Close exclaim, "Sophistry! mere sophistry!" every sensible person will at once acknowledge that such is the only mode by which the presumed law may be either negatived or affirmed. This may be sophistry in Mr. Close's logic, but it would be difficult to find a parallel for such a sophism in Bishop Whateley's.

Let the science be submitted to a tribunal of men of acknowledged abilities; let its principles be subjected to a fair and impartial analysis, and judgment be pronounced accordingly; but its advocates may congratulate themselves, thus far at least, that it must be rather advanced than retarded by the writings of opponents who seem to know but little either of its principles or practice.

I am, Sir, your obedient servant,
TRUTHSEEKER.

London, March 15.

TRIAL OF DR. CRONIN FOR THE MANSLAUGHTER OF MISS COLLYER.

[*Before Mr. Justice Coleridge.*]

Dennis Cronin surrendered to take his trial at the Old Bailey, on Wednesday, upon an indictment charging him with the manslaughter of Sarah Ellen Collyer.

Mr. Payne prosecuted; and Mr. Clarkson conducted the defence.

Mr. Clarkson said that he should not attempt to dispute the facts connected with the death. It would only be necessary to state that the deceased was suffering from some malady at the commencement of last February, and applied to the defendant, who furnished her with some medicine, which was sent from his own dispensary, and after she had taken it she appeared better. The defendant afterwards gave her a prescription, telling her that she could get the medicine made up at any chemist's, and it appeared that on the 15th of February a person named Johnson was sent with the prescription to the shop of a druggist named Corfield, in Camden-town, and he received from him a bottle of medicine, which he brought back to the deceased, and upon her taking a tablespoonful of the mixture she immediately complained of illness, and died in the space of a very few minutes, the death being clearly occasioned by prussic acid contained in the compound thus furnished.

Mr. Daniel Corfield was examined: He deposed that he was a chemist, and resided in High-street, Camden-town. He remembered Mr. Johnson coming to his shop on the evening of the 15th of February with a prescription for a mixture, which was to be composed of two drachms of compound spirit of ammonia, sixteen drops of tincture of opium, four drops of prussic acid (Scheele's strength), two grains of compound strychnine powder, and six ounces of bitter almond water. The prescription was dated the 3d of February. Having no strychnine powder or bitter almond water, he sent his boy to fetch some, and he brought back a 12 oz. bottle of bitter almond water, and having placed the other ingredients in a bottle, with the exception of the strychnine powder, he filled it up with six ounces of the bitter almond water, and gave the mixture to Mr. Johnson. In addition to this evidence, he stated that, having been in business as a chemist for twelve years, he never before heard of strychnine powder or bitter almond water being used as the ingredients of medicine.

Cross-examined: He was entirely ignorant of the qualities of bitter almond water and strychnine powder, and they were not named in any recognised Pharmacopœia. The last edition of the "Pharmacopœia" was published eleven years ago; and since that period there had no doubt been a great advance of medical science, and many new discoveries in medicine had been made.

Mr. Clarkson: Do you know anything of the character of strychnine powder, or whether it would be calculated in any way to neutralize the effect of the other ingredients of the mixture?—Witness: I don't know anything of the quality or effect of this powder.

Mr. Clarkson: And yet you did not communicate the fact of its having been omitted to the party to whom you gave the medicine?—Witness: I did not.

Mr. Clarkson: In justice to Dr. Cronin, will you tell us whether you sent the prescription to Mr. Bell, from whom you obtained the bitter almond water?—Witness: I did not.

Mr. Clarkson: Then he had no means whatever of knowing how it was to be used—whether internally or externally?

Cross-examination: The bitter almond water appeared only to be intended as a medium for mixing the other ingredients and making up the quantity. The different articles mentioned in the prescription he should say were calculated to neutralize each other; the spirit of ammonia, for instance, would decompose the prussic acid. He was not aware that there were a great many different descriptions of bitter almond water, and that some were deadly poison while others were perfectly harmless. It was evidently the intention of the prescription that the simple bitter almond water should be used, and not the concentrated essence of the bitter almond, and then only as a vehicle for mixing the other ingredients.

Mr. Clarkson: And you filled up the bottle with six ounces of deadly poison?—Witness: I filled it up with the bitter almond water that I received from Mr. Bell.

Mr. Clarkson: Without meaning anything offensive, will you allow me to ask you whether persons who follow the profession of a chemist undergo any medical examination?—Witness: They do not.

Mr. Justice Coleridge here interposed, and observed, that to say the least of it the act of pretending to make up a prescription sent by a physician, without putting in all the ingredients mentioned in it, was most monstrous. Although not a fraud in the ordinary sense of the term, still it was one on the person for whom the medicine was intended. Such a proceeding was very dangerous in any case, and he was not prepared to say what the effect had been in the present instance.

Mr. Morson, a chemist in Southampton-row, to whom the first application was made by Mr. Corfield's messenger for the powder and the bitter almond water, but who not having them referred him to Mr. Bell, of Oxford-street, was next examined, but he merely proved that, having been in business as a chemist for a great many years, he had never heard of bitter almond water being used in compounding medicine.

Mr. Jacob Bell deposed that he received an order from Mr. Corfield for the bitter almond water and the strychnine powder. He had none of the powder, and therefore he only sent the bitter almond water, and a formula of the powder that he found in a book to which he referred. There were twenty-two different descriptions of bitter almond water, and looking at the prescription he should not know what description was required, and if such a prescription had been sent to him he should not have made it up without communicating with the physician. Different distilled waters were made use of to mix medicine in, some being poisonous and others harmless; but in the former case he should expect the prescription would denote the strength that was to be used. Chemically speaking, he was of opinion that the omission of the strychnine powder would not at all affect the quality of the mixture in question, excepting that the omission of a poisonous ingredient would have rendered it less poisonous. This powder was a preparation from *nux vomica*, but the quantity mentioned in the prescription would in itself have been perfectly harmless.

Cross-examined: If he had seen the prescription he should have known that the bitter almond water was merely intended as a vehicle for the administration of the medicine, and he would have made use of a harmless description of bitter almond water. In that case no mischief would have happened. He had no means of knowing whether it was to be used internally or externally, or, in fact, to what purpose it was to be applied. If he had known that the bitter almond water he sent was to have been used internally, he should not have put the word "poison" upon the bottle, because he should think a chemist would be aware of the fact; but if he had known that he was dealing with a person who admitted, although in that profession, that he was entirely ignorant of the qualities of the article, then he should certainly have put the word "poison" on the bottle. The article he sent was a concentrated bitter almond water, but there was some of a more powerful description.

Mr. Justice Coleridge inquired of the witness whether, when the chemists sent out the concentrated almond water, it was not customary to label it as such?

The witness said it was not customary to do so.

In answer to further questions put by Mr. Clarkson, the witness said that although he did not consider the quantity of bitter almond water that he sent was sufficient to kill a horse, there was quite enough to destroy a human being. He likewise said that there was no doubt the physicians of the present day were infinitely in advance of the existing Pharmacopœia.

Re-examined: In his opinion the prescription should have defined the strength of the bitter almond water that was to be made use of.

Mr. J. E. Spratt, chemist, deposed that he kept five descriptions of bitter almond water—two English and three foreign. He was in the habit of making up physicians' prescriptions, and constantly used bitter almond water. If the word "concentrated" was not mentioned in the prescription he should use the strength stated in "Gray's Pharmacopœia," which would be quite harmless.

Mr. Justice Coleridge: Then, in your opinion, the omission of the word "concentrated" was an indication that the weak description of bitter almond water was intended to be used in the prescription?—Witness: Certainly. If this prescription had been sent to me I should have used the weak compound.

Mr. Justice Coleridge: And if you had done that would the mixture have been harmless?—Witness: I conceive so.

The learned judge here inquired of Mr. Payne whether he thought the case ought to be carried any further?

Mr. Payne said he certainly thought after the evidence that had just been given that the matter was too doubtful to justify a conviction.

His lordship observed, it appeared perfectly clear that a chemist possessing the ordinary knowledge of his profession must have known that a weak description of bitter almond water was intended to be used for the prescription. Mr. Corfield did not appear to have known anything upon the subject, and he did not give the prescription a fair chance.

The jury then deliberated together for two or three minutes, when

Mr. Clarkson observed, that perhaps it would be more satisfactory to all parties that another medical witness should be examined.

Dr. Robert Venables, lecturer on forensic medicine, was accordingly called, and, after having stated that upon analysis he discovered sufficient prussic acid in the liquid of which the deceased had partaken to account for her death, he said that, looking at the prescription, he should have expected that the ordinary weak compound of bitter almonds would have been used, and that was perfectly harmless. He also said that if the strychnine powder had been added, although it would not have had any chemical effect, it would have acted physiologically upon the system, and would have had a similar effect to ammonia in neutralizing the prussic acid.

The jury here interposed, stating that they were quite satisfied with the evidence that had been adduced, and they at once returned a verdict of *Not Guilty*.

Mr. Clarkson observed, that if the case had gone further he had twenty chemists present to prove that bitter almond water was constantly an ingredient in the prescriptions they made up for physicians.

Mr. Justice Coleridge ordered the defendant to be immediately discharged.

DR. CRONIN'S TRIAL AND ACQUITTAL.

(From the *Pharmaceutical Times.*)

Since the late calamitous death by prussic acid—an occurrence which, bowing to judicial authority, we may no longer call manslaughter—we have been inundated with letters in some way relating to the principal hero who figures in the tragic scene. Of course we did not notice these communications, considering it but just to Dr. Cronin, that our opinion should be reserved until after the judicial inquiry had terminated. We were determined, in other words, not to prejudice his case; and, therefore, offered no opinion on the nature of certain prescriptions which had reached us under the signature of D. C.; much less did we oblige our correspondents by ascertaining whether this same Dr. Cronin was the individual who had already been implicated in one charge of manslaughter at Liverpool, and another at Barnstaple. Indeed we were rather favourably disposed to the doctor, who appeared to us an honest man, performing what his advertisements promised—to *cure* consumption. In truth, few diseases, we believe, would resist the heroic treatment of nux vomica and prussic acid which seems so peculiarly his own. But, reverting to the prescription which caused the death of Miss Collyer, let us coolly and dispassionately ascertain, if we can, what the doctor really meant to be dispensed.

Unquestionably his prescription was fatal on account of the large amount of prussic acid ordered; chiefly in the form of bitter almond water; and the trial seems to have broken down in consequence of the assumption that the bitter almond water mentioned in "Gray's Supplement to the Pharmacopœia" ought necessarily to have been employed. Why necessarily we cannot tell, inasmuch as "Gray's Supplement" is not a recognised guide for the preparation of medicines; and it is not incumbent on any dispenser of medicine, be he apothecary—be he druggist—to be acquainted with any form therein contained except such as may also exist in the Pharmacopœia. But, did Dr. Cronin ever intend to have employed the formula mentioned by Gray? would the patient have been supplied with this form in her mixture had she procured it from Dr. Cronin's own shop? Undoubtedly not; for we are informed by Mr. Venables, a pupil of Dr. Cronin's, and son of the Dr. Venables who was *the only* medical witness examined at the trial, that the bitter almond water used by his principal was a very dilute preparation, made by adding a few drops of bitter almond oil to a large quantity of water. After all this importance, then, which has been given to "Gray's Supplement," as a recognised standard for the dispensing of medicine, it happens that, even had the prescription been dispensed in accordance with this book, the almond water would not have been that *intended* by the prescriber—there would, in fact, have been committed, in one sense, *a mistake*, and the young lady's life *might have* been saved. We say, might have—for, unquestionably, the bitter almond water of Gray is far from being the harmless compound asserted by Mr. Spratt—in fact, it is a poison.

Again, as to the compound powder of strychnia. After the fatal prescription had been dispensed, and the young lady's death had taken place, the compound powder of strychnia mentioned by Beazely was fixed upon by Dr. Cronin, and his friendly advocates, Mr. Tennant and Dr. Venables, as the basis of another special pleading.

The preparation in question contains black oxide of iron, a fact eagerly laid hold of by Dr. Venables, the chemical adviser of Dr. Cronin, to be wielded in the following line of argument:—That had the compound powder in question been used, prussian blue would have been formed, and hence a portion of the prussic acid rendered inert. It would seem, then, from the tenor of this argument that Beazely's compound strychnia powder was the substance intended by the prescriber,—that a mixture coming from his shop, and dispensed in accordance with the aforesaid prescription, should have displayed a blue colour:—not so again—for at a more advanced period of the inquest the doctor admits that his own compound powder of strychnia *did not* contain oxide of iron! hence all that had previously been advanced about the neutralizing effect of that oxide and the blue mixture was merely an example of *ex post facto* ingenuity, the honesty of which our readers can appreciate. Even had black

oxide of iron been present, we need not tell our chemical readers that it would not have formed prussian blue with hydrocyanic acid, and that the neutralizing effect spoken of is purely imaginary. We waive altogether the absurdity of supposing that the third part of a grain of either of the iron oxides would have materially weakened seventy minims of pharmacopœial prussic acid. We certainly blame Mr. Corfield for having omitted the compound powder,—but merely on the general ground that a druggist has no right to tamper with a prescription;—in this case its addition would have increased the poisonous nature of the mixture.

Dr. Cronin cannot complain because we judge him by the standard, which he and his judicial friends have laid down for his own guidance. It has been argued that Gray's formula for bitter almond water and Beazely's formula for compound strychnia powder, should have been employed. The public have been amused by recitals of the various chemical reactions, and physiological antagonisms, which would have resulted *had* they been employed; and yet —after all this display of scientific argument—the preparations in question *were never intended to have been employed at all!*

Were it our province to expatiate on the general incongruity of materials indicated by Dr. Cronin's prescription, our task would be long indeed. Never had we seen any previous instance of such deadly materials so intermixed;—with a playful wantonness, it would seem, and to accomplish no definite object whatever. An idea seems to be prevalent amongst the public—and we are not wrong in saying that it is encouraged by the doctor—to the effect that the compound spirit of ammonia used counteracted the prussic acid. Now, the assertion is neither chemically nor physiologically correct. The union of the two would form hydrocyanate of ammonia, a substance nearly as virulent as prussic acid itself, as the experiments of all toxicologists will testify. True, if hydrocyanic acid be swallowed, *ammonia is employed* remedially;—not chemically, but as a stimulant; which stimulant effect is, of course, lost by union with hydrocyanic acid.

True it is that hydrocyanate of ammonia is somewhat more liable to decomposition than hydrocyanic acid itself; but to what extent has been proved by a comparative analysis of Dr. Scoffern, performed by the coroner's order. After a lapse of more than a week, the fatal mixture, on being analyzed, was found to contain only four hundredths of a grain of prussic acid per cent. less than a similar mixture prepared at the time of analysis.

Having directed the foregoing remarks more particularly to Dr. Cronin and his prescription, we will now say a few words on the mode in which the judicial inquiry was conducted. It will be considered strange by many parties that no counsel for the prosecution was employed by the friends of the deceased. The death of a young, and, we may say, healthy, girl, by prussic acid, would have been sufficient to have aroused, in the breasts of some relatives, feelings of deeper resentment than seem to have been exercised in the present case. Various reasons for this seeming forgiveness have met our ear, but with which it is not our province to meddle; the result was, however, that no counsel for the prosecution was appointed by the friends of deceased; therefore the depositions were read at the request of the court by Mr. Paine.

The mode of examination of witnesses pursued was, no doubt, in accordance with legal propriety, albeit many points require explanation to us. In the first place, it does appear to us extraordinary that the medical gentleman, Mr. Weathers, who was at the eleventh hour called in to see the unfortunate young lady, did not grace the witness-box at all;—that the *only* medical witness examined was Dr. Venables, whose son *was, and, we believe, still is,* a pupil of Dr. Cronin's; that Mr. Clarkson, for the defence, after getting Mr. Corfield to admit the total incompetency of druggists (we think Mr. Corfield was unjust to his class) to give a chemical opinion—actually, after this admission, sought all the chemical testimony he required from Messrs. Bell, Morson, and Spratt, members of the class whom he had inferentially accused of ignorance in that particular science, to the exclusion of Dr. Scoffern, who, although he had performed the analysis by the coroner's order, and therefore was certainly an important evidence, was excluded the witness-box altogether! We felicitate Dr. Cronin on having had so important a witness as Mr. Spratt, the gentleman who at the coroner's inquisition was blessed with so oblivious a memory, but who, in the lobby of the Old Bailey on the morning of the trial, stated exultingly that he *did remember,* but would not be fool enough to tell! This same Mr. Spratt, one of the class on whom the counsel for the defence had inferentially thrown a doubt as to their amount of chemical information, affirmed that Gray's bitter almond water was harmless, and that he should have used it; on which the case broke down.

And now a passing word for Mr. Jacob Bell. He—the well-meaning regenerator of British pharmacy—the patron of the Pharmaceutical Society—to send out a deadly poison without a label! and—although cognizant of "twenty-two varieties,"—without one word to indicate that this was THE MOST POISONOUS! Shame! We can imagine him on the far-away sheriffs' bench glancing with unquiet eye towards the felon dock, conscience whispering that which we yesterday heard more audibly expressed, that *he, too, should have been there!*

One important consideration still remains to be discussed—the amount of responsibility which society attaches to dispensing chemists. It appears, then, from a consideration of this case, that society is not content to regard them as mere dispensing machines: they are expected to be competent to pass a judgment on the general qualities of a medicine, and to be equal to the task of detecting any glaring mistakes. This is what society requires of them—*will have* of them; and yet the law inferentially brands them as incompetent! Now, how much longer will dispensing chemists submit to this aspersion? How much longer will they remain disconnected among themselves,—lost to the sense of their own rights,—treated with distrust by society, and be made to pronounce their own dishonour before an Old Bailey jury?

Unquestionably, the education of druggists in general has been felt by themselves to be under the mark which the exigencies of their calling require; these deficiencies they have themselves denounced, and have expressed their wish to overcome; but they have built their faith, and it is with grief we say so, on what promises to be a foundation of sand—the Pharmaceutical Society!

The greatest social and educational boon which the druggists' assistants could have acquired—a few hours for educational purposes in the evening of each day—has been systematically refused by the society, under the absurd plea that the assistants would become immoral thereby. Much more likely is it that a few's peculiar interests have been consulted in this matter,—and that, for the peculiar benefit of them, a whole community has suffered! But we have said enough; the Pharmaceutical Society was either made for the body of druggists, or they were made for it,—which supposition is the correct one the druggists themselves must decide.

CHARGE OF POISONING BY ARSENIC.

NORTHERN CIRCUIT—MARCH 30.

[*Before Mr. Baron Alderson.*]

Elizabeth Johnson stood charged with the wilful murder of Henry Johnson, at Barton-upon-Irwell, by the administering of arsenic.

Mr. Hulton, Mr. Monk, and Mr. J. Pollock for the prosecution. The prisoner was defended by Mr. Sergeant Wilkins and Mr. Overend.

The facts for the prosecution were as follow:—

Robert Johnson stated that he was the brother of the deceased, who was forty-two years old at the time of his death. Had never known the deceased ill in his life. Was present when the body was disinterred, on the 9th of March. Mr. Hepworth and Mr. Lee were present. The deceased kept a horse and cart, and was well to do in the world. Witness knew a person of the name of Abraham Hewitt; he is sixty years of age.

William Lord, a blind man, was the next witness called, but his evidence was not important.

Peter Barnes saw the deceased at a colliery at Halshaw-moor, on the Friday in question, November 27, at about half-past eight, and he seemed in good health.

Emma Bowers deposed that deceased passed the house with a load of coals about two o'clock on Friday, the 27th of November. Knew a man called Abraham Hewitt. Had seen him frequently at the house before the death of the deceased,—only once after. Never saw him there when deceased was at home.

Reginald Longshaw corroborated the former part of the preceding evidence.

Martha Livesey stated that she lived at Barton-bridge with her mother, who kept a shop. She sold arsenic. The shop is about one mile and a half from the house occupied by the deceased. Had known the prisoner for more than a year, from her coming to the shop, but did not know her by name. The prisoner came on Friday, November 27, between two and four o'clock in the afternoon. Thinks it was a little before three o'clock. She asked for threepenny worth of arsenic, which she said was for rats that infested the gutter. Witness asked if there were any children in the house? and prisoner said there were not. Prisoner put the arsenic in a basket and went away. On the 4th of January witness saw the prisoner at the house of Forrester, the officer. Forrester asked the prisoner if she knew witness? She said she had no recollection of her. Witness said that was strange, as prisoner had so often come to the shop. Prisoner said she had never been there. Witness said she had, and had come for arsenic. Prisoner replied she never had, and that the witness was mistaken.

In cross-examination the witness stated that the shop is one in which drugs are sold on one side, and drapery goods on the other. The customers are chiefly working people, and arsenic is frequently sold to them for rats. The cart of the deceased would pass the shop door on the way to Halshaw-moor.

Sarah Hardman was present when the prisoner bought the arsenic from the last witness. The prisoner had on a blue plaid dress, a black velvet mantle, and a coarse white bonnet. She put the arsenic in a dark-coloured basket.

John Hardman, the brother of the last witness, corroborated her recollection as to the date.

Jane Bradshaw gave evidence of an unimportant character.

John Whitehead: Had known the deceased, and lodged in his house about six weeks before his death. Witness went away on the 24th of November and returned on the 28th. The prisoner told him on his return that her husband was very ill; had been taken ill on the Friday evening, and had vomited very much. He asked her if she had sent for a surgeon? and she said she had not, but had sent for some stuff to Mr. Hepworth's, the surgeon, who lives about 200 yards from the house of the deceased. Saw the deceased on the Sunday. He appeared very poorly, but did not complain of any particular pain. Mrs. Johnson carried away the vessel containing what he threw up. Saw him two or three times on the Monday, and he was much in the same state. Mrs. Moult, who lodged in the same house, had been absent, and she returned on the Tuesday evening. Saw the deceased on the Wednesday. He was then very ill. The prisoner asked witness to go up and read to him. Witness did so. He was then very sick, and the prisoner was attending him. Saw the deceased for the last time alive about four o'clock that day, when witness assisted in lifting him out of bed. He died at six o'clock that day. The prisoner and his wife appeared to live comfortably. Witness was not much at home.

In cross-examination the witness said it was the bible the prisoner asked him to read to her husband. She seemed to be attentive and kind to him.

Benjamin Millington, a cousin of the prisoner, and a local Wesleyan preacher, stated that on the 29th November he went to the house of the deceased, and found him in bed. He said he was not in pain, but was "inwardly done." He complained of sickness and thirst. Prisoner seemed quite cheerful, and not apprehending any danger. Witness went to preach in the neighbourhood. Returned in the evening, and found deceased much in the same state. Believed deceased and his wife had been in some way related before their marriage.

Margaret Bent stated that she was housekeeper to Mr. Rogerson, the landlord of the deceased. Went to the house of the deceased the evening he died. Found prisoner with Joseph Bethell in the stable. Prisoner came out and asked witness if she had heard of deceased being ill? saying he had been ill since Thursday. Witness said she had seen him come from the coalpit that day. The prisoner then said, "Then it must have been Wednesday." Witness asked "What was to do with him?" She replied, "A bad cold and other things." She asked witness to go up stairs and see him. Said deceased would never come out of that bed alive. Witness said, "Eh, woman, how you talk!" The prisoner repeated the observation, saying his inside was quite done; that he had been ill for several months; they had not had a doctor, but were expecting one every minute. She said, "He'll never come down those stairs alive. I have quite prepared myself for it, though I have been laughing and talking with you; and I am going to Worsley to my father to get some hay, that the horse may have something to eat after he is dead."

Joseph Bethell, weaver: Saw deceased on the Saturday before his death. He was dressed and standing up. He was sick. About ten days after Johnson's death saw Hewitt at witness's door. He said something to witness's wife. He had once before seen Hewitt about deceased's house, but could not say at what time of day. It was about nine months before.

Mr. J. Hepworth, surgeon, at Croftsbank, said he knew the deceased. Went to visit him on the 30th of November, about six o'clock in the evening. He complained of pain in the bowels, with vomiting and severe thirst. He said he had been relieved by some medicine sent him, a saline draught and some morphine pills, which had been sent on the Saturday. He (as witness understood) complained of having been taken ill after supper on Thursday evening. He complained of pain and heat in the throat. He said his supper had been beefsteak and potatoes. He was not vomiting while witness was there, but witness saw some frothy mucus which had come from his stomach. Witness prescribed a preparation of carbonate of potass and spirit of nitre, and some James's powder with three quarters of a grain of calomel and some acetate of morphine. There would be about cent. per cent. of antimony in the James's powder. Saw him again on the Monday and on the Wednesday. He seemed better, but complained of a choking sensation in the throat. The vomiting had ceased. Continued the morphine and saline mixture, and mustard poultice and fomentations externally. On Thursday, the 4th of December, the day after the death, witness assisted at the *post-mortem* examination. The viscera were generally healthy. The interior surface of the stomach was highly injected, and the same appearances were presented throughout the alimentary canal, diminishing in intensity from the stomach downwards. The lips were excoriated; the gullet and bladder highly inflamed, and an unusually red or scarlet appearance of the lungs. These appearances might have arisen from any irritant cause. Never met with such as the result of natural causes. Arsenic would, in witness's opinion, produce such symptoms. Found a small quantity of something in the stomach witness thought was arsenic. It was not so big as a grain of sand. Could not undertake to say what it was. Might have been antimony. Was present when the body was disinterred. Marsh's test was applied by Mr. Lee in the presence of witness. There was a solution of magnesia sent by Mrs. Hepworth to Johnson's, as part of the medicine for him to take. Could not say if the matter tested was the thousandth part of a grain. It could not have caused death. In June, 1846, attended a young girl, the daughter of Abraham Hewitt, who was staying at the house of deceased. There was a solution of arsenic and a solution of magnesia in witness's shop. The former was of a red colour, the latter was white. There was no solution of arsenic missed from the shop, and it could not, in witness's absence, have been sent by mistake for the solution of magnesia.

Mr. John Lee, surgeon and lecturer on medical jurisprudence, stated that on the 4th of December he assisted with the last witness at the first *post-mortem* examination. Took a portion of the intestines and of the liver, and by Reinsch's test obtained slight film on the copper, but so slight that he could not say what it was. The body was exhumed again early in the present month, when the witness took a large portion of the internal parts, the stomach and the heart, and a portion of the thigh. These were examined the day after. A portion was first subjected to Marsh's test. There was a metallic deposit on a piece of cold porcelain. This was discharged by the action of chloride of lime. This would not discharge antimony, but whether it would discharge other metallic deposits besides arsenic was not certain. It would discharge arsenic. By another process a yellow precipitate was produced; and from these appearances and experiments he had formed the conclusion that there was arsenic in the body, which had been the cause of death.

Cross-examined: Was lecturer on medical jurisprudence at the Manchester Medical School. Could form no estimate of the quantity of the mineral in the metallic films. Knows of no other substance which would produce under the circumstances the same results. Much would depend on the purity of the tests.

Re-examined: The tests themselves had previously been tested.

Mr. Watson, analytical chemist, corroborated the preceding evidence.

Thomas Forrester, a police-officer, corroborated the statement of Miss Livesey as to the conversation between her and the prisoner at his house. When witness took prisoner into custody she said she did not know what arsenic was, and had never bought any in her life. Searched the house, but found no arsenic.

Mrs. Ann Hepworth deposed that on the 28th of November the prisoner came to Mr. Hepworth's surgery, saying that the deceased was ill, and had got, she thought, the English cholera. Witness gave her some fluid magnesia.

Cross-examined: The little girl Bethell came first, and the prisoner about ten minutes after.

Mrs. Maria Moult said the prisoner and his wife did not live happily together, and quarrelled a good deal. She spoke to several angry expressions of the prisoner on various occasions respecting her husband, saying she wished he was stiff—that she would make a cheap burying of him, and would not ask one of his folks. The day he died, when told that Mr. Hepworth thought him better, she said he would never get better, and would die that night.

William Chapman deposed that deceased was formerly a tenant of Abraham Hewitt, who frequently came to his house, contrary to the wish of deceased. Once they had a fight.

Thomas Brooks, gardener at Sale-moor, deposed to seeing the prisoner meet Hewitt in a wood there, and had seen him kiss her.

Elizabeth Wood stated that she had seen the prisoner and Hewitt in bed together in Johnson's house at Sale-moor, and that she had told witness she liked him better than Johnson, and that if she could not have him without she would poison Johnson. The following Monday prisoner came to witness's father's house, and borrowed a shilling. She said she would go and see "if she could get without him without being found out."

Ellen Gatley deposed to Hewitt's frequent visits to Johnson's house in his absence. Had seen him in Johnson's bedroom. Once saw Johnson strike him with a potato-fork on finding him in the kitchen. Prisoner had told witness that she liked Hewitt's little finger better than Johnson's whole body, and that she wished he never would come in alive.

The deposition of Robert Churchill, now deceased, was read, to show the intimacy of Hewitt with the prisoner, and the use of expressions respecting her husband similar to that already given.

James Shawcross and William Longshaw gave similar testimony.

Mr. Sergeant Wilkins addressed the jury for the defence.

His Lordship's summing up occupied about two hours.

The jury then retired, and, after some deliberation, returned a verdict of *Not Guilty.*

ANOTHER MURDER BY POISONING.

A coroner's inquiry, which has occupied several days, was concluded on Monday, the 28th ult., at the Pontypool Workhouse, Pontypool, respecting the death of John Thomas, aged ten days, the illegitimate child of Hannah Thomas, a pauper inmate of the union. The infant was born in the workhouse on the 16th of February. About a fortnight before that date the mother saw Mary Miller, another pauper, apply some sulphuric acid to a ringworm on her child's head. The pain made the child cry, which induced Thomas to ask Miller if she knew the nature of the lotion. Miller replied that the doctor told her it was strong poison, and she must be careful, for if it touched clothes it would make them rotten. The accused, on the 25th of February, when she had been only eight days confined, was seen in the kitchen with the baby in her arms. There, according to the workhouse regulation, she ought not to have been. On a shelf in this kitchen Miller kept the bottle containing the sulphuric acid, and also a teacup which she used when making use of the acid to wash her child's head. On the morning of the day on which the mother, as stated above, was seen in the kitchen, Miller left about two tablespoonfuls of the acid in the cup. She was seen with the cup in her hand by a woman of the name of Lewis. On the latter entering the kitchen she put the cup back on the shelf in a hurried manner, and her child was observed to be crying. Thomas then left,

and returned to the lying-in room. Shortly afterwards she complained to Margaret Thompson, a nurse, that her infant was ill. When she had left the kitchen, Miller perceived the cup was not in the same position she had left it on the shelf, and that the acid that had been in it was gone. Rees, a girl, saw the child on the lap of Thomas that day, and noticed that it vomited black froth, which she wiped off with a napkin. The prisoner said to Rees, "I wish to God my child was dead, as I could then go back to service." The infant died in bed the next morning, between five and six o'clock. No suspicions were entertained at the time that the child was poisoned until the morning of the 29th of February, when Miller and another woman were washing the prisoner's clothes, amongst which was some of the child's apparel, which they found in parts to be rotten. This aroused Miller's suspicions, who thought the rotten condition of the clothes much resembled the rotten state of her own child's dresses on which she had dropped some of the acid. On communicating her suspicions to the governor, the coroner of the district was apprised of the circumstances, when the exhumation of the body was determined on, and the facts already detailed were deposed to before the jury. Mr. Cossens, the surgeon of the union, stated that he attended the birth of the deceased, and it was a fine healthy child. He described at some length the *post-mortem* examination of the body and the analysis of the contents of the stomach. After a great mass of evidence had been taken the coroner summed up, and the jury, after a careful consultation, returned a verdict of "Wilful Murder" against Hannah Thomas, the mother of the deceased. On the following day she was removed to the county gaol, for trial at the ensuing assizes.

GOSSIP OF THE WEEK.

SUPPOSED MURDER.—(From the *Times* of April 3).—It may be remembered that an inquest was held, on the 2nd of November last, on the body of Rosetta Brown, twenty-one years of age, before Mr. Mills, deputy coroner for Middlesex, at which the evidence showed that she lived in the service of Mr. Jenkins, a surveyor, No. 22, Huntley-street, Tottenham-court-road. Mr. Jenkins stated that the deceased was to have been married on the day of her death to a young man named Payne, but that he (Mr. Jenkins), knowing that an affection existed between her and a lodger in his house, attended at the church and forbade the marriage. On the following day, whilst at dinner, his little child, five years old, came up stairs, and said Rosetta was lying in the coal-cellar, with a mask on. He ran down, and found the deceased lying on her back, with her head literally severed from her body, and a carving-knife lying near her. Mrs. Pope, sister to the deceased, and other relatives, wished to make a statement affecting an individual, whom they said they had no hesitation in declaring to be the murderer, but the deputy coroner refused to hear them, alleging, that if he allowed private character to be assailed, they might sit there till Doomsday. No medical man was examined, or *post-mortem* examination made. The jury, of which Mr. George Davey, of Tottenham-court-road, was foreman, expressed dissatisfaction at further evidence not being produced; but, after a long argument with the deputy coroner, returned a verdict—"That the deceased committed the act herself, the state of her mind at the time not being known." The friends of the deceased, not being contented, had the body examined by Mr. Davidson, a surgeon, living in Marylebone, when it was ascertained that the girl had been seduced, and the surgeon gave it as his opinion that it was impossible she herself could have inflicted the wound which caused her death. The deceased had been threatened by the person suspected of seducing her, and Mrs. Pope had been warned by the partner of that person to get her away from Mr. Jenkins as soon as possible, and not suffer her to go out after dark. Mrs. Pope had also been informed that the suspected person had become insane, and was in a lunatic asylum either at Norwich or Ipswich. Under these circumstances a letter was addressed to Mr. Wakley, the coroner, which, as he was out of town, fell into the hands of Mr. Mills, the deputy coroner, in reply to which the last-named gentleman stated that the verdict of the jury was unanimous, and that they had decided that, as jurymen, they would not be justified in making further inquiry into her private history. Mr. Pope then applied to Lord Wriothsley Russell, the result of which was, that two months after the death of the young woman a statement appeared in one of the morning papers, and Mr. Francis Godbold, of Francis-street, Tottenham-court-road, one of the jury, wrote a letter to the editor contradicting the statement of Mr. Mills, as to the jury having been satisfied with the proceedings on the inquest, and hoping that a more searching investigation would be instituted. On the 22nd of last month Mrs. Pope obtained an interview with Mr. Wakley, and placed in his hands a written statement of all the particulars which had come to her knowledge. At the conclusion of the interview Mr. Wakley, who expressed a strong opinion on the subject, said she should hear from him, and accordingly, on Wednesday last, Mrs. Pope received a letter from Mr. Churchill, appointing a second interview between her and Mr. Wakley on the evening of that day. She attended, when Mr. Wakley endeavoured to dissuade her from having the body exhumed, on the ground that, if it should turn out after all that the deceased had herself committed the act, it would be a great exposure for the family. Mrs. Pope, however, persisted in demanding further investigation, and Mr. Wakley expressed his willingness to attend to any further proof that might be adduced, but has not as yet determined on the exhumation of the body. Thus this mysterious business rests at present, but it is understood that, in the event of the coroner refusing to have the body exhumed immediately, application will be made to Lord Denman, as Chief Coroner for England, and to Sir G. Grey, as Secretary of State, to exert their authority.—[Mr. Mills has written to the *Times*, insisting that the whole of this statement is false, and affirming that assertions of the same kind have been made the subject of a legal action against the *Morning Chronicle*. Our readers will, of course, believe the deputy magistrate in preference to the unknown reporter. In the meantime we shall be glad to hear Mr. Davidson's statement, as well as that of the medical gentleman called in to the case, and whom, Mr. Mills, no doubt, took care to examine. ED.]

Our readers are doubtless aware that the Council of the National Institute have arranged to hold a *conversazione* on Tuesday, the 13th instant, at which there can be little doubt there will be an abundant gathering of all those members of the profession interested in the welfare and objects of that body. This is the first time that the general practitioners, as a class, have ever been called together in this social manner, animated by the same hopes, leagued for the same ends, and working out, by their own unaided exertions, the uses and advantages that sometimes are, but too generally are not, conferred by acts of Parliament and royal charters. We hail this promise as an omen of better things, and we doubt not that the reunion will be both beneficial and attractive.

MODERN MEDICINE. HOW TO CURE CONSUMPTION BY ONE DOSE!—Take of Scheele's prussic acid four drops, laudanum sixteen minims, compound spirits of ammonia two drachms, compound powder of nux vomica two grains; fill up with bitter almond water, so that a six-ounce mixture may be made. Two tablespoonfuls are a dose, and a six-ounce mixture will DO FOR SIX patients. N.B.—To secure efficiency, PROCURE the *bitter* almond water of Mr. JACOB BELL!

WAR-OFFICE, March 23.—16th Foot: Assistant-Surgeon Benjamin Usher Hamilton, M.D., to be Surgeon, vice Thomas Young, who retires upon half-pay; Henry Fowle Smith, gentleman, to be Assistant-Surgeon, vice Hamilton.—46th Foot; Christopher Wright Wray, gentleman, to be Assistant-Surgeon, vice Langley, promoted on the Staff.—55th Foot: Staff-Surgeon of the Second Class Samuel Currie, M.D., to be Surgeon, vice Martin, deceased.—71st Foot: Michael Allen Jane, gentleman, to be Assistant-Surgeon, vice Reade, appointed to the Staff.—97th Foot: Assistant-Surgeon Frederick Foaker, from the Staff, to be Surgeon, vice Irwin, deceased.—2nd West India Regiment: William Leggo Reid, M.D., to be Assistant-Surgeon, vice Macartney, appointed to the Staff.—Hospital Staff: Assistant-Surgeon William Leslie Langley, M.D., from the 46th Foot, to be Staff-Surgeon of the Second Class, vice Currie, appointed to the 55th Foot; Assistant-Surgeon Henry Cooper Reade, from 71st Foot, to be Assistant-Surgeon to the Forces, vice Foaker, promoted in 97th Foot; Assistant-Surgeon Christopher Macartney, M.B., from 2nd West India Regiment, to be Assistant-Surgeon to the Forces, vice Robertson, deceased.

APOTHECARIES' HALL.—Gentlemen admitted members April 1:—George Burton Payne, Henry Nevers, Thomas Balle Forster, John Lane Cutcliffe, George Augustus Hartelbury Hepworth, James Sarzewell, John Ingman, George Herring, Wm. Nowell, and John Jessup Sewell.

MORALITY OF MEDICAL MEN.—From a return of prisoners given in the Parisian *Moniteur*, a fact very satisfactory to our profession has been made public, viz., that of all the professions the medical is the most moral. From 1828 to 1838 there were in France, 41,679 male prisoners, aged above twenty-five, under criminal charges. Of these there were 33 priests, 33 *avocats*, 9 *avoués*, 75 notaries, 66 *huissiers*, and not one medical man!

Mons Combes has been elected a member of the Academy of Sciences.

The Municipal Council of Paris have decided that a new street shall bear the name of Ambrose Paré.

The influenza has been common in Munich, and with unusual severity.

MORTALITY TABLE.

For the Week ending Saturday, April 3, 1847.

Causes of Death.	Total.	Average of 5 Winters.
ALL CAUSES	1004	914
SPECIFIED CAUSES	1001	900
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	107	166
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	128	99
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	177	158
Diseases of the Lungs, and of the other Organs of Respiration	302	275
Diseases of the Heart and Blood-vessels	55	20
Diseases of the Stomach, Liver, and other organs of Digestion	78	70
Diseases of the Kidneys, &c.	10	8
Childbirth, Diseases of the Uterus, &c.	11	10
Rheumatism, Diseases of the Bones, Joints, &c.	[illegible]3	8
Diseases of the Skin, Cellular Tissue, &c.	2	2
Old Age	58	57
Violence, Privation, Cold, and Intemperance	60	28

No. 391. SUMMARY. April 17.

A COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the THEATRE of QUEEN'S COLLEGE, Birmingham.

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham, Physician to the General Dispensary, Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Special treatment of the typhoid fever of 1846 details of a case in illustration, and comments upon it, inferences concerning the treatment of this form of fever, difference in cases requiring different treatment illustrations and comments, depression the most common leading feature in typhoid fever, indications of it especially shown in the action of the heart reflections, value of persisting in a definite and well indicated plan of treatment, ammonia as a stimulant, observations upon, cases in which it would seem to be contraindicated, case illustrative of the value of wine and ammonia, another case in which neither was used

GENTLEMEN,—In my last lecture I detailed to you the general features and treatment of the typhoid fever of 1846 reserving the more special particulars of it for the present occasion. One or two cases will be sufficient to convey to you the information I am now desirous of giving.

Susannah Griffiths, a spinster, aged twenty-three, was admitted into Queen's Hospital, under my care, on the 15th of October, last year. She was placed, you will remember, in the top front ward. She was not sufficiently conscious at the time of her arrival, nor indeed for some time afterwards, to give me any account of her commencing illness, but I learned from her sister, that the poor girl had been ill for three weeks prior to my seeing her, that she had kept her bed for a fortnight, and had had no medical assistance whatever.

When we first met at her bedside we found her in a low typhoid and semi-comatose condition. Her surface was cold and pale, except her hands, the fingers of which, up to their metacarpal articulations, were of a deep dusky red. She was quite unconscious of passing objects, and could only be roused, for a few seconds at a time, by shouting in her ear. We thus learned that she had some pain in her head, with a sense of heaviness; that she felt thirsty, but had no appetite. Her eyes were lustreless, and covered with films, pupils dilated, and scarcely sensible to light, respiration slow, irregular, and slightly embarrassed, pulse 152, small and feeble, impulse of the heart scarcely perceptible, and its systolic sound weaker than corresponded with the pulse at the wrist. Tongue dusky red at the edges and tip, and covered with a brown fur in the middle, it was quite dry, and its papillæ elevated, gums swollen and vascular; teeth partially covered with sordes. The stroke sound of the chest was everywhere clear, but the respiratory sound was occasionally, and in places, distinguished by a mucous rattle. The abdomen was tumid and somewhat tympanitic, and the epigastrium a little tender on pressure. Her breath was offensive, and the surface of her body exhaled a disagreeable mawkish sort of odour. She passed but little urine, which was deeper in colour than natural, smelt very strong, exhibited an alkaline reaction, but did not afford any evidence of containing free ammonia. Her bowels were costive.

She was ordered toast-water for drink, and, as she refused solid food, old bread soaked in milk, or in beef-tea, was directed to be given to her every four or five hours. The following medicines were prescribed:—Cap. stat. ol. ricini, ℥ss. et rep. post horas tertias, si alvus non respond.

℞. Inf. gentianæ, aquæ puræ, aa ℥iv. sp. ammon. aromat., ʒij.; tinct. hyoscyami, ʒij. Misce fiat mist. cujus capiat cochlearia ampla duo tertia quaque hora cum pilul.

℞. Hydrargyri chloridi, gr. iij.; pulv. Jacobi veri, gr. x.; extr. conii, q. s. ut ft. pil. viij.

I ordered a mild dose of castor oil as an aperient, because in these cases you are never safe with active cathartics. Even in a moderate form these often do more than you expect from them, and so either increase the prostration (the reverse of your requirement in typhoid fever), or cause such irritation in the mucous membrane of the bowels as shows itself by frequent tenesmus, diarrhœa, or twisting pain, any one of which will, directly or indirectly, multiply the chances against you in treating such cases as these. The object is, gently to unload the bowels of any undue accumulation, but, at the same time, to do this without increasing the debility immediately by excessive intestinal discharge, or more slowly by continued irritation. It was to answer this intention that I prescribed castor oil—one of the mildest aperients we have, in small quantity, and advised its repetition, if necessary. In any cases in which you have to fear the consequences of lowering action, or of gastro-intestinal excitement, it is much better to proceed with a cautious repetition of aperients given limitedly, than to hazard a larger dose given at once. You can thus better feel your way, and push your treatment without the risk of compromising your patient's strength or safety. The case under consideration well illustrates the truth of what I say. Half an ounce of castor oil was a very moderate dose to give, and, if required, it might have been repeated at a proper interval without fear. Fortunately, the first dose sufficed; we may anticipate what would have been the effect of giving double the quantity, or of giving any aperient of a more irritating nature. As I told you, at the time of first prescribing for this patient, I thought the generality of the symptoms were consequences of nervous depression. I thought the nervous system wanted rousing and sustaining, but, of course, gradually and guardedly. It was with this object that I prescribed the ammonia in the mixture. The cold skin, the quick, weak pulse, and, above all, the diminished impulse and sound of the heart, spoke of nervous depression. The dilated pupil and lustreless eye, and heavy pain in the head, with slight stupor, and the absence of all symptoms of active disturbance in the brain, told plainly that congestion of a passive kind was there. The very nature of the case forbade even local bleeding, and suggested, further, that the opposite treatment was necessary. Local blistering might, or might not, have done good. It would have been no easy matter to have raised a blister, by ordinary means, with such a state of skin; and had one risen, it would likely have a constituted a troublesome slough—one of the worst of troubles in such cases. Then, as I have said, we trusted to the diffusible stimulant, ammonia, to dissipate the local congestions and balance the circulation, by imparting fresh energy to the nervous system. I gave the hyoscyamus in the mixture, to allay the gastric irritation; it was not severe, but it might have become worse had it not been prescribed for. Further, the patient, though seldom fully awake, did not sleep thoroughly, and I thought the hyoscyamus might procure her some slumber. This is of great advantage in the watchfulness of fever—a night's rest is often invaluable in these cases—and when hyoscyamus answers the purpose, it does so without occasioning the cerebral oppression so common after opium. I made the vehicle, equal parts of water and infusion of gentian: we must have had a vehicle of some kind, and perhaps water alone would have sufficed; but I chose to have equal parts of this and a bitter infusion, because of the value of the latter when there is a tendency to putrescency. As you are aware bitters are in some measure antiseptics, and I have often been made satisfied of their efficacy in typhoid cases, when the stomach has had power to retain them. I ordered the calomel in small doses, for there was a little more tension

in the region of the liver, and a greater extent of dulness on percussion, than there ought to be; there was also some sallowness of skin, and these things, added to a torpid state of bowels, led me to expect a sluggish condition of the biliary apparatus—a state of passive congestion, in fact, similar to what had been manifested in the brain. This proved to be the case, for, after the first few doses of the mercurial, an abundance of bile was discharged by the bowels, and most of the symptoms indicative of its retention, and of liver congestion, immediately disappeared. I administered the antimonial along with the calomel, because I have learned from experience that it often corrects the latter in its action—makes it more certain and safe; and because I wanted its relaxing influence upon the skin, which, in this case, was dry and harsh and unyielding. So much for the treatment we commenced with.

On the 16th we found that the bowels had been freely unloaded by the castor oil, which had operated four times; the dejections were dark and offensive, and accompanied with much flatus; less tympany to-day. Patient slept several hours last night. Tongue slightly improved, but more sordes on the teeth. Pupils less dilated, but the left eye completely covered with film. Surface quite cold; pulse 150, weak and trembling. The fingers quite free from congestion, but the cheeks marked by a circumscribed dusky-red blush. (This migratory congestion—at one time in the fingers, and at another in the cheeks—was a peculiar feature in this case during many days.) Pain in the head a little easier. Has taken her food tolerably well. Remedies to be continued. To have three ounces of wine, daily, at three doses.

17th. Better to-day. Expression of face better. No films on either eye—pupils wider, but more sensible to light. Tongue cleaner, and articulation more distinct. Pulse 140, but feeble; impulse of heart, and systolic sound, more appreciable. Head cool; bowels open; no pain anywhere.

The mixture and wine to be continued: the pills omitted. This change was made in the treatment, because the several indications expected to be met by the mercurial and antimonial medicines had been satisfactorily fulfilled, and there was no necessity for pushing these further.

18th. Tongue cleaner and more moist. Head hot; pulse 140, and very feeble; slept indifferently last night, during the greater part of which she hooted and shouted vociferously; thirst more urgent; bowels well open.

The hair to be cut close, and wet cloths applied to the head. The wine to be continued, and also the mixture, excepting that, in place of the water and bitter infusion, camphor mixture is to be the vehicle. This change was made in anticipation of any febrile reaction.

19th. In much the same state as yesterday. Pulse 140, feeble. Pupil more contracted; head cooler; face pale; return of congestion to the fingers; shouted frequently during the night; bowels well open; urine scanty and slightly ammoniacal. The mixture to be continued, and the wine diluted with its equal of beef-tea or sago. From this time to the 24th she continued almost stationary. She was then ordered three grains each of camphor and hyoscyamus, at bed-time: the other remedies to be continued.

The narcotics had the effect of soothing her irritability, and obtaining for her some refreshing sleep. There were the next morning more symptoms of improvement than we had previously seen.

On the 27th these favourable indications were still more manifest. In particular, they were shown in the altered expression of face, which was becoming, as I remarked to you at the time, more *physiological*. The tongue was also cleaner, and more moist; there were fewer sordes on the teeth; and neither the breath nor the perspiration had the offensive odour that at first marked them; bowels open; urine more abundant, and neutral; less shouting; appetite a little better. Remedies to be continued.

On the 29th she was still progressing favourably, except that the impulse of her heart, and its systolic sound, were still very weak. I therefore increased her wine to four glasses daily, and gave her an extra quantity of ammonia in her mixture.

From this date she improved as satisfactorily as could be desired: the treatment was continued for twelve days further, when, in addition to full diet, she was ordered the following:—

℞. Inf. gentianæ c., ℥viij.; sodæ bicarb., ʒj.; sp. æth. nit., ʒij. M. ft. mist. cujus cap. coch. ampla duo ter die. Cap. pil. rhei, c. gr. v. pro re nata. These were administered merely to correct a little weakness and irregularity in the gastric and intestinal functions, and to increase the action of the kidneys; all of which intentions were in due time fulfilled, and the only remaining trouble was an absence of the catamenia. As I before told you, this was a not unfrequent *sequela* of the fever of last year. In this case, the patient was ordered tincture of sesquichloride of iron in infusion of quassia, and an occasional aloetic purge. The menstrual discharge shortly made its appearance, and the girl left the hospital well.

My note-book would enable me to furnish you with many examples of typhoid fever, treated similarly to the above, and with like results, during the summer and autumn of 1846. It is not requisite, however, for me to put various cases before you, when one will serve as a type of the whole, as regards their radical treatment. In the outline of the case given above, you have an index to the fever I refer to, as well as to its management, at least in so far as concerns my own practice. The general features of the ailment were sometimes varied with local pathological manifestations of one kind or other, but these were never such as to change the intrinsic character of the fever, or to render the stimulating and sustaining treatment objectionable or unnecessary.

You must understand, gentlemen, that I am not lecturing upon typhoid fever in general, but upon typhoid fever in particular—upon that variety of it which prevailed amongst us last year. Whilst, therefore, I speak with some degree of positiveness concerning its remedial management, I do not wish you to infer that the rules I have laid down will apply to whatever cases of typhoid or typhus fever may hereafter occur to you in practice. Were I to say thus much, I should only be delivering to you the language and sentiments of empiricism. In physic we have no rules that are not liable to exceptions, and it is as much a knowledge of the one as of the other that constitutes a scientific and safe practitioner. If you were to go upon the undeviating plan of treating every case of typhoid fever with wine and ammonia, you would be guilty of the same indiscretion and prejudice with the man who would make the lancet and mercury his only remedies. Whatever inclination you may have for general rules of practice, always let it yield to the suggestions of particular cases. In doing this you will sometimes meet with an epidemic fever of the typhoid type which, contrary to that prevalent here a few months ago, exhibits many varieties, according to the age, temperament, and state of health of the individuals seized with it: this, of course, will call for as various a form of treatment. In a series of cases there may be local inflammatory tendencies—the brain, lungs, or gastro-intestinal mucous membrane, being the suffering organ. Here you would require local or general depletion, proportioned to the severity of the attack and the strength of the patient. In another series the organs above-mentioned, or the liver, or the kidneys, may be simply congested, and then corresponding counter-irritant and derivative measures would be needed. In a third series, the leading pathological condition may be one of nervous depression—all other morbid manifestations being secondary to it. Here, of course, your object would be to sustain and strengthen.

You may have all these varieties, nay more, during one visitation of epidemic typhoid fever; or the cases may be altogether of one class, as happened in the fever of last year. My own experience and reflection upon this subject incline me to the belief that a state of vital depression is by far the most frequent radical morbid feature in the fever I speak of. This you recognise, as in the case I have quoted, by the expressed or exhibited feelings of languor; the laxity of the muscular tissues; the shrunken, anxious features; the sleeplessness, incoherence, and involuntary twitching of the limbs; the quick, weak, irregular pulse; and, above all, by the diminished impulse and systolic sound of the heart. These latter are indications that will rarely if ever fail you,—make them your constant inquiry in treating fever!

Having satisfied yourselves of the pathological condition which chiefly requires to be met, meet it determinedly, and with perseverance. Never let the minor features of a case divert you from your proper purpose. If stimulation be indicated, none other measures *can* be; therefore, do not be betrayed into the exhibition of them, from the suggestions of symptoms merely. *A priori*, it might be urged that wine and ammonia are contraindicated by a hot dry mouth, flushed cheeks, injected conjunctiva, restlessness, thirst, and depraved secretions. But it must be remembered that the *cause* of all these things, in the cases I speak of, is vital depression. Remedy this, and the symptoms of it improve, as a matter of course. You have seen, in my practice of last year, how a persevering use of due stimulation in typhoid fever will lessen the frequency, and at the same time increase the force, of the pulse; dissipate the flush from the cheeks; moisten the mouth, and clean the tongue; dispose to sleep, and, by giving tone and energy to the system, improve those secretions that had become depraved from weakness. Even the suggestions of organic chemistry, valuable as they often are in the practical business of the bedside, are sometimes to be disregarded in the necessity that may exist for prosecuting any single and well-indicated plan of treatment. It might be argued, that when the urine is ammoniacal, the perspiration alkaline and foul like the breath, and there is a general tendency to putrescence, ammonia would be an unsuitable remedy. Yet you have several times seen all these morbid conditions corrected by this very medicinal. I have no doubt that any other diffusible stimulant which, like ammonia, has often a prolonged action, and little affects the sensorial functions, would have answered as well; but I know of none that in all these particulars is equal to ammonia, and therefore give it the preference.

One of the best cases illustrative of the value of stimulant treatment which I saw during the prevalence of the typhoid fever of 1846, was in the person of a little boy, aged eleven years, whom I attended in consultation with Mr. Francis Elkington of this town. He had been ill some days when I first saw him, and presented all the ordinary features of the fever. Mr. Elkington was treating him with bark, ammonia, and nitric ether, which seemed to me to be so judicious a plan as to deserve a continuance. On the following day the boy was in much the same state as before, and we agreed to give his medicine a little more frequently, and also to allow him more wine. In spite of this, his vital powers continued to fail, and on the occasion of our next visit, the subsequent day, the nurse told us it was not necessary to go up stairs, as the little fellow was "all but dead." Of course we visited him, notwithstanding the suggestion, but to all appearances it seemed as though we had come rather on ceremony than for service. For several hours he had lain in the condition in which we found him, and the nurse had declined administering either wine or medicine, from his inability to swallow. He was cold all over; pupils dilated, and quite insensible; eyes open and covered with films; action of heart inappreciable over its site; pulse not sufficiently distinguishable at the wrist to

say what kind of pulse it was; breathing hardly perceptible. There was no consciousness whatever of passing events, and nothing that we could say or do roused the poor creature: to sum his case up in few words, he had every appearance of being close upon the point of death. Still, he was *not dead;* and, acting upon the belief that "whilst there is life there is hope" (in such cases as these a very advisable belief), we determined not to lose even the last chance, and therefore proceeded to give him wine. The first teaspoonful put into his mouth remained some seconds there, and then passed with a feeble gurgle down his throat. We followed that dose by a similar one, and then another, and another, until half a glassful had been swallowed. We then let him rest for about a minute, at the end of which time his pulse had become perceptible at the wrist. This was the only sign of reaction, and, trifling though it was, it was encouraging, inasmuch as it showed us that there was vitality enough left to *respond to stimulation.* We therefore ordered that he should have a large wineglass (holding about an ounce and a half) of port given to him every other hour, and in the intervening hour a similar glass of strong beef-tea, containing two drachms of compound spirit of ammonia. One hour, you observe, he had the wine, and the next hour the beef-tea and ammonia. The remedies were strong for so young a subject, but the case was desperate, and we did not choose to abandon him whilst there was even a "forlorn hope" left.

We visited our patient the next morning, about fourteen hours having elapsed, and we found him on the night-chair, sufficiently comfortable and conscious to greet us with a smile. On Mr. Elkington asking him how he was, he answered in a strong voice, that he was better, and had just taken some coffee and bread and butter. In this short space of time his tongue had become moist, and had nearly lost its dark brown colour; the sordes had completely disappeared from his teeth; in fact, without enumerating the items in proof, I may say he had become a living intelligent creature! From this period there was only one uninterrupted and rapid progress to recovery. This case is one of the most remarkable of the kind I ever met with. I have no comments to offer upon it, for I think none are necessary; but I am happy in being able to refer you, for its corroboration, to the accomplished practitioner whose name I have quoted in connection with it.

I have told you that the only case in which I did not prescribe stimulants, in the typhoid fever of last year, the patient died. I will give you the particulars in a few words. The patient was a man named Thorp, living in William-street, who had been several days under the care of Mr. Carter of the General Dispensary, before I saw him. My attendance was requested, because of a sudden increase of general febrile symptoms. I found him with a pulse of 126 *per minute,* full, and somewhat hard; head hot, and slightly painful; face flushed; eyes rather glaring, but not intolerant of light; throat sore, and the membrane of the fauces reddened; thirst urgent; urine scanty and high-coloured; bowels confined.

The leading features were those of inflammatory fever, simply; but it was a question what turn the present state of things would take. The brain might be beginning to suffer, or scarlet fever might be impending. Under ordinary circumstances, depletion might have been recommended; but, knowing the vital depression of the general fever cases, I did not advise it. As a purgative, I ordered six grains of scammony, and three of calomel, to be taken at once. The mixture—which consisted of the following:—

℞. Sodæ bicarb., potassæ nitratis, tinct. hyoscy., aa. ʒij.; sp. æth. nit., ʒij.; aquæ, ℥viij., M. ft. mist. cujus cap. coch. ampla duo tertiis horis—was to be continued.

In six hours after the administration of the purgative, I called upon the patient, and found that his bowels had been freely moved three times: his general symptoms, however, were little altered. I ordered the following:—

℞. Hydrarg. chloridi, gr. iij.; pulv. Jacobi veri, gr. xii.; ext. conii, q.s. ut ft. pil. viij. Cap. i. singulis dosibus misturæ.

On the following day he was somewhat better; pulse 120, full, but softer than before; skin more moist; thirst less urgent; kidneys secreting properly; bowels open. Still there was considerable restlessness; the head was painful occasionally; there was slight inclination to wandering and perverseness; pupils more contracted than natural, and eyes glaring. The mixture and pills to be continued.

During the next two days the improvement was very marked; every untoward symptom had subsided, and only simple fever, in a very mild form, seemed to be left. The bowels were well open: the pills were omitted, and the mixture continued. To have beef-tea twice a day.

On the following day no symptoms were present, excepting those of general debility. The bowels were comfortably open, and nothing seemed to be required, except the recruiting of the patient's strength. He was ordered beef-tea three times a day, additionally to a little sago, arrowroot, &c., and this mixture:—

℞. Quinæ disulphatis, gr. viij.; acidi sulph. dil., ʒj.; tre. cinchonæ c., ℥ss.; mist. camph., ℥vijss.; misce ft mist. cujus cap. coch. ampla duo ter die.

For two days subsequently, he improved slightly in appetite and strength, and had partaken of a little mutton chop without any return of feverishness. His bowels were well opened twice or thrice daily.

But on this, *the third day since the suspension of his mercury,* his gums became swollen and painful, breath fetid, and jaw difficult of movement. He was ordered a continuance of his medicine and nutritive diet; wine occasionally, and his feet to be put in hot salt and water at bedtime.

The following day the salivation was very strong; and the parotid and sub-maxillary glands were largely swollen. Additionally to the other treatment, a mild gargarism of chloride of soda was prescribed for his mouth. In spite, however, of all we could do, medicinally and by aliment, the man continued to sink, and died on the fourth day succeeding that on which the salivation appeared.

Considering the urgency of this case at its commencement, I think we could have hardly used milder remedial means consistently with anything like good judgment. Yet, mild as these measures were, the man sunk from them. Even in the face of his strong quick pulse, and threatened determination to the brain, I feared depletion, knowing the depressing tendency of the prevailing fever; yet these conditions required to be met by some means—could we have used safer? The quantity of mercury taken was trifling; and during, and subsequently to, its administration, the bowels were freely open. Directly that its services could be dispensed with, it was discontinued. Three days elapsed before salivation appeared, and yet the man sunk! And this, in spite of treatment calculated to sustain him. What would have been the consequence had we bled him well at first? It is probable he would not have rallied from the effects of it. Would it have been better to have given him ammonia during any period of the fever? I doubt it.

War-office, April 9.—25th Foot: Assistant-Surgeon Jonas King Carr, M.D., from the 63rd Foot, to be Assistant-Surgeon, vice Swift, who exchanges.—63rd Foot: Assistant-Surgeon Benjamin Swift, M.D., from the 25th Foot, to be Assistant-Surgeon, vice Carr, who exchanges.—Hospital Staff: John Clay Purves, M.D., to be Assistant-Surgeon to the Forces, vice Galland, who retires upon half-pay.

Naval Appointments.—Assistant-Surgeons: J. B. H. Collings, of the Hibernia, to the Trident; Charles Roberts, of the Vindictive, to the Nautilus.

A COURSE

OF

LECTURES ON SURGERY;

BY

SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London Consulting Surgeon to London University Hospital, &c.

Gentlemen,—Surgery is essentially a part of the healing art; it forms one of the divisions of medicine; and it becomes us, therefore, in commencing a course of lectures on this department of science, to ascertain in what it properly consists, and its limitations. Among the several departments of the healing art, surgery occupies a prominent position; so that we shall not greatly err if we divide the whole province of this art into two great branches, Physic and Surgery. Midwifery, another division of this extensive field, may, in so far as its manual operations are concerned, be considered as a subdivision of surgery, while the remainder is, properly speaking, a branch of the practice of medicine. The operations of the oculist and dentist are especially surgical.

The term surgery, if considered in its strict etymological sense, signifies the cure of diseases, the removal of the results of injuries and deformities by manual operations. Although this definition may be to a certain extent correct, as regards the art of surgery, it is by no means co-extensive with the science. We must not content ourselves with defining surgery as the mechanical part of medicine, nor draw the line of distinction between physic and surgery so strictly as to prohibit the surgeon from prescribing internal remedies in conjunction with external means. Such a procedure would in the present age be grossly absurd. As the surgeon cannot then be prevented from treating disease as well by internal remedies as external applications and manipulations, the line of demarcation between physic and surgery is less easily settled. We must look upon surgery as a science founded on the same principles as medicine, and acting, to a certain extent, by the same means for the alleviation of suffering. This science must be based, like medicine, on a right comprehension of the structure and functions of the human body, on a careful investigation of the causes of aberrations either of structure or function in the animal machine, and on an equally diligent study of the physiological and therapeutic action of remedial agents.

Even our mechanical operations are founded on applications of scientific principles. Take, as an example, the passing a ligature round an artery. The act of tying the artery is purely mechanical; but the principles on which the steps of the operation, and the intention of the surgeon in performing it, depend on a large number of scientific details which render the whole operation much more than a mechanical performance. In tying an artery for aneurism, it is necessary that a precise knowledge of the position and relations of the artery be well understood; and this is taught us by the preliminary study of anatomy. Pathology teaches us that aneurism, which is a tumour formed by the dilatation or rupture of an artery communicating with the vessel, and filled with blood from it, increases in size in consequence of the forcible propulsion of blood into it; while physiology informs us that the office of an artery is the conveyance of blood from the heart to every extremity of the body, and thus that the blood flows through the vessel in a certain direction. Anatomy and physiology further demonstrate that, if the main artery of a limb be obstructed, there are other channels through which the blood can flow, and thus furnish to the extremity the blood which is requisite for the fulfilment of its functions and the sustentation of its vitality. From a knowledge of these facts, the surgeon infers that, if the flow of blood into the aneurism be diminished or prevented, coagulation of the blood in the aneurism

and obliteration and consequent cure, will follow. Such an example will show that both judgment and care are requisite in the performance of operations, and that these, to be successful, must be based on scientific principles, drawn from anatomy, physiology, and pathology.

The question whether an operation is either requisite or proper for the cure of a surgical disease necessarily involves a large amount of scientific knowledge and practical experience, calling into action the highest functions of the mind. Reverting to the question with which I set out—the connection of physic and surgery—I may broadly state that they cannot be disjoined, since the principles of both are the same. Custom has introduced a distinction: some diseases being allotted to the physician, others to the surgeon, while a third set of cases form a debatable ground, occupied alternately by the one or the other, and where both meet. This division of duties is a purely artificial one, which, although convenient to a certain extent in practice and teaching, cannot be extended to the science. Notwithstanding these artificial distinctions, the treatment of disease in all its varied forms must be based on a sound knowledge of the anatomy, physiology, and pathology of the human body; and sad indeed must be the condition of the medical practitioner who starts on his career without a sufficient acquaintance with these all-important subjects.

You will perceive, gentlemen, from what I have already said, that anatomy and physiology must constitute the principal foundation of a well-conducted surgical education. Anatomy may be denominated the science of organization: it makes us acquainted with the qualities, situations, forms, connections, and textures of the organs of the human body. It not only investigates these forms and qualities, such as they are shown to us by the naked eye, but, with the assistance of microscope, it makes known to us the minute structure of each of the separate parts and tissues which enter into the formation of the organs themselves. Physiology contemplates these organs, when in action under the influence of vitality; revealing to us their functions, and exhibiting all the vital phenomena which are capable of being discovered by the curious observation of man. Hence, anatomy and physiology are the two sciences on which our knowledge of the structure and functions of our organs rests, while in a healthy and natural state; and hence the necessity of studying these sciences before we venture on the more complicated and difficult ground of pathology. What possible advantage can be gained by the student in the wards of our hospitals who is ignorant of these two primary sciences? He who is ignorant of the healthy structure and function of an organ cannot be supposed to be in a proper position to understand the abnormal changes to which such an organ is liable. He who knows nothing of the functions of an organ will be equally unable to appreciate functional disorder.

Anatomy and physiology conduct us to pathology—a word which, in its most general signification, implies the science of the changes to which the whole, or a part of the body, is subjected under the influences of causes which disturb its normal condition. To this science belong the investigation of the alterations in the texture, consistence, forms, relations, connections, and functions of organ. Morbid anatomy—an important branch of pathology—should be sedulously cultivated by the student, on account of the light it throws on the nature, seat, and cause of disease. While anatomy investigates the normal structure of organs, morbid anatomy examines the changes in structure induced by disease. It is not, however, coextensive with pathology, because the latter includes the investigation of diseases of function as well as of structure.

The scientific practitioner of physic or surgery will go still further: he will not only endeavour to cure disease when actually existing, but he will strive to prevent its occurrence. The art of preserving health, or hygiene, is not undeserving of our special attention. Hygeine implies the power of estimating the effects of all surrounding influences, on the organization and functions of the human body. This science directs us to the most available means of preserving every function free from disorder, and every organ from disease. It is of considerable importance in the practice of your profession, since you may be asked by your patients how a particular disease may be best avoided; and it will be most unsatisfactory to all parties if you are unable to solve the question propounded to you under such circumstances.

As you will have in the course of your practical duties to attend not only to the local ailments of your patients, but also to their constitutional state, and as you will be required to correct morbid conditions of the body, it is absolutely essential that you should be well acquainted with the nature and properties of the agents you will have to employ. Therapeutics, or the study of the nature and properties of remedial agents, is therefore of the highest importance. In addition to the study of the peculiar effects of medicines, their sources, properties, and doses, we find a most important auxiliary to all treatment of disease in the consideration of diet and regimen.

Several other sciences more or less intimately connected with surgery form integral parts of a sound surgical education. Comparative anatomy, chemistry, botany, and natural history, throw a flood of light on medical science. They cannot therefore, be totally neglected without detriment to the student.

In addition to this mass of knowledge, and without which a man cannot be a good practical surgeon, experience must be placed as of the most vital importance. An intimate knowledge of the names and symptoms and treatment of disease derived from books will not constitute either a good physician or surgeon. He must possess, in addition to this knowledge obtained from the writings of his celebrated predecessors, the capability of recognising disease and unravelling the symptoms of the more obscure cases, when presented for examination, so as to arrive, when possible, at the real nature of the affection he is about to treat. Again, he must know not only what is written of remedies in books, but what is their real effect when administered to the patient; and this kind of knowledge can only be gained by oft-repeated examination and treatment of actual cases. This constitutes experience. By experience I do not mean to say that a surgeon should have seen an immense number of cases; but that he should have attentively observed them, and have drawn careful and mature deductions from the phenomena he has witnessed in the course of his practice. The theoretical or book practitioner may be capable of descanting most fluently on the nature, symptoms, and phenomena of disease; but place a patient before him and you immediately detect the quality of his information: he is unable to apply his knowledge and recognise the disease with which he may be well aquainted theoretically.

I have thus demonstrated to you, gentlemen, the necessity of experience, and I shall now proceed to explain how true experience is to be gained. True experience, I have told you, does not depend so much on the number of the cases you observe as the manner in which you observe them. It is only by an attentive study of particular cases, guided and enlightened by the general principles you obtain in the lecture-room, and assisted by the remarks made by the surgeon or physician under whose care the patient is placed, that you will arrive at a true knowledge of disease. With those aids you will be enabled to obtain that *tactus eruditus*, without which you will cut a sorry figure in your future professional life. No condition can be more deplorable than that of a high-minded and honourable man who should rashly undertake the responsible duties of a medical practitioner unprepared by a sufficient course of study. Doubt and difficulty will attend every step he takes, and he will be harassed by the consciousness of his inability for the duties he has undertaken, and the danger in which he is constantly placing the lives and limbs of his fellow-creatures. This deplorable picture of the state of mind in which every honourable man must be placed who neglects to obtain a competent knowledge of his profession will, I hope, serve as an inducement to ardent and sustained study while you have still the ample opportunities before you which are furnished by the noble school in which you are now placed.

And now for the mode in which experience should be gained. In the course of lectures I have now commenced I shall place before you the principles and practice of surgery; but this will prove insufficient for the education of a surgeon unless accompanied by careful attendance on the practice of the hospital It is there that you will gain the *tactus eruditus*; there that you will see what I am about simply to describe. You will have both medical and surgical cases in the hospital attached to this institution in sufficient numbers to enable you to observe the chief phases of disease. Even these will more than suffice for your careful study, for it is infinitely better for you to observe well a few cases than to pay an insufficient attention to a large number. By confining your attention in this manner to a few cases at a time, you will gain the habit of careful examination; you will imprint the symptoms of disease more vividly and durably on your mind, so as to be able to recognise them at once when called to examine a case. Another and most useful adjunct to experience consists in preserving careful and methodical written records of cases. By so doing, you not only imprint the symptoms more forcibly on your mind at the time, but you preserve the materials which are capable of reviving your recollection in after years. You must bear in mind, however, that art is long and life short; that your education must not be confined to the three or four short years you will pass in the schools; but that every day of your professional life ought to afford you additional knowledge and experience.

The surgeon, in addition to the qualifications I have already described, requires certain others which are not so requisite in the practice of medicine. He often inflicts the most atrocious pain for beneficial purposes. He therefore requires a steady hand, good sight, and firmness of mind, not to be shaken by sudden or unforeseen difficulties, nor by the cries and suffering of the patient. Here, want of coolness and composure would prove highly injurious to his patient. Dexterity is another important qualification of the surgeon. This may be acquired by practice; but coolness, firmness, or courage, are gifts of nature. Unless you acquire dexterity in performing the surgical manipulations you will naturally lose the confidence of your patients; the clumsy application of so simple a matter as a bandage will be instantly detected, and you will lose caste in the estimation of your patients. It is therefore of importance that you should take every opportunity of practising the minor manipulations of surgery, and for this purpose you should anxiously aspire to the office of dresser to one of the surgeons of our hospital, which here is given in accordance with the merits of the candidates.

Much of your success, gentlemen, in future life will depend on kindness and propriety of manner towards your patients; they are usually incapable of ascertaining the amount of your professional knowledge, but they readily detect a want of kindly feeling and interest for their ultimate welfare. They will cease to place confidence in one who appears wanting in this quality. As your future life will be devoted to the relief of human suffering, you cannot but sympathise with the misfortunes of your patients; and this sympathy ought in every case to beget kindness of feeling and manner. Especially should you show this feeling to your poorer patients, who, in addition to the pain and misery of disease, bear the oppressive burden of poverty.

Among the ancients no such division of prac-

tice into medicine and surgery existed as that of the present day. The writings of Hippocrates, Galen, Celsus, and Albucasis, comprise both these subjects. They did not recognise the modern artificial division of medical science. They were then essentially general practitioners, who at present have the care of by far the greater proportion of cases.

It was not until the clergy became the physicians of the middle ages that the two departments were severed. The Council of Tours, in prohibiting the clergy from shedding blood, effected this division. Surgery was then abandoned to the laity, who, in those days of barbarism, were plunged in the direst ignorance. Operations were performed by a set of menials, under the immediate direction and control of the priest-physician; and thus those who, by the use of the razor, were accustomed to employ sharp instruments, became surgeons.

Has this division conduced to the advancement of medical science? is a question of considerable interest; to which it would be difficult to give a satisfactory answer. That division of labour conduces to the perfection of particular departments is an undoubted fact—provided each sets out with the preliminary information which is requisite for both. There can be no reasonable doubt that the students of medicine and surgery should receive the same preliminary education—that they should go through the same course of elementary studies—since both the sciences are built on the same foundation.

I cannot agree with those who would annihilate the regular physician and surgeon. Our lives are not sufficiently prolonged, and our powers of mind sufficiently strong, to embrace the whole wide field of medical science, so as to attain to perfection in each department. The pure physician should understand the general principles of surgery, although he may neglect the details; while the pure surgeon should be conversant with the principles and, to a certain extent, the details of medicine, so as to enable him to treat such general symptoms as may arise during the progress of surgical diseases.

ORIGINAL CONTRIBUTIONS.

ACCOUNT OF THE CHOLERA WHICH PREVAILED IN THE 86TH REGIMENT, STATIONED AT KURRACHEE DURING APRIL AND MAY, 1846.

By A. THOM, Esq., Surgeon, 86th Regiment.

The disease appeared first in the 86th Regiment, and I believe we had a hundred cases in hospital before it had decidedly set in with the other corps; the first cases were almost universally fatal, the virulence of the disease having been most concentrated at its first appearance, and becoming gradually less uncontrollable and less general as its progress continued. Thus of the first 100 admissions, 79 died, 21 recovered; of the second 100 admissions, 66 died, 34 recovered; of the third 100 admissions, 50 died, 50 recovered; of the fourth 100 admissions, 40 died, 60 recovered.

On the 14th, 15th, and 16th, particularly the two first of these days, the cases were generally brought in in a state of collapse, and death followed in three or four hours.

But the peculiarity in many cases was, that there was neither vomiting nor purging, or only one of them, and in by no means a profuse quantity. Another circumstance which struck me in some of the first cases was, that before even the natural hue of the skin had been replaced by that livid look so characteristic of the disease, the pulse was almost imperceptible at the wrists, the eyes turned up, and the voice hollow and feeble; in an hour after, such cases would be *in articulo mortis*. But in these cases cramp of the lower extremities was severe, although seldom extending to the abdomen.

The next class of cases were those where the attack was equally sudden, and the collapse preceded the vomiting and purging of serous fluid, or appeared simultaneously with these symptoms; and when cramps of the legs and thighs, arms and abdominal muscles, were most violent and intolerable.

Again, we had a third class, where the patient was suddenly attacked with vomiting and purging of *congée* stools, cramp of legs, arms, and belly, rapidly inducing prostration of strength and early collapse often within an hour or two of the first attack.

Lastly, there was a number of cases in which there were evident signs of reaction, or an attempt of nature to bring about this, but in many instances the brief effort was too much for the system, and it rapidly sunk; but, in general, this class was more manageable than the others, and not unfrequently terminated in fever; and we were very glad to have a bad case of fever instead of a doubtful one of cholera.

The four types of the disease to which I have just alluded occurred in the order of succession in which I have placed them, each predominating in the four groups of cases which I have ranged to show the gradual modification of the disease by time.

In three-fourths of the cases the attacks were sudden, often within a few minutes; in the other there were occasional precursory signs for a few hours, or even a day beforehand. The first indications were a sudden sense of *malaise*, sinking, and prostration of strength, with restlessness and jactitation, accompanied by vertigo, deafness, loss of vision in some, alteration or hollowness of voice, and weak and slow respiration, nausea, and vomiting, purging of serous fluid, with intense thirst and sensation of burning heat at the precordium or course of the colon. The circulation seemed as if suddenly impeded, especially in the extreme vessels and capillaries, and collapse quickly followed; the features became shrunk, and the lip and skin assumed a ghastly and livid hue, which often pervaded the whole body; the pulse weak or imperceptible at the wrist, and the skin rapidly became cold and clammy, and covered with copious perspiration. Now, with regard to the spasmodic symptoms, they were generally most remarkable in the first stages, and commonly assailed the muscles of the inferior extremities, but very often extended to the arms, head, and abdomen—in fact, the whole body. The biliary and renal secretions seemed to have ceased, and, indeed, this may be said to have been the case with every other secretion, excepting those of the skin and mucous membrane of the stomach and intestines, and, in women nursing, of the secretion of milk.

Now, although these symptoms were those generally met with, they were not universal, and it was rare to find them all in one individual. The purely pathognomic symptoms of the disease, as we met it, were loss of nervous power; weakened circulation, tending to more or less degree of collapse; and profuse cold perspiration, to such an extent that the clothes and bed of the patient seemed wringing wet. This last in addition to precordial distress were never-failing symptoms present in every case, and remained till the action of the heart ceased altogether. There was often an absence of purging, vomiting, and cramp, the three next most prominent symptoms; but in no case do I, or any one else, recollect that the skin did not pour out fluid in large quantities: this might have been called the chief symptom.

The mind was usually clear and collected, unless disturbed by the excruciating sufferings arising from severe and protracted spasms of the whole body; and, in a very few cases, I have seen it wander as coma, which usually closed the scene, set in.

Treatment.—As there is no pretension to success in any part of our practice, I will just advert to the different plans adopted to arrest the disease or alleviate the sufferings of the hapless creatures who passed under our care. I vainly fancied that it was not difficult to treat this disease with ordinary effect, judging from experience of Asiatic cholera, in its visit to England, and was quite prepared in my mind with an array of remedies to oppose this pestilence on its native ground; but it seemed to bid defiance to every mode of cure which I or others adopted.

From the want of medical officers it was impossible to pay minute attention to individual cases; but the numbers came in so rapidly that we could, under almost similar circumstances, give precisely the same remedies to a given number, and the rapidity of the malady showed in a few hours the success attending them: thus enabling us to draw a fair conclusion from the considerable number of data. As failure followed, another plan was tried with the next series of cases admitted, and so on, till, feeling at a loss what next to do, we had to revert to treatment which we had condemned before. Thus it turned out that exactly the same plans of treatment were employed in each of the 400 cases which were successively admitted, and with the results as exhibited. That sixty cases out of the last hundred were cured we might have had some reason to assume, had not the same practice been so unfortunate in the first hundred. It is true many men appeared to improve after our treatment in the last hundred cases which came into hospital; but our past disappointments led us to assume little merit in this apparent success, even in the cases that recovered.

Conceiving the disease to be of a highly congestive nature, suddenly occurring in full, powerful, robust men, V. S. was a natural remedy to be adopted, and its high reputation by some gave us some encouragement to pursue this practice for awhile; but what availed it to open a vein in a man in collapse, as every case was at the first outbreak. A few drops of dark blood issued, and the patient steadily sunk. Now, in cases which had sudden collapse, and no vomiting and purging to debilitate the system, we ought to have had some success with this practice; but it was not so. But, after the disease had in some degree exhausted its violence, we found bleeding apparently useful in many cases; but if reaction followed venesection, it was just as likely that the stimulus of mercury would have been followed by a similar result.

Mercury was one of the earliest and most general medicines in use; it was given in large and repeated doses of ten or twenty grains of calomel or blue pill, with one or two grains of opium united, particularly in cases where there was much vomiting and gastric irritation. This treatment was almost invariably attended by relief, and quieted the vomiting and spasms; but still the system would not rally, reaction did not follow, and the profuse perspiration of the skin and collapse went on to the usual termination. In the modified cases, and those which took place after the 17th and 18th, this practice was generally readopted after having tried others, being found quite as certain as any other.

Croton oil, in doses of two drops, with one or two grains of opium, was given with much temporary advantage in bad cases, and apparently contributed to the recovery of others. It certainly seems an invaluable remedy, and in many cases of vomiting, purging, and spasms, the disease was arrested at the outset; still, in the earlier cases, it had no influence over the circulation, and nothing seemed capable of arousing the nervous and circulating system to action even after the profuse vomiting and purging were arrested; and I confess we could accomplish this last object so often that we were frequently led to indulge hope, which, alas! proved vain.

The acetate of lead, in doses of one, two, or three grains, and one-eighth of a grain of acet. of morphia, was employed to stop those profuse watery dejections which continued in some cases after reaction had taken place; and in this point of view it was a most useful remedy. Of course in those cases where vomiting and purging are the first symptoms, and collapse appears to be heir consequence, the early use of this remedy was resorted to, and with very good encouragement.

The use of tartar emetic and hydrocyanic acid was not found to afford sufficient evidence of being preferable or even equal to the other remedies mentioned, to have had an extensive trial, or reverted to a second time.

But the use of hydrocyanic acid by itself in water was of equal benefit in allaying the gastric irritation; and in that distressing state of the stomach marked by retching and rejection of almost everything taken into it, which exists for some days after the more imminent danger is past, I think a more efficient remedy cannot well be found.

Saline remedies and diluents were used according to the state and inclination of the patient's stomach. An incessant craving for drink, for the sake of the coolness which it produced, was a most common and the most distressing, because never yielding, symptom. Cold water was sought for by many, and after two or three draughts, being rejected, it would lie on the stomach. Others would only use soda-water or lemonade; and the character of the blood showed that, if the last could be introduced into the system, it would be of much use in correcting the changes therein existing. Nitrous acid, much diluted with cold water, was occasionally accepted by the patient, and quieted the vomiting and allayed the pressing calls for drink.

The stimuli which were used consisted in brandy diluted with water, or wine, ammonia, ether, assafœtida, the various essential oils, &c. But I do not know any mode by which we were more successful in rousing the system after the profuse discharges had been stopped than by enemas of sago mixed with brandy or wine, and a few drops of T. opii conjoined. By this treatment, especially the brandy injection, repeated every hour or so, I have seen men rally in a most wonderful way; and, unless the pulse had wholly ceased at the wrist, it was always more affected by stimuli exhibited in this way than any other. I would strongly recommend it as an auxiliary in certain cases of cholera.

Friction of turpentine, mustard and vinegar, &c., were resorted to in all cases; hot water to produce vesication, and hot applications in every form and shape, were used as external remedies.

After the first danger was past, a free use of wine, beer, nutritious diet, and tonic medicines was required; and I never saw so many cases in so low a state recover, without running more generally into fever. It is quite astonishing how much wine and beer could be used without affecting the brain or head."

ROYAL BERKSHIRE HOSPITAL.

SURGICAL REPORTS AND OBSERVATIONS.

By F. A. BULLEY, Esq., F.R.C.S., Surgeon to the Hospital.

FRACTURE OF THE SPINE.—DEATH.—POST-MORTEM APPEARANCES.

John P., aged thirty-six, admitted September 17, 1846, on account of a fracture of one of the dorsal vertebræ, which he had received while assisting in removing the wooden centres of a railway bridge. In lowering a large beam of timber by a rope working in a block, one end of it had swung round, and, striking him suddenly on the back, felled him to the ground. His companions, finding that he had lost all power over his lower limbs, and as he complained of intense pain in the back and loins, conveyed him without delay to the hospital.

On examination, the spine was found to be fractured in the situation of the fifth or sixth dorsal vertebra, a large soft swelling, from blood effused in considerable quantity underneath the integument over the seat of fracture, preventing the exact nature of the injury being at first clearly ascertained; but from the continuous linear regularity of the spinous processes of the bones, above and below the fracture, there appeared to be no considerable displacement, either backwards or forwards, of the separated portions of the column; he suffered excruciating pain in the part, as well as in the abdomen, extending on the left side towards the back in the direction of the kidney. The sensibility and voluntary muscular power of the lower limbs were entirely lost. He had vomited immediately after the accident, and continued to do so for some time after admission into the hospital. Thirty leeches were ordered to be applied over the seat of fracture, to be followed by a bran poultice, made with a strong decoction of poppy-heads and chamomile flowers to the part. To have an opiate draught at night.

18th. Has been very sick at intervals during the night. The urine, owing to the paralysed condition of the bladder, has been drawn off by the catheter both last night and this morning, unmixed with blood, and without any particular ammoniacal smell. Has had no relief from his bowels since the accident. The pain in the back and abdomen continues; the swelling over the seat of fracture is subsiding so as to allow of a more particular examination of the part, by which it is clearly evident, from an unusual mobility of the fifth dorsal bone, that this vertebra has been fractured. To repeat the opiate draught at night.

19th. The sickness has, in a great measure, subsided. Had a good deal of pain in the situation of the fracture last night, but is easier this morning. The bladder is distended with urine, which, when drawn off by the catheter, is of a straw colour, slightly albuminous and alkalescent, but without any particular smell. Feels his appetite failing, so that he has no desire for solid food. To have broth and other nutritious liquids in small quantities and often. The anodyne draught to be repeated.

21st. No change in his symptoms during yesterday; last night the pain in the back was greater than usual, and lasted longer; he is, however, free from any uneasiness this morning, as has been the case generally in the morning since his admission; but the pain in the left kidney has been persistent of its being greater than he has before felt it. Natural appetite decreasing; he has an anxious and distressed look; tongue red at the tip and edges, and he complains of excessive feverish thirst. The lower extremities, which were at first above the average temperature of the body, are now quite cold. Habeat olei ricini ℥vj. at bedtime.

23rd. The bowels have been freely moved by the oil. The pain in the back and left kidney has continued unrelieved. On passing the catheter this morning, a considerable quantity of blood was observed for the first time dissolved in the urine, followed shortly afterwards by an oozing of sanious muco-purulent fluid from the urethra. Complains particularly of pain on pressure over the bladder. Extremities still cold, insensible, and motionless. The natural sensibility of the surface of the abdomen remains unaltered as far down as Poupart's ligament, where it is suddenly lost. To be removed to a water-bed, and his legs to be swathed in cotton-wool, and bandaged in flannel. To repeat the opiate at night.

27th. Has continued much in the same state as last report. Has suffered a good deal of pain in the back, especially during the night, as well as in the kidneys, and in different parts of the abdomen. The pain in the bladder has increased, and is more constant; urine still bloody, and has a very offensive ammoniacal smell.

30th. Urine still bloody and offensive, and every attempt to pass the catheter into the bladder in the gentlest manner is followed by a stream of fluid blood. Has been constantly suffering from fever, apparently hectic, since last report, with night sweats and other symptoms of great constitutional disturbance. There is a hard, doughy feel above the pubis, as if from the bladder being full of coagulated blood. The respiration, which had up to this time been in some degree assisted by the natural movements of the thorax, is now entirely diaphragmatic and abdominal. Slight electro-galvanic shocks have been directed down the legs, which have had the effect of raising the temperature of the limbs, and creating a feeling of warmth to the touch, which the wadding and flannel did not seem capable of producing; he is also conscious himself of a sensation of warmth passing down the legs.

Oct. 2nd. The respiration, which was yesterday entirely diaphragmatic, has to-day become partially thoracic. The emaciation of his body has progressively increased. The night sweats and hectic fever have continued unabated; the feeling of hardness on pressure over the bladder, even when completely emptied by the catheter, is unaltered.

It would be tedious to note the minute indications of the patient's progressive decline; sufficient to state that, from this date, he gradually became weaker and weaker, the urine diminishing in quantity, but mixed with a larger quantity of pus and blood, and, indeed, for a few days before he died, scarcely anything but bloody pus seemed to pass through the catheter; a bed-sore, which had a few days previously appeared upon the right buttock, had, notwithstanding every care, increased in size and depth, forming an irregular sloughy hollow; and an artery which traversed the bottom of the wound gave way the night before he died, occasioning a hemorrhage to the extent of about a pint, which, when discovered, was easily arrested by pressure. This comparatively little bleeding, however, seemed too much for his enfeebled system to bear, for from this time he quickly sunk, and died in the morning of October 6, ten days from the date of the accident, retaining his consciousness to the last.

Post-mortem Inspection Twelve Hours after Death.—On exposing the cavity of the abdomen the intestines generally had a pale, bloodless appearance, but there were no signs of any part of them, with the exception of a small portion of the ileum, having been affected by the accident. The liver, which had been uninjured, was natural in structure, participating only in the anæmic condition of the other viscera. At the lower part of the abdomen, on the right side, the ileum, at a short distance from the valve, was found to be thickened apparently from previous inflammation, and agglutinated by a thick inelastic medium to the peritoneal investment of the bladder.

The parietes of the bladder were generally increased in density, so as to be in some parts considerably more than an inch in thickness, more especially on the fore part of the organ, where an abscess, as large as a walnut, had been formed in the hypertrophied tissue, the cavity of which was only separated from the interior of the bladder by a thin membranous partition, but had no communication with it; there was another, but a smaller one, on the right side, and this, as well as the larger one, was filled with half-putrid unhealthy-looking pus. The mucous lining of the bladder had entirely lost its natural appearance, being universally covered with flakes of yellow lymph, intermixed with flat adherent patches of coagulated blood from the rupture of vessels on different parts of its surface. On making pressure along the tract of the ureters, from above downwards, a considerable quantity of purulent urine escaped from their orifices into the bladder, more especially from the left as connected with the kidney, in which the patient had during life complained of the greatest amount of pain.

The pelvis of each kidney was more or less coated with flakes of coagulated lymph of the same kind as was observed in the bladder; but, except in one small spot, there was no appearance of ruptured surface, so that the quantity of blood in the urine, which had latterly been so great, could hardly be considered, except, perhaps, in a very small degree, to have had its origin in these organs. The left kidney was somewhat larger and more vascular than the right, and appeared to have been subject to a subacute inflammation of the same kind as had affected the bladder, but not to so great an extent.

On cutting through the integument covering the fractured vertebra, a thick layer of softish coagulated blood was observed underneath it, occupying a considerable space over the injured part, thickest in the centre, and gradually diminishing till at its circumference the clot was as thin as paper, and ultimately lost in the cellular tissue. In its central portion it extended downwards towards the spine, separating the muscles from each other, and the deeper ones partially from the bones; and the whole of them were in a softened and flabby state, from having been so long in contact with the effused and decomposing blood. The vertebral column at this part, both above and below the fracture, had the appearance of having been bathed in blood, from the extensive effusion caused by the rupture of one or two branches of the dorsal spinal veins, which seemed to have been the principal source of the external hemorrhage.

On removing the broken arch of the bone, and those of two or three of the contiguous sound ones, the theca vertebralis was for a considerable distance upwards and downwards separated from its attachment to the spinal canal by a thickish layer of coagulated blood, so considerable at one part as to diminish the capacity of the tube, and press upon and somewhat flatten the spinal cord. The cord itself did not appear to be pressed upon by any portion of the fractured arch of the bone, nor was there any considerable alteration in the direction of the medullary canal by the displacement of either the upper or the lower portion of the column; but the medullary matter was for some distance softer than usual, and of a rosy pink colour, the result, apparently, of the secondary inflammation to which it had been subject; the roots of the nerves arising from this altered portion were also in a softened state, and of the same colour as the substance of the cord.

The immediate injury to the bone consisted of a fracture of the base of the arch on each side, close to the body of the vertebra, attended, however, with very slight displacement; there appeared, also, to have been a fracture of the lower part of the body of the same bone, also without displacement, which had become partially united, for on endeavouring, with some slight force, to remove the spinal column from the body, the partial union gave way at this part, leaving a shell of bone a little more than one-eighth of an inch in thickness attached to the subjacent cartilage.

Remarks.—The foregoing case may probably considered as the record merely of the ordinary progress, and not uncommon result, of a spinal fracture; but, as it differed in several important pathological particulars from most of those which I have had an opportunity of observing, I shall be excused for giving it rather more in detail than I should otherwise have done. My attention was more particularly drawn to the altered condition of the *urinary bladder* by some able observations of Dr. Shaw, lately published in the *Medical Times* and *Gazette*, tending to show that the morbid changes in this organ that occasionally followed fractures and injuries of the spine were influenced, if not produced, by a highly alkalescent state of the urine (resulting from the decomposition of its urea and animal matter), which, being allowed to accumulate within it, was the means of setting up an irritation of its mucous lining, as evidenced by the increased mucous discharge, which he believed to be rather the consequence than the cause of the alkalescence of the urine, as was supposed by Mr. Curling and others; and that subsequently, the same cause continuing to operate, the whole of the structures of the organ became morbidly thickened and ultimately disorganized; and in some cases the decomposition was propagated in a retrograde manner along the ureters to the kidney, at last destroying the patient.

To prevent or moderate these ill effects, he recommended that the bladder should be emptied more frequently than is commonly done, and that it should be syringed with warm water after each operation, to remove any small quantity of mucus or alkaline urine that remained, which, if allowed to do so, would have a tendency to communicate the same alkaline irritating quality to any quantity of urine which might afterwards accumulate in the organ. What might have been the result in the present instance (where the morbid alteration was unusually great), if such means had been carefully pursued, I cannot take upon myself to say; but I should be disposed to adopt them in a similar case as a valuable pathological suggestion, worthy of more extended investigation.

I have omitted to mention that, shortly after the patient's admission, I applied some degree of extension to the spine; but whether this may have had any effect in rectifying any original displacement, I cannot exactly say, the precise degree of displacement being from the first obscured by the swelling; but, from what I could observe *post-mortem*, it may have done some little good; at any rate it seemed to have done no harm, as it put him to no additional pain, and certainly could not have increased the already complete paralysis; and, as I had heard and read of some instances where it had been employed with impunity, and even beneficially, I thought myself justified in cautiously adopting it. It was performed by fixing the body to the head of the bed, with steady and gentle traction to the lower limbs, by careful assistants.

The electro-magnetic currents which were passed down the lower extremities from the spine were observed on each occasion to cause the muscles to contract spasmodically, and raise the limbs from their supine and straight position on the bed; but, as these effects may be produced by similar means on dead animal matter, the circumstance is not remarkable; but it is worthy of observation that the usual vibratory sensations were felt no farther than Poupart's ligament, where they abruptly ceased; and the only benefit the patient received from these means was from the comfortable sensation of warmth in the limbs which they undoubtedly appeared to produce, and which must have tended, in some degree, to alleviate his sufferings.

MERCURY.—ITS INFLUENCE UPON THE SYSTEM, AND THE INDICATIONS FOR ITS EMPLOYMENT.

By CHARLES SEARLE, M.D., of Bath.

Mr. Smith, in the *Medical Times* of April 10, having submitted to your readers some very luminous observations on the operation of mercury, I beg leave to be permitted to support Mr. Smith's views, and add my own, which, as an Indian practitioner, may possess some claim to attention upon this interesting subject, by furnishing the following, extracted from my recent work on "The Philosophy of Life, Health, and Disease."

Of Calomel.—Whatever be the preparation of mercury administered, the condition in which it is received into the system from the stomach I believe to be that of a chloride, seeing that it must be first subjected to the influence of the hydrochloric acid of the stomach's secretion, and dissolved, before it can be received into the circulation. Hence it is, in my opinion, that calomel (the chloride of mercury) is so much more certain and determinate in its effects, and therefore so superior as a remedy to all and every other preparation of mercury we possess.

"The operation of all remedies received into the stomach, I believe to be in admixture with the blood, after their absorption from the stomach; experiments recently made having established this in my mind beyond question. The stomach, nevertheless, is subject, doubtless, as much as the skin, to irritation and other local agencies operating upon its surface; and thus, through its nervous sensibilities, also, may it be affected, as well as other organs connected with it; but neither calomel, jalap, rhubarb, wine, nor many of the numerous things administered as remedies, do so specifically affect it—not even ipecacuanha! An infusion of this substance, injected into a vein of the leg, operates as an emetic in a quarter of the time required by any quantity administered by the stomach. These, then, when taken, are accordingly first absorbed into the blood, and each, during its circulation, severally operates in its own particular way—jalap as a purgative, and ipecacuanha as an emetic—either directly upon the organ influenced, or indirectly so, by first influencing the brain and nervous connections of the part. In proof of this, the same remedies applied to a blistered surface, from which they become severally absorbed, and in like manner operate as when taken into the stomach.

"*Mercurials increase Capillary Excitement.*—Calomel, when absorbed by the veins from the stomach and bowels, in its passage with the blood through the liver, to which it is immediately conveyed, excites this organ to increased secretive function; hence the bilious evacuation which so constantly succeeds to the use of a grain or more. Proceeding from the liver, and admitted into the general current of the circulation, its operation I believe to be specific on the capillary system at large, exciting these vessels to increased action. Hence its general influence as a stimulant to the whole system, its renowned deobstruent power, and its operation on the glandular system, in increasing all the secretions. Its operation in exciting the capillary arteries, and thereby secretion, necessarily removes obstruction from the exhalent vessels, and congestion from their venous terminations—the cause of exudation; and thus is exudation prevented, and absorption at the same time increased; and hence the accredited action of mercury upon the absorbents, in removing exudation of whatever kind, and the various dropsical affections. Its operation on the capillary system being general, the action of the heart and that of the brain, through the medium of their organic structure, is excited also, and, in short, all the functions. It thus operates probably by imparting qualities to the blood, by which its constituent particles may have a greater affinity for oxygen—the vitalizing principle; and thus may increased chemical action in the blood and its consequence—excitement—take place throughout the system. But whether this be the mode of its operation, or not, the effect is, as I have described it, excitement to the general system.

"*Indications which Mercury fulfils.*—The power of mercury in increasing capillary action is further evinced by the febrile commotion it excites in the system, and the buffed blood of those under its more abundant influence—effects succeeding to its exhibition which should be guardedly watched (generally occurring when it has ceased to operate as an evacuant), and when they arise its further use should, in a general way, be prohibited, though in some cases it may be employed with great advantage upon the principle (noticed when treating of blood-letting) of exalting the general excitement of the system, in relief of a local or partial affection: thus showing its use in inflammations of the bowels, and numerous other organic inflammations. But, speaking of its employment in a general way, it may be observed, that the indications for its use in inflammatory affections are limited to the atonic stage, and that of oppression. In no case should it be given in the intermediate or more active stage of inflammation, involving the heart's excitement, save in very guarded doses, and in conjunction with other evacuants. But when the more active condition of inflammation or of fever has been moderated by bleeding and other evacuants, or when debility has succeeded to previous excess of excitement, the atonic condition of these affections of the capillary system, its administration supports a due action of the capillaries, excites the secretions, and invigorates the heart's action, in common with the rest of the functions, and accordingly becomes our chief remedy; and in combination with opium, to moderate its excitement and allay irritation, carried to the extent of inducing increased salivary secretion,

which appears to mark its ultimate effect for good, is of all remedies the most valuable.

"*Calomel, its Effects with Reference to Quantity.*—Upon the subject of quantity I have a few observations to make of much importance. I have endeavoured to prove, in various parts of my work (which, although addressed to the public, is nevertheless, I trust, deserving the attention of the profession), that all agents, in their operation on the system, whatever those agents may be, whether physical or moral, or whether operating upon a part of the system, or upon the whole, have their effects determined, and in all cases bounded, by the quantity of influence imparted. Thus, wine, in moderate quantity, produces exhilaration and excitement; excess of it, atony and death. Heat in moderation produces excitement; excess of it, as in a severe burn or scald, mortification and death. The reverse of heat, cold, in like manner, within a certain range, as in the plunge of a cold bath, produces a glow and excitement, extreme cold, on the other hand, palsy and death. Anger in moderation produces vehemence and excitement; extreme anger, or rage, on the contrary, often deprives the person of utterance and propriety. Fear will induce a man to fly; fright, on the contrary, fixes him to the spot. In extreme grief no tears are shed, in moderate grief they flow abundantly. Enough has been said, I think, to establish the fact I have in view, and which, in reference to its application in a variety of ways, has been too much neglected, and especially so in the administration of mercury. A grain or two of calomel, my experience justifies me in saying, will in all cases (unless there exists some specific disease obstructing the blood in its passage to or through the liver), with very few exceptions, produce one or more bilious evacuations; thus it does by moderately exciting the natural action of the liver, to which it becomes, when absorbed from the stomach, immediately applied. If the object, therefore, contemplated in the administration of this remedy be the increase of the biliary secretion, it should be given in a quantity limited to from one to three grains; whereas it is an every-day practice to give it in a large dose, to prevent, as practitioners say, its griping the patient. Now, griping, I maintain, is the natural effect of an acrid condition of, or long-retained bile, in the liver or its appendage, the gall-bladder; and, if this takes place when I administer a small dose, I hail it as the best evidence that the remedy was required, and in the extent of dose in which I have administered it; as I am thus dislodging the enemy, the cause, not unfrequently, of all the patient's ailment; whereas a large dose—what does it do? It so hurries the circulation through the secretive apparatus, that secretion is not affected, the excess of excitement paralyses the natural endowment of the part, and consequently there is either no secretion, or secretion of an altered kind, and perhaps without griping. This, in some cases of disease, may be a very proper measure, and I know it to be so; but not in fulfilment of the purpose mentioned, namely, that of increasing the ordinary biliary secretion.

Calomel, its Value as a Remedy.—The fruits of my experience justify me in declaring, that if there is any single remedy in the cure of disease meriting the name of universal, that remedy is calomel. The explanation I have given of its operation, and the universality of its influence on the system in exciting the functions of all the organs, and increasing all the secretions, render it evident, I conceive, that it fulfils indications of one kind or other in the treatment, with few exceptions, of every disease, which are all, it may be truly said, with very few exceptions indeed, based upon depression of the active energies, of life, health, as I have said before, consisting in the due action and efficient performance of the various functions of the system. Judiciously employed, I can say with confidence, in opposition to much prejudice on the subject, founded on the circumstances which first introduced it into practice in this country, and its too commonly improper mode of administration (the principles by which its employment should be regulated not being understood), that calomel is as harmless as iron, or any other of the numerous articles of daily remedial administration. This conviction, be it remembered, is the fruit of thirty years' experience, twenty of which were spent in India, where this is the chief remedy employed in the cure of disease, and one of universal use both by native and European practitioners."

PROGRESS OF MEDICAL SCIENCE.

France.

ACADEMY OF MEDICINE.

Meeting of April 6; M. Bégin in the Chair.

TYPHOID FEVER.

A report was read by M. Gaultier de Claubry on a communication of Dr. Ragaine, relative to an epidemic of typhoid fever at Saint Mard (Orne).

Dr. Ragaine insists upon the contagious nature of the disorder, and upon its treatment by the exhibition of saline purgatives after one or two emetics.

The reporter remarked that it was, to say the least, singular that, in Paris, typhoid fever was considered not to be contagious: this was the doctrine most generally adopted; and yet when physicians, having completed their studies, returned to the country for the purpose of practising medicine, in a short time their opinion was altogether modified on the particular point. The conclusions of the report were favourable to the paper.

M. Rochoux thought it very singular that the same disorder was declared contagious in the country, and not so in Paris: this difference of opinion depended upon the fact that typhus and typhoid fever, two very distinct maladies, were always confounded. Their chief differences consisted in the presence of a constant eruption in typhus, and in the much shorter duration of this malady.

M. Piorry did not consider it was proper to establish symptomatic differences of this sort between two maladies so closely allied: the anatomical lesions accompanying each disorder were the real elements from which positive pathological distinctions might be deduced. The system of considering disease as an entity—abstractedly from the organic conditions—separately from the temporary and successive modifications in each viscera, produced exclusive and unitary therapeutic ideas, and led to the adoption of one line of treatment exclusively—venesection, purgatives, &c. This was the result, in the Parisian hospitals, of erroneous ideas on general pathology. As to statistics, the academy know that they were brought forward in support of the most opposite doctrines. Professor Piorry was inclined to admit the contagious nature of typhoid fever, and thought that it might not be unfrequently observed in very severe cases.

Professor Bouillaud endeavoured to establish the superiority of venesection over every other treatment in typhoid fever: he did not believe in contagion.

M. Louis observed that no doubt could exist as to the contagious nature of typhoid fever in the provinces; the numerous cases of M. Gendron, Bretonneau, and Putégnat, demonstrated the fact beyond the possibility of a doubt. In Paris M. Louis had also observed cases which proved the existence of contagion. On three occasions M. Louis had noticed in his wards the development of typhoid fevers in consequence of the admission of a severe case of that malady. It was quite true that in hospitals this was rare, because the greater number of patients could be exposed with perfect impunity to contagion: some having already been affected with typhoid fever, others having passed the age at which it is observed. M. Louis was of opinion that typhus differed materially from typhoid fever, and particularly by the absence of the alterations of Peyer's glands, so constant in the latter.—Meeting adjourned at five.

FACULTY OF MEDICINE.

[The following pages are an abstract of the first lectures, by which Professor Andral opened his course at the beginning of the winter: we forward them, first, in order that the sketch we have endeavoured to lay before the readers of the *Medical Times* may be as complete as possible; and secondly, because the subject which these lectures treat of is now, and appeared to us, interesting.]

LECTURES ON GENERAL PATHOLOGY, BY PROFESSOR ANDRAL.

The history of particular cases, that of each disease, still leaves the mind unsatisfied, and does not completely establish the science of pathology. The tendency to generalization inherent to human intelligence leads us to connect facts in their constant and general points of contact. It is the object of this course to deduce from individual cases, principles and laws—using at the same time a degree of reserve proportioned to, and destined to curb, the eagerness of imagination.

The elements of disease are to be sought for, in the first place, in the physical alterations of the body; and secondly, in the modifications of its dynamic powers. The former do not constitute disease, but occasion a certain disorder in the accomplishment of the functions.

Disease can exist independently of any physical change in our organs—we should say any appreciable change, for we are not warranted in stating that no change exists, merely because we cannot detect it, as it may, and frequently does, baffle investigation.

The study of physical alterations is still in its infancy. Simple morbid anatomy is insufficient; structural anatomy, as it is taught to us by the microscope, is also of very great assistance; but chemistry must likewise be called in to complete the researches of the anatomist and microscopist, and give them a definitive value.

From the correct knowledge of physical and dynamic changes, the laws which constitute the basis of pathology may be deduced. These alterations must be studied separately, and each in all its details; but the difficulty of analysis is considerably increased by the fact that they are generally combined so as to form groups which we unite artificially, and call disease; and new discoveries daily throw disorder into these arbitrary classifications, and render the institution of a permanent nosological table a very arduous, if not an impossible, task.

Thus, in fever, the dynamic alterations of vital powers are always the same—heat, frequency of of pulse, &c.; but its concomitant physical changes vary with each age, with each school, with each new discovery. At one time fever is considered isolately; at another it is connected with physical changes of our structures variable with each successive doctrine, let it be humorism, vitalism, or solidism. Thus, again, the word inflammation recals to the mind a certain number of phenomena which are always the same, but to this day it is hard still to say what is the precise nature of the accompanying physical alteration.

Turning first to the physical alterations of our structures, we are at starting embarrassed to know if we should begin with their study in the organs, the tissues, or the liquids of the body. None of these parts are simple; we must, therefore decompose them, and seek in each of their constituent elements what part it takes in the production of disease. In these elements we find mediate and immediate principles. The former may be altered in quantity, quality, situation, and even in nature. The latter may also vary in these various respects, or be abnormally developed. From the mediate principles

emanate the immediate, and from these our solids and our fluids We must consequently inquire into the changes of the blood, and the alterations of those fluids which are formed from the blood In the changes of the solids we must consider the alterations of nutrition, and the various new productions which they sometimes present to our observation.

ALTERATION OF THE MEDIATE PRINCIPLES OF THE BODY

Gases are found in the system, some of them necessary to the continuance of health, others accidentally evolved The former may be modified in their quality or situation, or be in a state of combination, incarceration, or freedom

Combined gases are met with in all parts of the body thus, by the union of oxygen and nitrogen with other substances, most of our textures are constituted, but cases must be admitted to exist in which the natural proportions of these elements are modified In the blood we find oxygen, hydrogen, and carbonic acid in a state of dissolution, may they not in some cases be liberated, and remain in the heart or vessels in their gaseous condition, or escape from the parietes and surfaces of the body? These questions are not by any means futile, they are justified by the fact that free gases have been found in the circulating system, and that under nervous influence, as in hysteria for instance, gaseous productions have been known to escape from, or to accumulate over, certain surfaces of the body From the skin from the surface of respiratory organs, they have been discharged and collected, they may vary in quantity and in nature, from the skin, for instance, nitrogen and carbonic acid are evolved M Collard de Martigny has shown that a high degree of temperature increases the quantity of carbonic acid thus liberated, he has also stated, adducing experimental proof, that an abundant animal diet increases the quantity of nitrogen, diminishes the amount of carbonic acid gas discharged from the surface, and that a contrary result is the consequence of spare and vegetable diet Now, it is more than probable that a certain connection does exist between these differences of proportion of the evolved gases and certain morbid conditions of the system and, therefore, the prosecution of these physiological inquiries must prove eventually interesting to the progress of pathology From the respiratory organs, carbonic acid and nitrogen also escape The quantity of nitrogen discharged, as Mr Milne Edwards has proved, is less considerable in cold than in warm weather, although in a cold atmosphere more nitrogen is absorbed Thus in winter, either the blood will remain loaded with an excess of azote, or else, when separated from the blood, that gas will not pass out through the lungs, but be eliminated by other organs, some of our fluids will, therefore, in winter contain more nitrogen than they do in summer The influence of the nature of the nutriment on the pulmonary exhalation of nitrogen has not been completely studied With regard to disease, we find that M Condet, of Geneva, states that in diabetes, more azote and less carbonic acid are secernated from the lungs than during health

We have stated that carbonic acid is also separated from the blood by the lungs Its quantity varies according to the age, sex, and constitution of each individual from childhood upwards that quantity increases to the age of thirty The quantity of carbon evolved from the lungs of a child of twelve years, during one hour, has been calculated to equal four or five grammes in weight, and increases up to fourteen grammes per hour, from forty to fifty that amount remains stationary, and diminishes with age In the male a greater quantity of carbonic acid is discharged from the lungs than in the female sex, during menstruation it has been positively ascertained that the evolution of the gas from the respiratory surface is arrested in a temporary manner. It is increased by substantial diet and fermented liquors, and diminished by abstinence, according to Spallanzani, Prout, and Boussingault During sleep it is also diminished Nysten inquired into the influence of disease upon this interesting phenomenon, but his researches have remained incomplete it appears, however, that in chronic maladies the lungs separate less carbonic acid than in acute disorders

In the mucous cavities of the digestive organs gases are also developed, and in general under the influence of purely chemical causes In hysteria a variety of tympanitis has been observed, and it is not uninteresting to remark that the gaseous accumulation sometimes disappears spontaneously, no evacuation whatever having taken place to account for the fact. These intestinal gases are also formed in certain conditions of hematosis —in putrid and adynamic disorders

In other mucous cavities gas may be secreted, but the occurrence is very rare, and is always the result of disease In a dead but not decomposed body I obstein found the gall-bladder distended with air The urethra uterus, and vagina have been said also to exhale gaseous products, but the facts are not well proved

Gas is never found naturally in serous membranes, but often during disease it is never secreted by the membrane itself but always arises from rarefied or decomposed morbid products, from gangrene, or communication through an ulcerated part with atmospheric air, as in pneumothorax Cases have been reported of gas in the arachnoid and ventricles, but they require further confirmation In the pericardium, Laennec was disposed to admit the possibility of the secretion of air, but, if true, it must be exceedingly rare

In the cellular tissue, air is almost always introduced by wounds, however, Senac, Lieutaud, Portal, and P Franckhim, reported cases of spontaneous emphysema

Gases have been found in the heart and vessels in three distinct instances —1 when the body was putrid, 2, sometimes after particular operations, and 3, in some cases of death from hemorrhage Spontaneously and in even rarely it is true, in the cavities of the heart and be due to a diminution of quantity of the blood, to a change in its nature, or to the excessive amount of gas contained in the circulating fluid The presence of air in the circulating system is productive of various accidents Magendie notices a case of sudden apoplectic death due to the existence of gas in the cerebral vessels Sudden oppression and death have several times followed the accidental introduction of air into the veins of the neck during operations performed upon that region

Water is the only liquid mediate principle which need occupy our attention it forms the greatest part of all our solids or liquids The changes of quantity of the water exercise an undoubted influence over the production of certain pathological facts It may, for instance, diminish or increase in the blood and also in our various secretions In the solids of the body we find that the amount of water undergoes a gradual decrease from childhood to old age, and influences the resistance and elasticity of our organs In the water are found acids, alkalies, and salts, the proportions of which are necessarily modified by the continual changes in the amount of the water

The solid mediate inorganic principles may be either simple or compound The former are four in number—viz, carbon, phosphorus, sulphur, and iron

The carbon is either in combination with oxygen or in its pure state In childhood and advanced years, less carbon is consumed than in manhood, but in childhood it is employed for the growth of the body, in old age it is deposited in a pure state in the lungs, which it renders more or less incapable of respiration, increasing thereby the dangers of pneumonia In consumption these deposits sometimes take place, and have been observed to coincide with an amendment which has lasted for years (N Guillot) If such deposits do not take place in old age, the carbon must of all necessity remain in the blood, and there occasion more or less morbid change

Phosphorus exists in the body either free or combined with oxygen, it is a constituting part of fibrine and albumen, it exists in the brain, where it varies with the age of the individual (Denis), and is said to diminish in some cases of insanity (Couerbe)

We know nothing of the varieties of quantity of the sulphur naturally contained in our tissues: it exists in fibrine and albumen, on the surface of and around certain ulcers, in some abscesses, and on the intestine, to which it communicates a slate colour, due to hydrosulphate of iron (Vogel).

Iron we find in the hair, in the blood, in the black pigmentum of the body Many other simple bodies exist in our system, potassium and calcium, for instance, but they have not been studied

The salts natural to the body may vary in quantity, state, or situation With regard to quantity, we find, for instance, that an increase of the alkaline salts of the blood always corresponds with diminution of its fibrine, as in scurvy, diminution of these salts in the bones constitutes osteo malacia, and the perspiration of gouty subjects is, according to Berzelius, loaded with saline matter As to their state, the salts may become solid, and form concretions, as in the urinary or gall bladder The situation of those salts may also vary, we find them occasionally in the walls of arteries, or deposited on the valves of the heart, or on the surface of the lung (phosphate of lime)

In disease, new salts may be produced. Thus, sulphuret of ammonia has been said to exist in the blood, in the urine sometimes oxalates, and in the solid parts urate of soda and of lime are deposited in cases of gout

The acidity or alkalinity of our fluids is a most important condition thus, the diminution of the acidity of the gastric juice must impair digestion; its increase may influence unfavourably the health of the stomach

Having glanced at the alterations of the mediate principles we now turn to the consideration of the immediate principles of the system They should be studied during health and disease, in chyle, blood lymph secreted fluids, solid structures, and morbid products in all cases they may be considered as deriving their origin from one substance protein Let us first examine those which contain nitrogen, we will afterwards enumerate those principles which do not contain that element

Albumen is the first immediate principle which we have to investigate, its quantity may vary in the blood from age or disease In all our secretions it is to be found in the fluids, separated from the blood by inflammation, it is more abundant than in those which are extravasated in consequence of some obstacle to the freedom of circulation In the solids of the body, albumen varies with the age of the individual, in a child aged one day they contain 1 per cent, at eighty years the solids contain 7 per cent, of albumen

In the crystalline lens, Berzelius says that fluid albumen may be found, and M Lassaigne has attributed its opacity in cataract to the solidification of that albumen

In tubercles a mattery albumen is said to exist it can be occasionally detected in the urine in the serous contents of cysts and in pus, even after its filtration

Fibrine is less abundant in the system than albumen, it is, in its solid state, the basis of muscular textures, and in a liquid condition can be met with in lymph, chyle and serum, in the blood, its quantity increases from the presence of inflammation, and diminishes in diseases of an opposite and debilitating character, as will be hereafter seen in the study of hematology Extravasated fibrine coagulates in a short time, but its solidification may be prevented or delayed by the action of certain substances such as alkaline salts. Inflammation sometimes causes fibrine to escape from the blood, together with a certain amount of albumen, water, and salts, and it is

then deposited on the surface of the solids, in the shape of coagulable or plastic lymph, and occasionally in flakes floating in serum; or again, in granulations, of which instances may be often seen on the surface of mucous membranes. Fibrinary exudations not unfrequently become vascular, and are by some pathologists looked upon as the origin of numerous accidental products, such as cancer, tubercle, &c.—an opinion which, to say the least, must be looked upon as premature.

Casein resembles closely albumen and fibrine; its presence has not only been detected in milk, but in some cases in blood, saliva, bile, urine, pus, and tubercular deposits: we must, however, pause before we consider its existence in the last-named substances as perfectly demonstrated.

Urea varies considerably in quantity in the urine, according to the nature of the diet of each subject, and also according to ages and sexes: thus Lecanu asserts that more urea is separated in a given time by the male than by the female adult, more by the female than by the child, and more by the child than by the aged of either sex. In disease, the proportion of urea contained in the renal secretion varies considerably. When abandoned to itself, urine is decomposed, and urea is converted into carbonate of ammonia—a substance of the same elementary composition, but differing from it in the arrangement of its component atoms. It is in the bladder, not in the kidneys, that this transformation is operated. Accidentally, urea may be found in the blood, as in granular kidney, in violent cholera, when the urinary secretion is entirely suppressed (Henle). Urea is not formed in the kidneys; as a proof of the assertion, we may quote Prévost and Dumas, who, having removed the kidneys of an animal, found urea in the blood. Henle also detected urea in the blood of a healthy ox. In albuminuria, urea has been found in the various serous effusions. Nysten mentions two instances in which urea was detected in substances thrown up from the stomach; but in one of the cases he acknowledges that an imposition was practised upon him by the patient.

Uric acid is a compound originating from urea, and its quantity may be increased in the urine without disease of the kidneys, as in gravel, intense fever, and cirrhosis; in the latter disorder, it constitutes, together with dropsy, an almost positive sign of the hepatic affection. In gout, not only is uric acid superabundant in the urine, but it is also found in a solid condition in the neighbourhood of the joints.

We are unacquainted with the alterations of the immediate principles of bile, with the exception of those of its colouring matter, which is sometimes found in the serum of blood and in the various secretions, in consequence of nervous disturbances of the liver, of inflammation of that viscus, of changes in its texture, or of mechanical impediments to the excretion of bile. In the present state of science we are unable to state if this colouring matter is absorbed after its formation in the chylopoietic organs, or if it is created in a primary manner in the blood.

Gelatine is another immediate principle, the quantity of which may vary in the bones, in cartilaginous or tendinous structures, and may also be found accidentally in some morbid productions.

Ptyaline exists naturally in saliva, and the changes in its proportions may exercise some influence on the accomplishment of digestion.

Pepsin is an organic substance found in the gastric juice; its quantity and qualities are modified by various circumstances, and probably are influenced by the state of the nervous system; this would explain several disturbances of the digestive functions, hitherto unaccounted for, and amongst others those produced in some individuals by mental anxiety.

We now turn to the consideration of those immediate principles which do not contain azote.

Sugar of milk exists naturally in milk, but it has also been met with in other fluids. Schneger detected its presence in the peritoneal effusion found in the body of a woman recently delivered, and Henle in the intestines of women after arrest of the lacteal secretion. These assertions, however, require further confirmation.

Lactic acid is abundantly diffused in our system. It has the property of dissolving rapidly phosphate of lime, and Henle fancies that its presence in large quantities in the blood may sometimes coincide with mollities ossium. Mitsherlisch states that lactic acid is formed in the capillaries, and there acts upon the alkaline carbonates in such a manner as to liberate carbonic acid, which returns with the venous blood to the lungs in order to be evolved. The hypothesis is plausible, but not absolutely demonstrated.

Fatty principles have been met with in chyle, blood, pus, and nervous textures. They sometimes pass from the solid to the liquid state, and also from the latter to the former condition. Thus, cholesterine, usually fluid in bile, is often the basis of solid concretions. Fatty principles may accidentally be detected in unexpected situations: thus, cholesterine exists occasionally in certain dropsical secretions, in the shape of minute bright particles; often in hydrocele, or in ovarian cysts. In some viscera we may also notice the preternatural development of fatty matter—in the liver, for instance. All the immediate principles which have hitherto occupied our attention may be produced during health; but others also must be examined which are formed only in disease. Thus oxalic acid, hippuric acid, and sugar, do not appear in the healthy urine. If, however, animals are fed on sweet vegetable substances, or on cane-sugar, uncrystallizable sugar is found during digestion in the intestines. M. Bernard has shown that this sugar is absorbed into the blood, where it disappears; but, if certain diseases are present, this transformation of the sugar in the blood ceases to be performed—the saccharine matter is expelled with the urine and other secretions, and the animal invariably dies within a very short period. Saccharine matter is thereby proved to be indispensable to a proper and healthy assimilation and nutrition. We are perfectly ignorant of the chemical cause by which this elaboration is prevented in the blood of diabetic subjects. It is not, therefore, with disease of the kidney that we must connect the presence of sugar in the urine, but with a deep disturbance of the digestive functions, and of the vitality of the blood.

D. M'Carthy, D.M.P.

Vienna.

As an anecdote, may be mentioned that a glazier's apprentice, engaged in the cleaning of windows, fell from a fourth story (in Vienna very high), and got up quite unhurt.

Professor Rokitensky, whom the Vienna journals call the founder of pathological medicine (?), is laid up with typhus.—The great botanist, M. Endlicher, has been especially deputed by the Emperor to arrange and install the University of Cracow—the first in the empire to be worked on the newly improved educational system of Austria.

On the Consecutive Phenomena and Symptoms of Ether Operations.—An important question relating to this new discovery is, whether the perturbation produced in the animal economy of the operated be of such a nature, as to compromise the result of the operation, and to aggravate its consequences. This is what is stated by the *opponents* of the ether method in France. The most obvious way of resolving this question is to ascertain the number of cases, where either recovery or death has followed operations, and to see what ratio ether operations bear to those undertaken without it—*not* including, however, mesmeric operations in this calculation. The most accurate statistics hitherto attainable on ether operations which have ended fatally are comprised in the following table:—

Amputation of femur	4
,, ,, tibia	3
,, ,, arm	2
Amputation of forearm	2
,, ,, toe	1
,, ,, finger	1
,, ,, breast	2
Extirpation of tumour	3
Total	18

If we compare these results with those given by M. Malgaigne, in his "Etudes Statisques sur les Résultats des Grandes Operations dans les Hôpitaux de Paris" ("Archives de Médecine," 1842), we shall find that, from the 1st of January, 1836, to the 1st of January, 1841, there have been made in the hospital 852 amputations, comprising those from the disarticulation of the femur to the cutting off the joints of fingers. The general mortality of those patients was 332, or a proportion of 2:5. Making the same calculation with ether operations, and taking off that number, those dead after amputation of the breasts and extirpation of tumour, we shall arrive at a proportion of 1:1—favourable, as far as it goes, to ether. Still, as M. Malgaigne says, *generalities* are often deceiving, and we have to distinguish, in the first instance, between great and small amputations. If we take, therefore, the total number of amputations of the femur, leg, arm, and forearm, we will have twenty-three operations, amongst which ten are fatal, and therefore, a proportion of 2:5. The statistics of M. Malgaigne give, on the other hand, 518 amputations of the same kind, and about 281 deaths, consequently 3·5. These are some approximative data to be arrived at, *at present*, on a subject, which we believe worthy to be treated by some one well cognizant of the *great bearings* of medicine as an *exponent* of the condition and the whole state of mankind.—J. L——y.

REVIEWS.

On the Correlation of Physical Forces. By W. R. Grove, M.A., F.R.S. 8vo., pp. 52. London: Highley, 1846.

The object of this pamphlet, as its title expresses, is to show the reciprocal production or convertibility of the chief physical forces known to exist—to show, in fact, that each force is capable of producing, or being converted into, or of being produced by, every other.

The imponderable agencies selected by our author for the subject of inquiry are, heat, light, electricity, magnetism, chemical affinity, and motion. These, he proceeds to prove, are all correlative, or have a mutual dependence—"that neither, taken abstractedly, can be said to be the essential or proximate cause of the others, but that either may, as a force, produce, or be convertible into, the other; thus, heat may, mediately or immediately, produce electricity, electricity may produce heat, and so of the rest." (P. 8.)

Commencing with motion, the Newtonian proposition is started, that a body, made to move, will continue to do so for ever, and in the same direction, and with the same velocity, unless some contrary force or impediment prevent it. The general opinion is, that, when the opposing forces are equal, perfect neutrality is produced, or that the motion is annihilated. The opinion of our author is, that the force is not destroyed, but merely divided and subdivided, or altered in character. In the one case it is not lost, but perpetuated in a degree inappreciable, yet still really *perpetuated*; in the other, the phenomenon is maintained, but in a different form of *manifestation*. The first of these positions is one that has long had the credence of a certain class of philosophers. Mr. Babbage has carried out the idea that a part of our punishment hereafter will consist in hearing the endless reverberation of the foolish or wicked language we may have uttered in our lifetime.

"If we imagine the soul, in an after stage of our existence, connected with a bodily organ of hearing so sensitive as to vibrate with motions of the air even of infinitesimal force, and if it be

still within the precincts of its ancient abode, all the accumulated words pronounced from the creation of mankind will fall at once on that ear. Imagine, in addition, a power of directing the attention of that organ entirely to any one class of those vibrations, then will the apparent confusion vanish at once; and the punished offender may still hear vibrating on his ear the very words uttered, perhaps thousands of centuries before, which at once caused and registered his own condemnation."—("Ninth Bridgwater Treatise," p. 148.)

According to Mr. Grove, when motion is met by counter-motion, and a seeming quiescence is produced, leading to the popular belief that the force is annihilated, it is really not so, but ends in the production of another force, which is heat.

"I venture to regard the heat which results from friction or percussion as a continuance of the force which was previously associated with the moving body, and which, when this impinges on another body, ceasing to exist as gross palpable motion, continues to exist as heat."—(Pp. 9, 10.)

If the bodies mutually impinging be homogeneous, heat alone is produced; if heterogeneous, electricity. It results from experiment that when perfectly homogeneous bodies (at least, bodies as fully so as we can obtain and appreciate) are rubbed together, the resulting development is heat only. Whatever slight electrical current might accompany this, would be due to the absence of perfect homogeneity, because, to secure this, the opposing bodies must have no dissimilarity in any single chemical or physical attribute. To secure an identity so perfect is next to impossible: yet it has been secured sufficiently so, in various experiments, to establish the truth of the proposition. On the contrary, if the bodies be distinctly heterogeneous, electricity is the result of their forcible contact; and not only so, but the electricity is the greater, and the heat less, in proportion to the dissimilarity of the bodies.

"Thus, the friction of similar metals gives little electricity; that of dissimilar metals more; and that of a metal and glass still more, as in the common electrical machine, the action of which is so greatly exalted by the metal mercury." (P. 13.)

Having thus far shown that motion will produce heat and electricity, Mr. Grove next passes on to prove that the latter will produce magnetism—"a force which is always developed by electrical currents, at right angles to the direction of those currents."

"Light, again, is readily produced by motion, either directly, as when accompanying the heat of friction, or mediately by the electricity resulting from motion, as in the electrical spark." (Pp. 13, 14.)

"In the decompositions and compositions which the terminal points proceeding from the conductors of an electrical machine develop, when immersed in different chemical media, we get the production of *chemical affinity* by electricity, of which motion is the initial source. Lastly, motion may be again reproduced by the forces which have emanated from motion: thus, the divergence of the electrometer, the revolution of the electrical wheel, the deflection of the magnetic needle, are palpable movements, reproduced by the intermediate modes of force, which have themselves been originated by motion."—(P. 14.)

These are the leading features and objects of this excellent little treatise. We could have wished that our author had dwelt longer, and with illustrations, upon the influences of light and magnetism. That the latter will produce heat, and light, and motion, we know; but we are not so certain of the correlative powers of the former. Will light, *simply such*, produce heat, or motion, or magnetism? We doubt whether there are any experiments sufficiently conclusive to justify us in saying so. We wish our author would find time to reconsider this part of a subject, of which he is a consummate master, and upon which he has discoursed with a rare scholarship and scientific precision.

Body and Soul; or Life, Mind, and Matter. By George Redford, M.R.C.S. London: John Churchill, 1847. 8vo., pp. 232.

This essay does not affect to advance anything new on the complicated and difficult subject it embraces; but rather purposes to be a recapitulation, condensation, and clear arrangement, of the facts previously enunciated at different times, by physiologists and metaphysicians. If Mr. Redford have not introduced to us any novel views or discoveries, at least he has not been wanting in the laudable purpose of judiciously collating and deducting from the established views of other writers. In the execution of his difficult task, he has displayed a great amount of industry, nice discrimination in the selection and disposition of his facts, and a very clear, impartial method of judging of them.

His work is an excellent summary of opinions, physiological and psychological, on the mysterious compound called man, and well worthy the perusal of whomsoever may feel interested in the subject of life and organization.

The Microscopic Anatomy of the Human Body, in Health and Disease. By Arthur Hill Hassall. London: Highley.

We have received of this admirable work the several parts up to February of this year. It is a work of sufficient interest and value to merit, not merely a passing compliment, but a substantial, searching inquiry and criticism. This, we are fully assured, it will not only bear, but be the better for; we shall, therefore, postpone our further observations upon Mr. Hassall's excellent series until they shall have been completed, when it will be our great pleasure to give them the analytical notice their many merits will entitle them to.

THE MEDICAL TIMES.

SATURDAY, APRIL 17, 1847.

MEDICAL REFORM IN 1847.

It must be admitted there is much truth in that oft-repeated saying, "We live in an age of wonders." Novelties multiply around us, and so rapidly do they succeed each other that what attracted our attention and excited our admiration but yesterday, ceases to do so to-day, because of something more extraordinary demanding our regard. Even steam is in danger of settling down amongst those things which we can praise without feeling, and use without gratitude: for the smoke, the hiss, and rattle of the train have long since ceased to make a single horse prick his ears, or a single calf cock his tail, as he grazes in the pastures through which the road has taken its course.

The past week will be memorable in the annals of our profession, not for any new discovery in medicine or its collateral sciences, but from the development of a principle which, till very lately, was supposed to have no existence amongst us—that of brotherly affection. On Tuesday evening the Hanover-square Rooms were graced with a large number of medical men, the majority being general practitioners in medicine, surgery, and midwifery, who were met for social intercourse and scientific converse. Such a meeting is a novelty amongst us, and, being new, it tells of past disunion, while it cheeringly announces future concord. Many eyes have been turned towards that assemblage, and many hearts have felt strange and opposite emotions about it. The enemies of the general practitioner will denounce it as worthless—his friends will view it as an omen for good. The colleges will frown upon it in their anger, though they may affect to treat it with silent contempt—the pseudo-reformers will watch their opportunity to prick at it with an obsolete instrument, once used but for no higher purpose than phlebotomy. The "getting up" of such a meeting is no easy task; and to the officers of the National Institute the credit is due—they have taken a step in the right direction, while they have given to the profession a pledge of future activity in its service. We have on a former occasion cautioned them against falling into that error which has been so palpably manifest in chartered colleges, and even benevolent institutions; and, as our admonitions were taken in good part, we would entreat them once more to be encouraged by the result of this effort, and to guard against the besetting sin of inactivity, and with energy carry on the good work which has been so creditably begun.

We have before stated that the meeting was principally composed of gentlemen who practise the three branches of the profession, medicine, surgery, and midwifery; and it is a matter of utter astonishment to us that there could be found any one with sufficient impudence to ridicule the idea of these departments of the profession being united, or of sufficient cruelty to attempt the ruin of those who have studied, and who practise, the "healing art" in its different branches. Ridicule is a pretty weapon, when there is none other to employ, and when there is some weakness in the party using it which it is desirable to conceal. And who are those who would cast opprobrium on the general practitioner, and who have endeavoured so to degrade him as to make him a mere tool in the hands of others? They are two orders of men rejoicing under one particular title—"pure." One is so pure that an individual of the class could not for the life of him, nay, nor for that of a friend, use a knife professionally, except it were to trim his pen for writing a guinea prescription; and the other is so pure that, "throwing physic to the dogs," he will hold fellowship only with plaisters, bandages, knives, and forceps. Now, the investigation of truth is one of the most interesting employments in which an intelligent mind can be engaged, and the more extensively and widely it is studied the more exalted and expanded must the intellect become. If this proposition be correct, the general practitioner, *cæteris paribus*, may stand vastly superior to the man who simply confines his studies to the mechanical or empirical part of the profession. We grant that the pure surgeon may become a better handicraftsman; but with nerve and anatomy *only*, he may make a good hospital surgeon, and shine as a star of the first magnitude in the hemisphere of Lincoln's-inn-fields. That amount of knowledge which the general practitioner must necessarily possess is not required for him; and, if men were to be put in their

high places, the head-quarters at the College would be tenanted by those who, to the present moment, have been ignominiously excluded, even the celebrated John Hunter, himself being judge. This illustrious individual, lauded annually by "pure" orators—furnishing them, through the liberality of Parliament, with a peerless museum—was himself a general practitioner, and has recorded his testimony, that the operative part of the profession shows our limited acquirements; and that for individuals to confine themselves to this part alone is dangerous to the limbs, if not to the lives, of the subjects of the commonwealth. Many curious instances of the reckless use of the knife are recorded in connection with his times. One one occasion, the surgeon waiting in the operating-theatre for a patient who was to have his leg amputated, becoming *impatient*, sent the surgery-man in quest of the unfortunate sufferer, when, lo! he returned with the astounding intelligence that the invalid had bolted, using the condemned limb with the agility of a greyhound. On another occasion the doctor, meeting a tar who had suffered the pangs of amputation, said to him, "Well Jack, you have lost your leg?" "Yes," was the reply. "But how was that?" The son of Neptune, hitching up his trousers and turning his quid, responded "I don't know, your honour; you must ask the doctor"!

One word more, and we have done for the present with these "pure" surgical gentlemen, and that is in reference to the contempt they have manifested for the practice of midwifery. What! is there no room for the exercise of skill, of patience, or of kindly feeling by the accoucheur, when called to the bedside of her "who is in travail, and cries with pain to be delivered"? The terrors which the patient then feels, and the danger in which she is often placed, require that the medical attendant should possess and use the highest endowments of the human mind. We would have these scorners understand that the day is long past since an episcopal mandate was sufficient authority for old women to practise, and that midwifery is now an inseparable and honourable branch of the medical profession.

Nor can we see that the "pure" physician has any better reason for contemning the general practitioner than the surgeon who eschews pills and draughts. We admit that "medicine doctor" is a very imposing title, and might, with a little good legislation, be made a very valuable one; but we *do not* opine that at present it is all that the public think it is, or that the possessor would have us suppose it is. To be of sterling worth it must have inseparably attached to it *age*, *experience*, and *intellect*. The physician ought to be, and eventually will be, the presbyter of medicine—the general practitioner—mellowed by time, and enriched by hard-earned experience.

There are signs which admonish us that a crisis is not far distant, and it is our earnest wish that those whose cause we now advocate should be fully prepared to meet it. Our advocacy of one order of the profession arises from a sincere desire to benefit the whole. The general practitioners have been long injured, and we sincerely hope that the Government will not be backward in doing them all the justice to which they are entitled. In the meantime, let them look well to themselves. Their honour and respectability require that to the active engagements of life there should be joined close reading and close thinking; then will they be fortified for any exigency that may arise, and entitled to the highest honours which the Executive can bestow.

THE BURTON-ON-IRWELL POISONING CASE.

We are informed by Baron Humboldt, that in some parts of Spanish South America, where any admixture of negro blood is thought to imply a taint—although, by the agency of a tropical sun, Caucasian and Ethiopian are both equally black—that a judicial investigation is not unfrequently had recourse to for the purpose of determining the important points of blood and descent; and that frequently some haughty senhor, with black crisped hair and swarthy skin, displays a document signed by a neighbouring magistrate, to certify that Senhor So-and-so may consider himself a white man. And a white man forthwith he believes himself to be,—and woe be to the nigger who disbelieves the same! Judicial wisdom, then, is a powerful thing in its way—a thing not to be profanely reasoned on, but believed—implicitly believed as something omnipotent. Every fact drawn from this most honoured source should be religiously preserved and chronicled—held to be a precedent for future reference and instruction.

The omnipotence of a judicial verdict in subverting the ordinary laws of nature is strikingly exemplified in the result of the late trial of Mrs. Johnson, on the charge of poisoning her husband; and we may say the trial of Mr. Leigh, for incompetency as a chemical analyst, for virtually, although not literally, this question was *sub judice* too.

As the facts of this case may possibly not be known to some of our readers, we refer them to a letter from Dr. Scoffern, which appears in another part of the current number. From a perusal of this, it will be seen that a woman and her husband had for some time been living on very bad terms—frequent quarrels took place between them,—in the course of which the woman was heard to wish her husband dead, to threaten to poison him, to promise him a cheap funeral, and the like. She was known, moreover, to have been carrying on for some considerable time an intercourse of great profligacy with another man, who had been seen with her at times, and under circumstances, which placed suspicion beyond a doubt. She was proved to have availed herself of the remarkable facilities afforded by our Legislature for the purchase of arsenic, as on the 27th of November she bought threepenny worth of this poison. On the same day her husband was afflicted with all the symptoms of arsenical poisoning, and on the 3rd of December he died,—the almost exact time of his decease having been foretold by his wife, who predicted that he would never come out of his bed alive. On the day following his death, Mr. Hepworth, the surgeon in attendance, called in Mr. Leigh, lecturer on forensic medicine at the Pine-street Medical School, Manchester, to assist him in making an analysis of the contents of the stomach; which analysis was accordingly made; and this latter gentleman—the sole responsible party as to chemistry, in the present case—obtained by Reinsch's test some metallic stains of which he could not determine whether they were produced by arsenic or by antimony! The body thereupon was interred, and thus affairs remained until the beginning of March, when, for some reason which does not seem to have transpired, the corpse was now disinterred, and Mr. Leigh, the professor of organic chemistry and toxicology at a medical school, called in Mr. Watson to assist him in repeating the analysis; which seems to have been conducted in a very careful manner. This time the presence of arsenic was determined in very considerable quantities—not only by Marsh's and Reinsch's tests, but also by the less delicate liquid tests. Assuredly then Mrs. Johnson's friends must have considered her case very bad, and Mr. Leigh's friends must have regarded him as labouring under an imputation of incompetency.

Mrs. Johnson was acquitted, however—and with her—the toxicological professor. It was argued by the prisoner's counsel, that inasmuch as the presence of arsenic had not been satisfactorily determined by Mr. Leigh on the 4th of December, before the corpse had been interred, but had been discovered in considerable quantity in the beginning of March by Mr. Watson, after the corpse had been disinterred,—that the arsenic thus found had been *washed into the body* by some water found in the grave! This judicially-determined fact we need hardly say is not more extraordinary than important. Had it not been established to the conviction of a British jury, Mrs. Johnson's love for her paramour would have had an unpleasant quietus; and Mr. Leigh's chemical acumen would not have been above suspicion. He may now show his judicial certificate and say—I *am* a white man.

[Would any correspondent favour us with a portion of the churchyard soil for analysis? It must be rich in arsenic.]

MANCHESTER ROYAL INFIRMARY.

An election for one of the surgeons of this institution has just been contested between Mr. N. Beevor and Mr. Smith. The latter gentleman was nephew to Thomas Turner, Esq., himself, for a long period, one of the surgeons to the establishment; but still Mr. Beevor was the winner by sixty-nine votes. We are not sorry for this, on other grounds than the merits of the candidates. We do know that the ruin of more than one hospital in London and elsewhere has been consummated by NEPOTISM. The sons and nephews of the present officers are thrust into place and responsibility at an age and with an inexperience fatal to usefulness. We take the present defeat of the re-

presentation of nepotic influence as a pleasing augury that a certain portion of the public at least desire to do their duty to the Manchester community. The trustees of this infirmary will, we believe, shortly have another opportunity of evidencing their public spirit in this direction; and knowing the high classical and scientific attainments of some of the medical staff, and particularly its consulting officers, we expect the best results. There exists a rule, or by-law, established many years ago, to meet a very particular case, but which has not been since rescinded, insisting that any candidate for the office of physician shall produce proof of long collegiate residence at the place where he may have obtained his diploma—a rule which, of course, excludes nearly all licentiates of the College of Physicians, London, as well as all those who have been educated at one establishment, and by virtue of that education obtained their degrees at another. This is manifestly an injustice, which, we trust, will be speedily remedied. It is bad to the profession: it is, if possible, worse for the public. It is a close-borough system which should not exist in science.

THE NATIONAL INSTITUTE OF MEDICINE, SURGERY, AND MIDWIFERY.

On Tuesday, the 13th instant, a *conversazione* of the members of the National Institute of Medicine, Surgery, and Midwifery, was held at the Hanover-square Rooms, which was attended by a numerous assemblage of both metropolitan and provincial members. Among the latter we noticed Messrs. Bedingfield, of Stowmarket; Stedman, of Guildford, Surrey; Chesterman, of Banbury, Oxon; Warner, Cirencester; Stilwell, of Epsom; Wallace, of Carshalton; Thos. Martin and V. Martin, of Reigate; Daniells, of Newport Pagnell; Thompson, of Westerham, Kent; Pout, of Yalding; Snell, of Milton-Abbot, Cornwall; Hemmings, of Kimbolton, Hants; Napper, of Guildford; Barnett, of Alton, Hants; Haines, of Pinner; Mackinlay, of Isleworth; Crocane, of Homerton; Sturton, of Greenwich; Westall, of Croydon; Collyns, of Kenton, Devon; Paget, of Leicester; Swaine, of Birmingham; Day, of Isleworth; Barker, of Bedford; Bennett, of Winterton Barton, Lincoln; Dalrymple, of Norwich; Curtis, of Alton, Hants; Parker, of Woburn, Beds; Anson Cartwright, of Teignmouth, Devonshire.

For the gratification of the gentlemen present on the occasion, the council had invited collections of subjects of great curiosity, interest, and value, which were displayed on tables down the middle of the great room. Among these were instruments for the inhalation of ether and of oxygen; admirable models of pathological subjects, after the invention of Dr. Thibert; a great many specimens of articles of the *materia medica*, remarkable for purity and superiority of quality and character; and there was a collection of engravings and curious objects of *vertu*, referring to the archæology of medicine, the property of G. J. Squibb, Esq. This collection comprises the largest number of portraits of eminent medical men of all ages and countries which is known to exist.

Mr. Ward, of Wellclose-square, exhibited many interesting natural curiosities, and also one of his close cases for the culture of plants; and kindly gave a short history of his discovery of this most agreeable and useful adjunct to the cultivation and preservation of plants in an atmosphere so unfavourable as that of the metropolis, and also as respects great diversities of temperature.

Mr. Ward, after citing the elegant hypothetical description of the physical peculiarities of climate in Paradise, stated, that, supposing the description to be probable, it was not unreasonable to conclude that the atmosphere and climate of his case might be nearly those of Paradise itself.

Following up the analogy, Mr. Ward did not doubt that apartments for human habitation might be similarly adapted for the occupation of invalids suffering from pulmonary and cutaneous diseases; mentioning the instance of a lady who, having been ordered to a warmer climate, from circumstances being unable, as well as unwilling, to leave home, rooms were adapted for her use on the principle, in which, after living for one or two years, she was perfectly restored to health. It is well known that the principle of Mr. Ward's cases is to secure a perfect stagnation of the air and a perpetual moisture.

In the course of the evening Mr. PENNINGTON, the venerable and highly respected President of the Institute, delivered the following address.

"GENTLEMEN,—After difficulties innumerable, we have at length arrived at a period in the history of the NATIONAL INSTITUTE which I trust will be an evidence of two things:—1st. That as a class we are determined to sustain our position, and to assert with becoming dignity our right to be considered one of the scientific bodies of the kingdom, and an essential part of the medical profession.—2nd. That as general practitioners, hitherto in possession of no means of social communion, we are resolved to furnish them for ourselves, and no longer to be solely dependent upon the courtesy of other bodies.

"I have been sixty years a member of the College of Surgeons. I believe that I am the oldest member of that body, and I fearlessly assert that no man has had better opportunities of judging than I have respecting all that is connected with our profession, and of the various relations of that profession to the public. My intercourse with every order of medical practitioners during this long series of years, and my enjoyment, I may fairly say, of a very considerable share of the public confidence, has afforded me means more extensive than has fallen to the lot of any other individual, not only of judging what the medical requirements of the community are, but also of the capabilities of every description of medical practitioner.

"You are all aware, gentlemen, that during the whole of my life I have practised as a general practitioner. Cullen, William Hunter, Jenner, and Abercrombie, were general practitioners, and we have a right to feel proud of the memory of such names. Throughout the lengthened period to which I have referred, I have had the most complete demonstration that the confidence reposed by the public in the competency and skill of the general practitioner has been well merited, and that the principles upon which the general practitioner stands are those of truth and justice; and my connection with the National Association and the National Institute has assured me, that this confidence not only continues, but is on the increase, and that I and others, who must soon pass from the scene, will be followed by gentlemen who will equally enjoy it, and who, in the progressive advancement of practical medical and surgical science, will fully sustain the character and the honour of their class.

"Identified as I have been with this class—impressed with the most thorough conviction that the welfare of the community depends upon its prosperity—observing its progressive advancement in knowledge and respectability—it has for many years been a source of deep regret to me, that so large and intelligent a body, embracing as it does so much sterling worth, should be deprived of the advantages which would result to themselves, to science, and to the public, from their association into an effective and permanent body; by which association only, can they take their stand as one of the recognised medical institutions of the country.

"My energies have ever been directed to the attainment of this object. I took an active part during the agitation of the years 1812, 1813, 1814, and 1815. With this object in view, I hailed with satisfaction the attainment of the Act of 1815. Defective as it was, the act gave to the general practitioner the power of educating himself up to the standard which his important functions demanded. From that time to the present, and totally apart from any bill introduced by any Minister, I have never failed to advocate the INCORPORATION OF THE GENERAL PRACTITIONERS, and the retaining this power in their own hands, and extending and perpetuating this important privilege. It was the contemplated abrogation of this privilege, and the tendency to lower the social and professional position of the general practitioner, and thereby to inflict a serious injury upon my fellow-creatures, in the change recently adopted by the College of Surgeons, and in the medical legislation recently attempted, which induced me, at my advanced period of life, again to take an active part in asserting the claims to consideration of the class to which I belong.

"Personally I have no interest in the matter. My comfort and convenience would have been better consulted by ease and retirement—taking no part whatever in political agitation. Still, I by no means regret the part I have taken; and I here again declare my unflinching determination to do all that lies in my power, by every means that can be suggested, and to the latest day of my life, to accomplish the object which we have so much at heart,—an object which, in my mind, involves the security and happiness of the whole community. At the same time I should not be doing you justice if I hesitated to express my deep regret and great disappointment at the apathy, distrust, and lukewarm spirit with which the profession has regarded objects so highly important both to themselves and the community; and that out of a body numbering perhaps 12,000 or 15,000 individuals, only 4000 have as yet been found public-spirited enough to enrol their names as opponents of a scheme of legislation based upon the most erroneous principles, while a still smaller number have come forward to co-operate actively to promote a just and beneficial measure of MEDICAL REFORM.

"Notwithstanding all this, I live in hope of better things. The National Institute will try and carry through its plans in the face of every discouragement or difficulty which may present itself. It is contemplated immediately to take a house as a permanent abode. The representative council will be annually renewed,—we shall hold our general, our scientific, and our social meetings,—we have already commenced a collection of books, and a large and valuable library will be doubtless formed with great rapidity,—a museum will be the next object of our solicitude; and I trust that, before long, we shall be enabled to give *substantial* encouragement to the members of the Institute for contributions to science. A great object of the present meeting has been to bring together the PROVINCIAL and the METROPOLITAN MEMBERS, that they may have the opportunity of communing freely with each other upon all these subjects, and upon any and every other subject which may bear upon their political and social welfare, and for the especial purpose of promoting the greatest desideratum of all—a mutual good understanding.

"I have not deemed it right, gentlemen, to occupy your time, upon the present occasion, by any lengthy address; but I was anxious to avail myself of the opportunity, to make my own views and my own determination well understood, and for that purpose I have had these few observations printed, that any gentlemen who desire it may have copies for themselves, or for those friends who are not present, and that no misapprehension may arise from any imperfection in my delivery. I will conclude by stating, that upon this first occasion, the council has laboured under great disadvantages, owing to our not having rooms of our own; but, for the purpose of showing what the nature of our social meetings will be, they have hastily collected together a few objects of interest. I hope every one present

will pass the evening agreeably, and to the advantage of the cause in which we are engaged; and I trust that we shall separate with a renewed determination to employ our utmost zeal and energy to promote the successful issue of the cause."

The conclusion of this address was followed by the unanimous expression of warm applause, and a resolution of thanks was carried by acclamation.

The usual refreshments were at hand, in the adjoining room; all appeared to enjoy the utmost satisfaction in the proceedings of the evening, and separated with an assured confidence in the expectation of the enjoyment of similar reunions at future times, with improved and enlarged appliances and means of social and intellectual enjoyment.

INFRINGEMENT OF THE APOTHECARIES' ACT.

Ellis Flitcroft, a bricklayer by trade, but now a shopkeeper, residing in Boardman-field, was indicted at the Bolton Quarter Sessions, on Saturday, April 3, for misdemeanour, having practised as an apothecary without a certificate. Mr. Brandt conducted the prosecution, instructed by Mr. John Gaskell, the public prosecutor; and Mr. Sowler appeared for the defendant, instructed by Mr. Richardson, solicitor.

Mr. Brandt, in opening the case, called the attention of the jury to the indictment, which was of a different character from any that had previously been before them. The charge was made under the 55th Geo. III., c. 194, the fourteenth section of which prohibited parties from practising as apothecaries without being duly qualified by a certificate from the Apothecaries' Company. The learned counsel then detailed the facts as given in evidence, and referred to two cases in which convictions had taken place under similar circumstances. These were—the Apothecaries' Company v. Allen, reported in "Barnwell and Adolphus," vol. 4, p. 625; and Woodward v. Ball, in "Carrington and Payne," vol. 6, p. 577. He then called the following witnesses:—

Lettice Bartley, wife of Thomas Bartley, said: On the 7th of December last I was living in Bolton. My son Robert was ill at the time. He was seventeen months old. I know the defendant, Ellis Flitcroft. I went to him on the 8th of December, at his house in Boardman-field. I saw him there, and told him about my child. I said it was very poorly, and very red in its cheeks. Flitcroft said his child would have been in its grave but for Dr. Coffin's medicine. I told him there were three of my mother's children ill at the same time. He said that if they were red in the cheeks, and there were three of them down beside mine, it would be scarlet fever. He sold me 1½d. worth of what he called raspberry leaves, and told me to get one pennyworth of pennyroyal, and mix them together. Afterwards he came to my mother's house, and brought a bottle with him. I got him some boiling water, and he mixed some medicine for the child, which I gave to it. He said the medicine was to make it sweat. My mother also gave some of it to her children. Flitcroft said it would do them good: it would warm them. He also gave me a bottle of stuff; but it was not so terribly strong. I tasted it, and found it mild. It was to be given to the child a teaspoonful every twenty minutes. He said it was to make the child sick. I gave it to the child every twenty minutes till about seven o'clock at night. The medicine did not sweat the child: it became very sick, but could not vomit. Flitcroft came to my mother's house at dinner time, and applied a bottle of hot water to the child's feet and back. At eight o'clock the same night I went to his house again. He was not in, but I saw his wife, and she gave me some medicine for the child. He came the day after, and I told him his wife had given me something for the child. I tasted it, and found it very hot. The next day he came again, between two and three o'clock in the afternoon, but did not bring any medicine. He then told me to put the child in a warm bath, and to give it the medicine his wife had given me once every hour. I did so, but the child grew worse. I went to his house again on the Friday, and he gave me something to make the child vomit. It was in a bottle. A powder was sent up the same night, but I did not give it to the child. The stuff that was left in the bottle was given to Mr. Denham, surgeon. He charged 1s. 9d. for what I had from him on the Friday, but I paid nothing; 1½d. for the raspberry leaves.—By Mr. Sowler: Flitcroft is known in the town as agent or assistant to Dr. Coffin, the herbalist. I never saw Dr. Coffin.—By Mr. Brandt: She has seen the coffin, but not the doctor—(Laughter).—By Mr. Sowler: I did not give the child the medicine sent on the Friday night. I gave it a pennyworth of "white wine pick" (emetic), which made the child sick, the same as Flitcroft's medicine, but it could not vomit. I went to Mr. Challoner, druggist, on Saturday, and got half an ounce of castor oil and syrup of rhubarb, which I gave to the child at ten o'clock in the morning. It was very thirsty, and I gave it some hyssop tea about half-past five in the afternoon. This was the last thing it had.—Alice Grundy, mother of the last witness, deposed as follows: I remember Flitcroft coming to see my daughter's child; he brought a bottle with him. I had three children ill at the same time of scarlet fever. Flitcroft looked at them, and said one was very ill, and would go off in a decline if she did not get some help—(Laughter). He said he would engage them at half-a-crown a piece—(Laughter). I did not approve of it. He sent a bottle for my eldest child, and I gave her part of it. As soon as the girl got it, she screamed and said, "Mother, it is burning my throat." It was part of what my daughter's young child had taken. After the girl took it she became more red in the face, and I had no more of his stuff, but sent for a medical man, and my children got well.—By Mr. Sowler: Flitcroft is known as the agent of Dr. Coffin. I never saw Dr Coffin, but my son heard him lecture in the Temperance-hall, and was in a great passion at him—(Laughter).—Susannah Greenhalgh gave the following testimony: I am the widow of George Greenhalgh, who died on the 16th of January last, aged twenty-five years. He left work on Thursday, the 7th of January, and the next day he brought home a bottle of medicine, which he took every four hours. At first he thought it did him good, but the next Tuesday he was much worse. On Wednesday he was bedfast, and sent for Flitcroft, who came and saw him in bed. He ordered me to get a vinegar cloth and apply it, with a bottle of hot water, to my husband's feet. He also told me to come to his house for some medicine, which he said was to sweat, and pick, and purge my husband. I went to his house and received two powders, one of which was green and the other buff. He charged me fourpence for them. Of the green powder my husband was to take nearly a teaspoonful mixed in warm water with sugar to sweeten it. The buff one was to be mixed two teaspoonfuls in a gill and a noggin of warm water, of which he was to have not quite a teaspoonful every twenty minutes. This my husband took twice, but would have it no more. He grew gradually worse, and died on the 16th of Jan. Margaret Rogerson was at our house, and gave part of the powders to Finnigan, the police-officer. A man named Grady died in the same street, but Flitcroft did not tell me he was attending him.—By Mr. Sowler: My husband thought the medicine did him good the first day or two. Flitcroft told my husband he must not go to work, for he was not strong enough. He went, however, on Tuesday, and worked three quarters of a day, and on Wednesday he was bedfast.—Margaret Rogerson said: I saw the husband of the last witness in bed on the Thursday. He appeared to be in great pain. He told me he had been taking some of Dr. Coffin's medicine. I said to him, "George, I believe it is killing thee;" and he replied that he would take no more. He was very thirsty. Some of the powders that were left I gave to Finnigan, the policeman.—Mrs. Leach, wife of John Leach, beerseller, said: About two months ago I had an attack of rheumatism. I consulted Flitcroft, and he sent me a powder and a bottle. He came to the house and saw me. I took the powder. It was very warm, and I would take no more. I took one glass of the bottle, and no more.—By Mr. Sowler: I cannot say that the medicine did me either good or harm. I got better; but it was Dr. Chadwick that cured me. I have seen the defendant's sign: the words upon it are, "James Flitcroft, vender of herbs, from America, licensed to sell tea and coffee"—(Great laughter).—Martin Finnigan, sergeant of the borough police, examined by Mr. Brandt: I am acquainted with Ellis Flitcroft, the "vender of herbs, from America." I first knew him five or six years ago, when he joined the police force. He is a bricksetter by trade. I received some powders from Margaret Rogerson, which I gave to the coroner.—By Mr. Sowler: I am the coroner's officer, and it is my duty to look after evidence when an inquest is to be held. I lodged the information against Flitcroft, under the direction of Mr. John Gaskell, the public prosecutor. All the witnesses, except Mrs. Leach and Mrs. Grundy, were examined by the coroner.—Thomas Mewburn, sergeant of police, said: I apprehended Flitcroft on the 28th of January, and read the warrant over to him. He said he had no certificate, and did not require one; that he was not an apothecary, as he only dealt in herbs and plants.—Mr. Taylor, borough coroner, produced the powders given to him by M. Finnigan, and said that they had been examined by Mr. Denham, surgeon.—Cross-examined by Mr. Sowler: I have not taken any active part in getting a case against Flitcroft. I may have said something to Mr. Harris on the subject. I do not remember saying to him that I had found out some old law that would put Flitcroft down. The clause in the Apothecaries' Act under which Flitcroft is indicted is not old, and I have known it for several years.—Mr. Denham, surgeon, said: I made a *post-mortem* examination of the body of Robert Bartley. The child died of inflammation of the lungs. I made the examination under the direction of the coroner. Inflammation of the lungs is a medical case. George Greenhalgh's was also a medical case. The green powder produced by the coroner is lobelia, generally called Indian tobacco. It is a medicine, and inserted in the Materia Medica. It will operate in small doses as an emetic; in large doses, as a purgative; and in very large doses, as a narcotic poison. It would be more injurious from not producing vomiting. The buff powder consists of capsicum, or Cayenne pepper, apparently mixed with some spices. In cases of inflammation it is injurious. It is a medicine unfit for a child seventeen months old under any circumstances. It would produce great thirst. It is a medicine, and in the Materia Medica.—By Mr. Sowler: In small doses capsicum will increase the circulating power. In cases of great debility it is not an improper medicine. Lobelia has been introduced into the Pharmacopœia, if I recollect rightly, since 1819. It is a vegetable production, and a native of the United States of America. Capsicum is also a vegetable production. Druggists and grocers, I believe, are in the habit of selling it in lozenges.—By Mr. Brandt: The great mass of medicines are derived from vegetables.—By the Recorder: The druggists sell these things to persons who go and ask for them. They do not go out and prescribe.

This closed the case for the prosecution.

Mr. Sowler then addressed the jury on behalf of the defendant. He denied that Flitcroft had acted as an apothecary within the meaning of the act of Parliament. The cases cited by his learned friend were of a totally different nature from this. The parties held themselves out to the world as apothecaries; but in this case the facts were just the reverse. It was clear that Flitcroft did not

profess to be an apothecary, but merely a vender of certain American herbs. His client, therefore, had not been sailing under false colours. He sold medicinal herbs, and persons who purchased them knew that they were herbs. The poor people, unable to obtain the assistance of a surgeon, went to him for medicinal herbs, because they knew that he was the agent of Dr. Coffin. The parties who went to Fliteroft knew very well that they were purchasing Dr. Coffin's herbs; and when Fliteroft called upon them it was not as an apothecary, but as an assistant to Dr. Coffin, the herbalist. The question was, did Fliteroft, as assistant to Dr. Coffin, and administering his herbal preparations, act as an apothecary? He would prove that Fliteroft was the agent of Dr. Coffin, or rather his assistant, and that there were vegetable prescriptions given in Dr. Coffin's book, which Fliteroft and others were able to follow.—Mr. Sowler then called

William Chippendale, who deposed as follows: I am an assistant to Dr. Coffin, of Manchester. He is the author of a work on herbal treatment. [Mr. Sowler here asked the witness to read the title of the pamphlet, but Mr. Brandt said, "No, no, we want no quackery here." An attempt was also made to hand it up to the recorder, but the learned gentleman smiled, saying, "No, thank you, I don't want it."] Fliteroft was appointed assistant for Bolton in November last. Since then he has been at Manchester two or three times a week, and has done different jobs that we have required of him. He has to administer the pepper and lobelia according to the prescription in Dr. Coffin's book. In difficult cases he comes to Manchester to obtain Dr. Coffin's advice. There is not a single mineral used in our practice: only herbs, roots, and barks.—Mr. Brandt: Only "herbs, roots, and barks." But I suppose you can make 1,000 prescriptions from these? Witness: Yes, perhaps we can.—Mr. Brandt: Where did Dr. Coffin get his degree? Witness: In America.—Mr. Brandt: And why is your master not here? Witness: Because he is engaged in Manchester with his patients.

Mr. Brandt then addressed the jury in support of the prosecution. He said the answer attempted to be set up by his learned friend was one of the most extraordinary he (Mr. Brandt) had ever heard. It was attempted to be shown that this bricklayer and ex-policeman was an assistant to Dr. Coffin, and that as such he was entitled to prescribe and administer medicines to those who might consult him! Why, if this were the case, Dr. Coffin or Dr. Death might have assistants in every town and village in the country, provided he could find ignorant people to pass off his "herbs, roots, and barks." But if Fliteroft had really been appointed an assistant, why was Dr. Coffin not here to produce the appointment? Here we have a man treating inflammation of the lungs as scarlet fever. He goes to a house where there are four children apparently in the jaws of death; he does not suggest that a surgeon should be called in, but goes on prescribing till one of them dies, and the answer is that he did not prescribe as an apothecary, but as an agent to a herbalist! The simple question for the jury to decide was, did Fliteroft act as an apothecary? That he had done so there could be no doubt, and he left the matter with the utmost confidence in the hands of the jury.

The Recorder, in recapitulating the evidence, said that Fliteroft was indicted for acting as an apothecary, not having a certificate entitling him to do so. The question was, not whether the medicines had been properly prescribed, but whether, in prescribing them, he acted as an apothecary? The intention of the act was to prevent unskilful persons from acting as apothecaries, to the danger of her Majesty's lieges. The 14th section prohibited any person from practising as an apothecary without a certificate, and that Fliteroft had not a certificate was admitted by himself. His statement was, that he only practised in herbs, and did not, therefore, require one; and the question for the jury was, whether, in law, he did or did not practise as an apothecary? There was a section in the act imposing a penalty, if the parties had thought proper, but it was equally open to them to proceed as they had done, by indictment. The learned recorder then proceeded to read the evidence, making such comments as he thought necessary; and, in conclusion, he remarked, that their duty was to dismiss all other considerations from their minds, and decide whether or not Fliteroft, in attending the parties and prescribing for them, had acted as an apothecary within the meaning of the act of Parliament.—The jury retired about one o'clock, and returned into court at a quarter past two, when the foreman pronounced a verdict of *Guilty* against Ellis Fliteroft.—Mr. Sowler applied for an arrest of judgment, on the ground that Fliteroft ought to have been charged under the 20th section of the act as an assistant.—The Recorder said an indictment would not lie upon the 20th section. The prohibition was in the 14th, and upon that the indictment must be founded. When an act of Parliament prohibited a person from doing a certain thing, parties offending must be indicted on the prohibitory clause, and not upon those providing punishment.—Mr. Brandt read an extract from Archbold confirming the opinion of the recorder. He also stated that, as the object of the prosecution was to show parties what the law really was, they had no desire to ask any very severe punishment against Fliteroft.—The Recorder then sentenced Fliteroft to one month's imprisonment in the New Bailey.

STATISTICAL SOCIETY.

Colonel Sykes, vice-president of the Royal Society, read a paper on the vital statistics of the East India Company's armies in India, European and native. The documents upon which the paper was founded were of an elaborate nature. Colonel Sykes divided his subject into three distinct sections. The first section comprised the returns of the mortality of the native troops of the Bombay army for the years 1842, 1843, and 1844, at every age, from twenty to fifty-two inclusive. The second section comprised returns to an order of the House of Commons, upon the motion of Mr. Hume, of the sickness, mortality, and invaliding of the Indian army, European and native, for twenty years. The third section comprised the pension establishments of the native armies. It is difficult to give an abstract of a lengthy but important document which was itself but an abstract of an extensive subject, and the tables only can satisfy the inquirer with respect to details. Some facts only fall within our scope. The vital statistics of the Bombay army will create a complete revolution of opinion with respect to the value of native life in India. Tables are constructed, showing the value of life at each age of the troops serving in Scinde, of those not serving in Scinde, and of the whole army. The gross mortality in England and Wales, as exhibited in one of a series of tables submitted to the society, shows that it is coincident with the specific mortality at age thirty-nine; and, assuming that such will also be the case in the other tables, it may be concluded that during the three years, 1842, 1843, and 1844, the mortality of the whole Bombay native army, including that in Scinde was 2·729 per cent., being somewhat greater than that for the city of Glasgow at age thirty-nine, which is 2·410 per cent.

But, taking the whole Bombay army for twenty years, the mortality is only 1·[illegible]1 per cent. per annum. Another important result arrived at, is the removal of all rational grounds for the terror which has hitherto obtained respecting the intensity and extent of Asiatic cholera. The annual average strength of the whole Indian army for twenty years was 12,028 Europeans, and 194,082 natives. The annual average loss for cholera for twenty years was—

			Europeans.	Natives.
Bengal	..	..	51	224
Madras	..	..	22	348
Bombay	..	..	14	90
Total for India		..	87	662

The per centage annual loss, therefore, for Europeans was less than three quarters per cent., and that of natives only one-third per cent. The recent details from one locality in Scinde struck the public mind in India and Europe with amazement and horror; and such impressions would be justifiable were these visitations to be of frequent or extended occurrence, but the experience of twenty years relieves us from our alarms. For the annual average loss of European soldiers for all India was only 724 per cent., and of native soldiers only ·342 per cent. The maximum strength of the European portion of the Bengal army in 1844 was 5034; the minimum strength in 1827 being 3793 men. The maximum admissions into hospital were 11,202 in 1841, out of a strength of 4751, so that each soldier on an average was more than twice in hospital during the year, and some three times. The minimum admissions into hospital occurred in 1827 being only 927 out of a strength of 3793, so that not every fourth man went into hospital, although the mortality that year was great, amounting to 8½ per cent., and the invaliding to 6½ per cent. The maximum deaths from ordinary causes occurred in 1825 being 539 from a strength of 4512, producing the maximum mortality of th twenty years, namely, 12¼ per cent.; the invaliding of that year, however, being only 3·7 per cent. The maximum deaths from cholera occurred in 1843 being 107 from a strength of 5016 or 2·13 per cent. The absolute minimum number of deaths from cholera was in 1826, being 23, or ·53 per cent; but the minimum per centage of deaths from strength was in 1830, when, although forty-two died from cholera, the per centage upon strength was only ·24. The maximum per centage of ordinary deaths occurred in 1825, when it amounted to 11·94 per cent., cholera only adding a half per cent. The minimum was in 1834, amounting to 4·23 per cent. The maximum for cholera was in 1843, amounting to 2·13 per cent.; and the minimum in 1830, being ·24 per cent. The maximum of deaths from all causes was 12¼ per cent. in 1835, and the minimum 5·16 in 1829. The greatest invaliding was 6·7 per cent. in 1826, and the least, 1·7 only, in 1835. The mean of the ordinary deaths to the strength for twenty years was 6·23 per cent; from cholera, only 1·15 per cent.; from all causes, 7·38 per cent.; and the mean annual invaliding, 3·6 per cent. The mean per centage of deaths in the European troops of the Bombay army, from ordinary causes for twenty years, was 4·51; from cholera, ·56; and from all causes, 5·07. Comparing the mortality of the European troops of the three presidencies, Bengal loses the greatest number: from ordinary causes 6·23, and from cholera 1·15 per cent.; total, 7·38 per cent. Madras loses the least: from ordinary causes 3·42 per cent., and from cholera ·43; total, 3·85 per cent., about the half of that of Bengal. The loss at Bombay, 5·07 per cent., is somewhat more than at Madras. The mean loss of the European troops of all the presidencies is 4·68 per cent. from ordinary causes, ·72 from cholera, and from all causes 5·41 per cent. The mean per centage of deaths in the native army of Bombay from ordinary causes was 1·01 per cent.; from cholera, ·28; and deaths inclusive of cholera, 1·29 per cent. Comparing the mortality of the native troops of the different armies, from all causes inclusive of cholera, Bombay suffers least, 1·29 per cent.; Madras most, 2·09 per cent.; and Bengal is intermediate, or 1·79 per cent. The remarkable healthiness of the native troops is best shown

by the following sums and means for twenty years:-

Sums.		Admissions into Hospital.	Death, Ordinary.	Deaths, Cholera.	Invalid	Per Centage Deaths, Ordinary.	Per Centage Cholera.	Deaths, all Causes.	Per Centage Invaliding.
Bombay	638,975	586 017	6,155	1,796	21,155	1·01	·281	1·291	3·311
Bengal	9,048,425	1,100,735	32,170	4,688	30,413	1·57	·220	1·79	1·600
Madras......	1,196,260	904,325	18,088	6,976	23,479	1·512	·583	2·095	1·902
	8,881 660		56,713	13,260	75,077			1·803	1·931

Want of space permits only a bare notice of the pension returns. One explanation will suffice to show the duration of life of the pensioners, and the good effective service they had previously performed. In Bengal, in 1843-4, there were 79 native captains on the pension list who died: their average age at the time of death was $72\frac{1}{3}$; and their average time of service, before going on the pension or invalid list, was 43 years, 5 months, and 8 days. The total number of pensioners on 30th April, 1845, was 33,743, and the annual charge above £190,000. At Madras, at the same date, the number was 27,959, and the charge for them £204,695 per annum.

Colonel Sykes concluded with some observations on the habits and diet of the Europeans and natives, as bearing on health.

MISCELLANEOUS CORRESPONDENCE.

DR. SCOFFERN ON THE BARTON-ON-IRWELL POISONING CASE.

[To the Editor of the Medical Times.]

SIR,—Circumstances having rendered it necessary for me to watch the cases of poisoning which have occurred of late, I have been much struck with what appears to me to be a remarkable acquittal;—an acquittal which must be referred to an assumption which the records of toxicology inform us is wholly gratuitous. I refer to the Burton-on-Irwell case of supposed poisoning by arsenic, which has resulted in the acquittal of Elizabeth Johnson. As some of your readers may have forgotten the leading features of the case, I will take the liberty of very briefly recapitulating them. They are these:—The woman, Elizabeth Johnson, was proved to have lived, for some time preceding his death, on very bad terms with her husband—to have affirmed that she wished him dead—that she would remove him by poison, if driven to extremities. She was proved to have bought arsenic on the 27th day of November—the very day when her husband first began to suffer from symptoms of arsenical poisoning. She was proved to have predicted the night of her husband's death! These facts alone, to say nothing of a profligate intimacy between her and a man called Abraham Hewett, furnished strong presumptive evidence as to her guilt.

The husband dies on the 3rd of December, and on the 4th Mr. Hepworth, the medical gentleman in attendance, calls in another medical gentleman—said to be proficient in chemical analysis—Mr. Leigh, to assist him in ascertaining whether poison were present. Reinsch's test is used, and a stain results which Mr. Leigh, although a lecturer on organic chemistry and forensic medicine, cannot decide whether it be arsenic or antimony. The body is reinterred, and thus matters remain until the beginning of March, when Mr. Leigh, very prudently doubting the perfection of his analysis, obtains a warrant for the disinterment of the body, and calls in Mr. Watson, an analytic chemist, to assist him in making a fresh chemical examination. This time the presence of arsenic is conclusively established by a number of tests; some of which, as the ammoniacal nitrate of silver, will not act except the poison exist in comparatively large quantities. The counsel for the defence urges a plea that, water having been found in the arsenic might have been conveyed into the body by percolation; the plea is accepted by the jury, and Johnson is acquitted! Now, although the passing of comments which reflect upon the decision of a jury is a somewhat unthankful office, I cannot help remarking that the supposition involved in this plea is totally at variance with all toxicological records, which bear upon the point.

The increase of poisoning in Britain is frightful; we talk of Toffania and Brinvilliers, but there are individuals now existing in England who far out-Herod them, and so careless is the British Legislature on the protection of human life, that, until a member of Parliament at last falls a victim to the Circean altar of secret poisoning, the evil will be allowed to proceed. You could not, in my humble opinion, better exercise your powerful journal than in drawing legislative attention to this important subject.

I am, Sir, your obedient servant,

30, Essex-street. JOHN SCOFFERN.

P.S.—I may take this opportunity of remarking that the daily journals of last week would make it appear that Dr. Venables was engaged in the analysis of Dr. Cronin's mixture. This is not the fact; I was appointed to perform the analysis by the coroner, and Dr. Venables was merely present; indeed, Dr. Venables could not delicately have undertaken the task, inasmuch as his son is Dr. Cronin's pupil. It is somewhat singular that Mr. Weathers, the medical gentleman who attended Miss Collier, and myself, who performed the analysis, were not examined at all.

DR. VENABLES ON THE CRONIN CASE.

[To the Editor of the Medical Times.]

SIR,—I feel assured you would not have copied the article in page 143 of your journal of the 10th inst., from the *Pharmaceutical Times*, had you reflected upon its manifest want of candour, or the inherent evidence it presents of the violation of every principle of honour, justice, and truth. It purports to be a comment upon Dr. Cronin's acquittal. In his strictures the writer imputes to Mr. Tennant and myself, as the "friendly advocates" of Dr. Cronin, the suggestion to this gentleman, that the black oxide of iron in Beazeley's compound powder of strychnia would have decomposed the prussic acid in the medicine, &c. Assuming such to be the fact, I see nothing either "dishonest" or discreditable in submitting to a court of law any substantial view or conjecture that may seem calculated to assist the accused. But I cannot say so much in favour of that surreptitious intrusion upon the sacred intercourse between an accused and his confidential advisers which possesses itself of their secrets; much less can I approve *that discretion* which, by divulging, proclaims its own dishonour. In what way the writer became possessed of facts so truly confidential, as to be known only to himself, it is not for me to explain, and the surmise may be left to some abstruse form of "special pleading."

I must, however, in justice exonerate the writer from the inferential consequences of his own self-accusation. From the difficulties encountered by reporters, occasional inaccuracies will find their way into the best reports, and, as unintentional - frequently, indeed, unavoidable - are justly excusable. But what excuse can be urged for the deliberate and wilful perversion, not to say violation, of the truth in the closet? The writer of the article in the *Pharmaceutical Times* asserts that for which there is not the slightest foundation, and which is nothing more than a mere fabrication. Neither Mr. Tennant nor myself "fixed upon," or ever thought of fixing upon, Beazeley's compound powder of strychnia, as the basis of any "special pleading." Neither was the chemical reaction, so much dwelt upon by the writer, "eagerly laid hold of by Dr. Venables, nor wielded by him in any line of argument." The suggestion of the possibility of such a reaction emanated entirely from Dr. Cronin's own spontaneous and momentary reflection; and, so far from being approved, met with my decided opposition. Neither was it Dr. Cronin's object to infer from the decomposition, that the poison would have become inert; but that the colour, from the formation of Prussian blue, would have been so completely different from that of her former medicine, that her distrust would have been *efficiently* excited. Dr. Cronin acted entirely upon his own responsibility; and so far from the suggestion being made use of in any part of the defence, the only further allusion, was Mr. Bell and Mr. Morson expressing *merely their doubt*, not any absolute certainty, that no such reaction would ensue; with which view, I believe, Dr. Scoffern concurred. The writer, I presume, has satisfied himself upon the reaction between black oxide of iron and prussic acid. I considered the matter of so little importance that I have not examined the subject, but this I may say, that there is high authority against the conclusions of the writer.

There are some other obscure insinuations which are sufficiently discreditable to the writer, to justify passing them over in silence. But the conduct imputed to me by the writer, and transcribed into your pages, fully warrants me in claiming a place in your journal for this explanation.

ROBERT VENABLES.

5, St. Vincent-place, City-road, April 12.

VAPOUR OF ETHER IN SURGICAL OPERATIONS.

CASE OF MRS. PARKINSON.

[To the Editor of the Medical Times.]

SIR,—Having well considered this case, so far as the materials I now possess will enable me to do, I shall be obliged by your allowing me an opportunity of making a few remarks - promising that I wish only to deal with the case in reference to the experiment with the vapour of ether, not desiring to give any opinion as to the medical or surgical treatment of the patient in other respects.

In the first place, the patient was not in a state favourable to the experiment. "She was a delicate woman, subject to cold on the slightest occasion." (Evidence of Mrs. Leake). "She was very much out of health, and was directed to wean the child; and leeches were repeatedly applied to the tumour, at intervals of two or three days. The operation of acupuncturation was repeated several times. Mr. Robbs had tried the effect of the administration of the vapour of ether twice before, and failed in producing complete insensibility." (See Mr. Robbs's own statement in the *Medical Gazette* of the 2nd.)

2. Another unfavourable circumstance in the case was the fact of the operator having no faith in the experiment, having only been induced to try it by the sollicitation of the patient.

3d. The apparatus (a) employed was not properly constructed: the air-valve being closed by a poised weight, instead of being open to admit the free ingress of atmospheric air. Under such arrangement, the patient becoming insensible, and, especially in a protracted operation, would not probably inspire with sufficient force

(a) I have been favoured by the editor of the *Times* with a sketch of the apparatus used—a copy of which I will endeavour to forward to you in a day or two. This and a reference to the replies to my former queries will make these remarks more clear.

to admit the air. This would present a serious check to the experiment. The valve of expiration, being closed by a poised or kind of flute-key stopper, would not act as freely as that which I have been in the habit of using—a conical one. This would have a tendency to cause the patient to inspire and expire again into the *same* vessel, thereby vitiating the ethereal vapour, and subjecting the patient to asphyxia. No provision was made in the apparatus to generate a little aqueous vapour to be mingled with the ethereal vapour and atmospheric air, which would render the ethereal vapour less irritating to the lungs; nor had it the power to purify impure ether; nor was there any stop-cock, or any other contrivance, for regulating the admission of the vapour.

4. The patient never appears to have been completely insensible, nor were proper precautions taken to adjust the mouthpiece, so as to enable the patient to inhale the vapour in sufficient volume and density to render the nervous system insusceptible, nor was the vapour administered continuously. "During this period she cried out much, complained, and writhed in great pain. It was suggested by all present, to be advisable to re-administer the vapour, as its proper effects were not produced. I consequently requested Mr. Dibbin and my son to replace the inhaler to the patient's mouth, while I continued my dissection. The inhalation was not continued during the whole of the time, nor was it re-applied till the cries and struggles of the patient became so great as to be under no control; and then, both Mr. Dibbin and my son state that it was very imperfect and only at intervals, the position of the patient being very unfavourable." (Mr. Robbs's own statement, see *Medical Gazette*, April 2.) It is also stated that the conjunctiva was sensible.

5. The specific gravity of the ether, when perfectly pure and free from acid or alcohol, is 730. In this case it is stated to have been 733 to 765.

6. The parties who administered do not appear to have had much experience in cases of importance; six or seven times—several cases being merely extraction of teeth, and one the removal of a portion of a toe. No case of importance is mentioned in which they have previously tried the experiment.

7. the mouth and nostrils were not properly closed, so as to exclude atmospheric air during the second inhalation. The position of the patient was very unfavourable. (See Mr. Hobbs's statement)

8. The apparatus in this case was placed below the mouth, and the ether, being heavier than atmospheric air, does not so readily ascend without some little effort on the part of the person inhaling it. Operators should bear in mind, that ether vapour is very heavy, having a specific gravity, at a temperature of 60° and a pressure of 30 inches, of 2·58 to 1 compared with air; owing to this, it falls to the bottom of vessels, and may be poured from one vessel to another much more readily than carbonic acid: hence it follows that, when the apparatus is above the level of the patient's mouth, the respiration of the vapour is much facilitated by its density and its tendency to flow at once into the lungs; the reverse happens when the source of the ether vapour is below the level of the patient's mouth.

9. The appearances of the body are not such as would justify the expression of an opinion, that death was caused by the ether, especially with the limited experience at present possessed. "The lungs were pervious, they were a little congested at the posterior part, which witness attributed to the position at the time of dissolution. The heart was healthy in structure, but more flabby or flaccid than usual, and containing rather less blood than usual. The brain was quite healthy, with the exception of the upper part of the anterior lobes, the membranes of which were congested with blood, and there was no effusion in the ventricles."—(Evidence of Mr. Eaton.)

Amussat states that "The anatomical alterations observed in animals killed by the inhalation of ether were distention of the heart from accumulation of dark blood in all its cavities; congestion of the lungs, liver, and kidneys; the brain betraying signs of hyperæmia in some cases."

Had the medical gentlemen ever been before engaged in, or present at, a *post-mortem* examination in a case of poisoning by ether?

Apologizing for the length of these remarks,

I remain, Sir, your obedient servant,

A. Fairbrother,

Senior Physician to the Bristol General Hospital.

Bristol, April 12.

ON THE WORD CHEMIST.

By Dr. Adam Fergusson.

[To the Editor of the Medical Times.]

I have often asked myself the question, why it was that the dispensers of medicines and vendersof drugs called themselves chemists; and lately, on attending Dr. Cronin's trial, this question presented itself to me with redoubled force, inasmuch as the first vender of drugs there examined admitted his almost total ignorance of chemistry—an ignorance which he owned was participated in by the majority of his class.

Now, as those who do *not* know chemistry call themselves chemists, *lucus a non lucendo*, it is high time, I humbly opine, that those who *do* know chemistry should adopt some other name. I would propose, then, that they be denominated "Astronomers."

If you think my suggestion valuable, may I ask the favour of its insertion?

I enclose my card and address.

April 12.

PARTIAL ETHERIZATION.

[To the Editor of the Medical Times.]

Manchester, April 12.

Sir,—Will you be so kind as to insert the following remarks by way of appendix to the paper which you did me the favour to insert in the last number of the *Medical Times*?

At page 132 I stated as my last proposition—"That an operation should never be undertaken when the patient is only *partially* etherized and still capable of feeling acute pain; as in such condition, with many patients, the pain, emotion, and shock to the nervous system are likely to be greater than if they were in the natural state." In confirmation of this I beg to quote the remarks of M. Roux, at page 137 of your last number:—

"M. Roux stated that complete insensibility was far preferable to the second period of the effects of ether, during which irritability had on various occasions been evidently increased."

At page 632 of the last number of the *Medical Gazette* we have another instance recorded of the sudden death of a patient operated on under the *partial* influence of the ether. Mr. Eastment says—"As soon as the patient was brought under its influence, which was the case in about three or four minutes, Mr. Newman operated with his usual skill and judgment (it was for a compound fracture of the left thigh, with great laceration of the soft parts); but the patient's sufferings, on making the circular incision, were so severe that the intelligent and humane clergyman of the parish, Mr. Martin, who personally waited on the boy throughout the operation, remarked that the remedy was quite a failure. The inhalation was now employed the second time for two or three minutes, and with decided benefit, as far as the entire suspension of suffering was involved; another operation (in which the loss of blood was most trifling) was concluded. With its conclusion our difficulties and anxiety commenced, for our patient was in such a state of exhaustion and apparent intoxication that we soon considered his life to be in danger; and our fears were but too fully realized, for, in defiance of all the watchful attention it was in our power to pay, he sank in less than three hours after the operation. The state of the brain during this period was peculiarly distressing. There were alternate manifestations of excitement and depression of the sensorial powers; at one time resembling delirium, at another, like approaching syncope, and again, like violent intoxication; and these alternate conditions continued until the poor boy died." And Mr. Eastment further adds—"On a review of the above case, I am not only induced to consider that the inhalation of ether partially failed in suspending pain, but I also attribute the death of the patient to its narcotizing effects on a nervous system previously depressed by great and extensive injuries." The patient was only eleven years of age, and had sustained simple fracture of the right thigh, in addition to the injury of the left, which had rendered amputation necessary. I have quoted the case so fully, as being a good illustration of the propriety of the proposition which I have quoted above from my former paper, as to the caution which is requisite to be observed, to guard against operating on patients when only *partially* etherized.

The last case of amputation of the mamma, referred to in my last paper, I have the gratification to say has gone on in the most satisfactory manner. The patient not only suffered nothing during the operation, but there was far less hemorrhage than is usual in such cases; and the system was so tranquillized that she never required an opiate, and has assured many professional gentlemen, who have since seen her, that she has suffered more pain from a cut finger than from the breast since the operation. The reaction was just sufficient to aid the adhesion of the divided parts by the first intention. The pulse was only ninety the second day, eighty the third, and seventy-eight the fourth, and since then has never been more than seventy-two. Amongst others who visited this patient, and expressed their gratification with the results of the case, Dr. Knox, the experienced and talented editor of the *Medical Times*, honoured me by accompanying me to see her dressed on the twelfth day after the operation. The dressing used for this, as well as the former case, was water-dressing, with spongio-piline: no plaister was ever applied. The stitches were all removed by the sixth day, by which time the adhesion was so complete as to require no application of plaister.

I forgot to add, in my last communication, a most important fact in proof of hypnotism being less objectionable, in a *moral* point of view, than ethereal narcotism, which is this—that the same patient, who manifested the most intense erotic indications during ethereal narcotism, has been frequently hypnotized by me without the slightest indication of the sort being ever manifested by her during the sleep.

It is worthy of being recorded, that I have found ethereal narcotism of the greatest benefit for suspending the intense pain of dysmenorrhœa. I know it has been recorded as having been tried with considerable success in several other painful affections, but I am not aware of having seen any account of its application in the above-named most painful affection; however, the success which has attended its use in my own practice, in most intense cases of the sort, warrants me in submitting the fact to the consideration of my professional brethren.

I have the honour to remain, Sir, your most obedient servant,

James Braid, M.R.C.S.E., &c.

THE POSITION OF THE APOTHECARY.

[To the Editor of the Medical Times.]

Sir,—Your well-known impartiality to the different branches of the medical profession induces me to expect your insertion of the following remarks, concerning the supposed right of the Apothecaries' Company to legalize their members to act as general practitioners. In the reign of James I., the apothecaries and grocers were incorporated into a company; but, shortly afterwards, the apothecaries obtained a charter for

themselves, and by degrees got into the habit of prescribing medicines without having recourse to the physicians; and, as Pope, in his "Essay on Criticism," has it—

"So modern 'pothecaries, taught the art,
By doctors' bills, to play the doctor's part,
Bold in the practice of mistaken rules,
Prescribe, apply, and call their masters fools."

This innovation was exclaimed against as an infringement on the privileges of the physicians; but the apothecaries seem to have kept possession of the new ground they had taken up, and the Act of 1815 has placed them on a sound footing *as apothecaries*. But, with all their authority, I submit they have no claim or title whatever to assume the position of general practitioners, whose province it is to act both as surgeons and apothecaries. The knowledge of surgery is not expected by the examiners at the Hall: their regulations make no mention of this needful qualification to the general practitioner; and yet we are informed in your journal, a few weeks ago, by the deputation to Sir G. Grey, *they*, the apothecaries, are the only legal general practitioners. Many students content themselves with passing the Hall, and assume the title of surgeons, without either surgical practice, lectures, or examination; but a member of the College, whose *curriculum* of study embraces every requirement of the Hall, save medical jurisprudence (vide *Medical Times Almanack* for 1846), and passes an examination on those points, which are of the most importance to a general practitioner, is to be considered an improper person to practise as such. Truly a conclusion like this is above my comprehension, and, if an explanation could be given by the said deputation, it would oblige many surgeons, as well as your subscriber and well-wisher, CHIRURGUS.

Derby, March, 1847.

MANCHESTER EYE INFIRMARY.

[To the Editor of the Medical Times.]

SIR,—You have already received exuberant information from numerous correspondents on the "use and abuse" of ether. But you have not, I think, had much evidence of its employment in "ophthalmic surgery."

On Thursday last Mr. Walker operated at the Eye Institution of this town on two cases of cataract. In one patient he operated on both, in the other only on one eye (the right), a very low degree of vision being possessed by the left, sufficient for the present to postpone the interference of the knife and its possible consequences. It is a very judicious rule not to recommend an operation so long as the patient has sufficient sight to enable him to find his way about. Of course, cases where the patient himself, from circumstances, desires the operation, form the exceptions. In the first case ether was administered by means of Robinson's or Hooper's inhaler. The patient was not rendered so insentient as not to reply when spoken to, and during the operations there was the outward indication of pain or feeling manifested by a slight contortion of the muscles of the face; restrained respiration, the apparently suppressed exclamation of suffering, together with a general tremor of the body; yet, when the operations on both eyes were concluded, in answer to the interrogatories put to him by Dr. Robinson, "Did you feel pain?" he replied, "No."—"Will you now undergo the operation?" "Oh, yes, I am quite ready." On being told that all was over, he exclaimed in gratitude, "Bless the Lord! bless the Lord!" To the spectators this seemed to be a very unsatisfactory and imperfect experiment; but, if the patient's apparently guileless statements are to be depended upon, the condition induced was quite perfect enough to render him insensible to the pain; more than that was not needed. My own opinion on this particular case is not yet formed; as to many of the cases, of triflingly painful operations, in which ether has been used, I have thought that some error as to its effects might arise from those singular stoico-psychical persuasions and resolves which have been very ingeniously set forth in this journal, and in another department of medical philosophy by Mr. Braid of this town.

In the operation for cataract ether is not likely to be found serviceable. In the case referred to it was disadvantageous by producing so much upturning of the eye, and consequent interference with the pupil, as to make the lower section of the cornea a necessity. And this seems to be the usual concomitant or result of its employment. The relaxation of one set of muscles, which permits a contraction of the other set which induces this state, also gives a tendency to draw the eye backwards and upwards into the orbit, rendering the naturally sunken eye more so, and vastly increasing the difficulty of the operation. These circumstances, together with the consideration that the operation, whether viewed abstractedly or comparatively, is attended by little pain—the cornea seeming to possess a low degree of sensibility—will militate against the use and value of this valuable surgical boon. In the extirpation of tumours from the vicinity of the orbit, and in the removal of the eye itself, it will prove equally serviceable.

In the second patient the ether was not used. On being questioned as to the painfulness of the operation, he replied, "Oh, it was nothing particular."

Mr. Walker expressed his determination not to use it again for cataract. I have only to add, at this time, that having now witnessed many of this gentleman's operations, I am persuaded that his double-edged cataract knife (a drawing of which was given, *Medical Times*, Vol. XII., p. 107) seldom fails to make a sufficiently free incision for the escape of the lens—a circumstance upon which the success of the operation chiefly depends. I have never seen it fail in his hands.

A medical gentleman from Ashton was present, who stated that he had never failed to produce the full effects of ether by causing the patient to inspire it from the internal surface of the spongio-piline cloth fitted to the mouth.

A. W. CLOSE.

Grosvenor-street, Manchester, March 22.

A FACT.

SIR,—The marked difference that there is between the diploma of the Royal College of Surgeons in London, and that of the members of the Royal College of Surgeons of England, has not been, as far as I have observed, publicly noticed. Yet the difference appears to me to be a serious one, as it places the members of the new college in a class inferior to that to which the members of the old institution belong. The new diploma informs all men that A. B. has been examined and found to be a proper person to be admitted a member. The old diploma has the following important clause, "AND AUTHORIZE HIM TO PRACTISE THE SAID ART AND SCIENCE ACCORDINGLY." The reformed college, perhaps being quite sure that Sir James Graham's bill would pass, and that, as the license to practise would then issue from the board that would be formed in virtue of the act, it would be superfluous for the college to give to the new members their license; but no such bill has passed, nor can any one tell when it will pass; in the interim these members are left in the lurch. In fact the new diplomas are certificates of competence and of membership; but are, properly so called, no diplomas at all. Surely the surgical under-graduates would be justified in demanding from the college a license to practise, put down in black and white, that they might show to all men that they have an authority to practise surgery. The College of Physicians and the Court of Examiners of the Society of Apothecaries give licenses; why, then, has the College of Surgeons ceased to do the same?

I would like to see what defence this line of conduct will fairly admit of. I confess I can only look upon it with disapprobation.

I am, Sir, your obedient servant,

London, April 7. CANDIDUS.

COMMENTS AND SUGGESTIONS UPON THE SUBJECT OF MEDICAL REFORM,

And the Measures hitherto proposed for the future Regulation of the Medical Profession.

The subject of Medical Reform has been one so long contemplated and called for; and one that has hitherto met with so little success or unanimity of opinion, that the author of the following observations is induced to lay them before the professional public with the hope that, if the subject is again brought before the attention of Parliament, more efficient measures may be sanctioned than any hitherto proposed, and with the firm belief that they are only open to severe comment from the unqualified part of the profession.

Public exposure has proved useless in at all counteracting the progress of quackery; nor has any efficient measure been suggested to restrict the daily innovations upon the profession, or the assumption of the title of M.D. or Dr. by persons wholly unentitled to it, or to suppress the fulsome and obscene quack advertisements which disgrace too many of the metropolitan publications, and almost every provincial newspaper.

One proposition before the public at present is, that upon an annual registration, every practitioner shall pay a fee of "five shillings." Now, it is suggested, by a comparison with the legal profession, that a much larger sum, for an annual certificate, should be paid—viz., in the following ratio: that gentlemen registering and practising as physicians, and pure surgeons, should pay for the first three years of entering into practice, five guineas for an annual certificate, and for each subsequent year, eight guineas; and that the sum of three guineas for the first three years, and five guineas each successive year, should be paid by the "general practitioner." That many exemptions must be allowed as regards the medical officers in the different services, the stipendiary officers of eleemosynary institutions, assistants, and others, is evident, although their exemption would prove no obstacle to their due registration. As a counterbalancing advantage for such an oppressive sum, as many may at first proclaim that proposed for the annual certificate, the *total* of which, it is suggested, should become part of the revenue, it must be borne in mind, the *Government*, in consideration of that amount, should undertake *to enforce summary measures to prohibit all future sale of quack medicines, and also by similar measures suppress the practice of all other than duly qualified and, by virtue of such qualification, annually certificated practitioners*. Thus a source of revenue would be collected from the profession itself, to compensate the loss sustained by the Government by the suppressed sale of quack medicines; and the *qualified part of the profession* would hardly deem such measures oppressive, if they were strictly enforced, and if the *half and wholly unqualified* practitioners were restricted from practising, which too many do, to the bane of the public both in London and the provinces, and to the unjust prejudice of those who have devoted their time, talents, and finance in completing the required course of education according to the protracted course of study required by the educational institutions (a).

A summary mode of penalties for the suppression of empirical and unqualified practitioners must meet with the general approval of at least the qualified part of the profession, should such ever be carried into effect, and also the future enforcement of a general uniformity in

(a) "The London Medical Directory" for the present year returns a list of upwards of 300 parties practising as general practitioners who have returned no qualification at all, and more than 180 who publicly acknowledge the possession of but one diploma, and that of a much more recent date than 1814. Those so practising in the country would doubtless form a formidable addition to the half and wholly unqualified list.

the course of study on the part of all future candidates for admission into the profession; and, for the furtherance of that desirable object, the same period of time should be imposed on each future student, and a precisely similar routine of attendance on lectures, and at the hospitals, whether in London, Dublin, or Edinburgh. Notwithstanding the distinction between medicine and surgery is so generally admitted to be merely nominal, yet, on the principle of the division of labour, and from the general attainment now so much demanded, a second or medical examination should be enforced at each of the above-named cities, *in lieu of that of the Apothecaries' Company*, and a certificate of such examination, and the diploma from one of the Royal Colleges of Surgeons should be enforced, as *the legal standard of qualification*, from every practitioner of medicine and surgery in the kingdom. Some gentlemen have agitated the subject of instituting a college of their own; but the *majority* who have become members of either of the Colleges of Surgeons would be found far from desirous to resign the privileges—*limited as they are*—which, by their examinations and acknowledgment as members of the same, they have become entitled to. Far from wishing the total abolition of the examination at the Apothecaries' Society, it is submitted that a knowledge of "pharmaceutical chemistry," "materia medica," pharmacy, and even botany, ought to be demanded from the chemist and druggist, to whom is intrusted the preparation of many important prescriptions, and who, at the present time, sell too indiscriminately many deleterious and dangerous articles; and were the due examination of the chemist and druggist, and a more strict regulation of the sale of the powerful medicinal poisons, and a *standard national rule for the manufacture* of them, intrusted only to the Society of Apothecaries, it would be found that inquests would be less frequent upon children, "Poisoned by laudanum," "Godfrey's Cordial," &c. Arsenic for rats would be less heard of; mistakes of oxalic acid for Epsom salts, and reversed labels, would less frequently occur, and innumerable other errors of omission and commission, by which—it is a too fatal truth—many a valuable life has been sacrificed, an invalided state of health continued, and other evil consequences, aggravating the "ills that flesh is heir to," when not actually fatal. The prohibition of a diversity of formulæ for the manufacture of the same preparation is urgently required—an existing evil, in great measure, auxiliary to the present painful position of Dr. Cronin, as regards the difference of strength in the different formulæ for making laurel-water; and, if the errors of our neighbours may make us wise ourselves, the death of many fellow-creatures at Paris, in 1830, by the mistaken use of the "acide cyanhydrique hydratique" for the "acide cyanhydrique medicinale," should surely demand the enforcement of every precaution that the Legislature and professional prudence can suggest.

That an *efficient registration* of every qualified member of the profession is very desirable must be obvious; but it appears questionable whether it would not be more effectually promoted and effected if it were under the direction of a presiding medical council, having a board in London, with a principal officer of state as the President, as suggested in the former bill of Sir James Graham: such a board or council, being formed of one or more of the eminent physicians, surgeons, and general practitioners of London, Dublin, and Edinburgh; and forming at once a court of appeal and redress for any attack on a practitioner's professional reputation; and to be invested with the power of discontinuing the annual certificate or privilege to practise, upon any due and efficient proof of wilful malpractice, negligence, or ignorance of any party hitherto qualified, or even the degrading use of handbills, which some are mean enough to circulate—in the same manner as a disreputable member of the law is struck off the rolls. Such a presiding board would also prove an effectual source by which might be enforced statistical accounts from different parts of the kingdom, the presidencies, and the British settlements, and also for the due investigation of the causes, effects, treatment, &c., on the appearance, or during the prevalence, of any epidemic.

Another object might also be thus attained, viz., a due investigation of the actual merits and efficacy of any new mode of treatment, as instanced by the novel application of ethereal-vapour inhalation, at present undergoing uncertain investigation at the various public hospitals. That agent's safety should be sufficiently tested and approved of, before dabbled with by incompetent parties, or used in private practice, for the extraction of every decayed tooth, that is much better removed without it.

Any new drug, or combination of drugs, worthy of being added to the "Pharmacopœia" or "Materia Medica," might be similarly ordered by such a board to have an efficient trial and investigation, by the medical officers of the public institutions, prior to an unlimited use, or sale among the public. It cannot be imagined that the tenor of these remarks at all imply the prohibition of the sale of a box of pills or any other simple remedy by the dispensing chemist, although they aim at the suppression of the sale of quack medicines, with the precise composition of which the medical profession are in ignorance.

Is it not an anomaly that, in the profession of the law, should any innovator dare to undertake the management or direction of the legal affairs of society, he is immediately punished both by fine and indictment, and that the lives and health of the public may be placed in jeopardy by any *ci-devant* mechanic like St. John Long, or any impostor possessing "impudence" as his only qualification? Surely magisterial power should in future have a right of interference: for the author can authenticate instances in the north of England where "bone-setters"—a class, it is to be lamented, not yet extinct—have caused irremediable mischief in mere cases of simple dislocation. The parties applying to such impostors err from that degree of ignorance which renders them the more entitled to protection from the law, and an efficient suppression of such dangerous practice.

It is not intended here to comment at any length on the physician's department of the profession, further than to observe the title of Dr. or M.D. should verify to the public all that is implied by it—but which is far from a reality at present—viz., a higher degree of attainment, both in general, educational, and professional proficiency; and to ensure which, the Continental, Glasgow, and Aberdeen degrees should be abolished; and those of London, Edinburgh, and Dublin should be in strict conformity with each other in the amount of *attainment required* from the candidates for so high a professional position, by a preliminary university education, and, subsequently, a lengthened period of study at the metropolitan and continental hospitals. The degree of M.D. also should be attainable as an honorary distinction to the accomplished practitioner, as the council might think proper to bestow it, and to others, as at present, as licentiates, by examination after a fixed period of honourable practice and consequent experience.

London, March 20.

GOSSIP OF THE WEEK.

Queen's College, Birmingham. The first sessional examination of the students in the department of general literature and science took place on Saturday the 10th and Monday the 12th inst., when the following list was returned by the examiners:—Classics. 1st Class: Fryer, Coleford; Wall, Stratford-on-Avon; Yarwood, Birmingham; Edney, Craig Kilmarnock. 2nd Class: Seven.—Mathematics, 1st Class: Wall, Fryer, Yarwood. 2nd Class: Edney; Rice, Stratford-on-Avon; Rose, Madeley; Wilkinson, Northleach, and A. T. Davies, Birmingham, equal. 3rd Class: Three.—Chemistry. 1st Class: Edney, Fryer, Wall. 2nd Class: Five.—Examiners: Lyttelton, M.A.; James T. Law, M.A.; W. M. Lawson, M.A.; George Richards, B.A.; John Taylor, B.A.; George Shaw; E. W. Day, M.R.C.S.

Royal College of Surgeons.—At a meeting of the Court of Examiners on Monday, the 12th instant, the following gentlemen, having undergone the necessary examinations for the diploma of this College, were admitted members, viz.,

Chelsea; George B. Barron, Southport, Lancashire; Frederic Robinson, London; James Henry Richardson, Toronto, Upper Canada; Oliver Pemberton, Birmingham; Frederick Acret, Toronto, Upper Canada; Edwin Cotton Cottingham, London; and Richard James Hansard, London.

Royal College of Surgeons.—Gentlemen admitted members, Friday, April 9:—E. P. Wilkins, E. Lund, C. J. Gibb, R. J. Brackley, C. Mackechnie, W. E. Hayman, R. B. Painter, J. H. Prossor, and W. B. Gill.

Education, Science, and Art.—The Miscellaneous Service Estimates (No. 4) contain an account of the sums proposed to be appropriated during the current financial year to the purposes above mentioned. The sum total which the Government will require from the House of Commons amounts to £349,943, against £325,908 in 1846, and £300,218 in 1845. The sum total will be thus distributed—viz., £100,000 for public education in Great Britain, and £100,000 for the same purpose in Ireland; £6500 for Schools of Design, £2006 for the University Professors, £4536 for the University of London, £7480 for the Scotch Universities, £300 for the Royal Irish Academy, £300 for the Royal Hibernian Academy, £6000 for the Royal Dublin Society, £2600 for the Belfast Academical Institute, £48,518 for the British Museum establishment, £47,959 for the British Museum buildings, and £3152 for purchases; £5537 for the National Gallery, £8961 for the Museum of Practical Geology and Geological Survey, £4094 for scientific works and experiments, and £2000 for the completion of the monument erected to the memory of the late Viscount Nelson.

French Justice.—The Parisian courts have just punished by fine and three months' imprisonment a keeper who, having to watch a suicidal patient, fell asleep and gave the latter an opportunity, which he used, of self-destruction. It appeared in evidence that the keeper had used all kinds of stimulants to resist sleep with no effect.

A Dr. Outman, of Washington, wishing to test a magnetic somnambulist, suddenly applied to her nostrils a bottle containing cayenne pepper. The doctor suffered instantly a severe scratching in the face from the fair subject, and subsequently a legal process, in which he was condemned to pay less than one farthing damages.

It has been ascertained that the rate of mortality is considerably higher among the medical students than any other class of students in the French capital. From 1825 to 1846 inclusively, thirty-three medical students died from dissection wounds alone.

The greatest astonishment has been excited among the Turks by some successful surgical operations which have lately been performed at Constantinople upon patients under the influence of ether.

The following is a copy of a "General Order" regarding "relative rank" in the medical department, recently issued to the American navy by the late chief of its executive, Mr. Bancroft:—

"Surgeons of the fleet, and surgeons of more than twelve years, will rank with commanders.

"Surgeons of less than twelve years with lieutenants.

"Passed assistant-surgeons next after lieutenants.

"Assistant-surgeons not passed next after masters.

"Commanding and executive officers, of whatever grade, when on duty, will take precedence of all medical officers.

"This order confers no authority to exercise military command, and no additional right to quarters."

The above important order, so gratifying to the medical body in the United States navy, has been obtained through the instrumentality of Dr. William Maxwell Wood, now surgeon of the fleet in the Pacific, who has also been the means of obtaining many other gratifying orders tending to improve the condition and standing of the medical gentlemen employed in the American service.

The students of the faculty of medicine in University College are about to present to Dr. Taylor, late Professor of Clinical Medicine, a testimonial expressive of their estimation of his character and talents.

POISONING BY CANTHARIDES.—The following French case is curious from the repeated attempts made to destroy life. The accused was a man, aged forty-one years, a carpenter by trade, and of an appearance, gestures, and conversation nearly verging to idiotism. His attempts were made on a step-brother, named Hervonet:—During May, 1846, Hervonet, shortly after eating some soup, which tasted extremely bitter, was seized with violent pain in the stomach and bowels; he could not pass urine but with extreme pain, and the quantity discharged was small and bloody. After suffering several hours, he was enabled to sleep, and, on waking, found himself much better. He had no suspicion of the cause of this illness, but during the night of the 5th he was seized with similar symptoms. Two hours previous he had eaten soup of similar bitterness to the last. This time his sufferings were more severe and longer continued, and they only yielded after copious draughts of oil and sweet milk, which excited copious vomiting. Even yet he had no idea of any intent at poisoning. On the evening of the 12th of July he found in his soup a black substance, which at first he supposed to be fragments of vegetables. A portion of this adhered to his palate; he detached it with his finger and examined it by the light, but could discover nothing certain, except that the taste was precisely similar to that experienced in the two previous instances. The next morning he was impressed with the idea that it was cantharides; and all doubt was removed on showing it to M. Drew, a medical man, who also informed him that two days previous he had seen his step-brother purchasing medicines from an apothecary. Hervonet denounced his brother to the authorities; and, as soon as Poirier heard of the charge, he fled, but was soon retaken. He confessed that he had purchased a blistering plaster on the 10th of July, and mentioned where he had hid it. On obtaining it all the plaster was found scraped off. It was also proved that he had made several purchases of the same nature; and an apothecary deposed that one of the plasters sold contained two grammes of cantharidies. The character of Poirier was proved to be extremely bad—a thief, of idle, loafing habits, and a burden to his relatives. His father, aged eighty, had given his property to his son-in-law and daughter, leaving Poirier only an allowance. The jury found him guilty, and he was condemned to death; but scarcely had sentence been pronounced before eleven of the jurymen united in a petition for a commutation of punishment. His apparent idiocy seems to have been the ground for this.—*Gazette des Tribunaux.*

TOPICAL APPLICATION OF SULPHATE OF QUININE.—Dr. Wedderburn, of New Orleans, extols ("New Orleans Medical and Surgical Journal," January and September, 1846) the efficacy of the sulphate of quinine in the treatment of indolent ulcers. He applies it in solution, ten grains to the ounce of water. In a subsequent number (November) of the same journal, Dr. Richard Lee Fearn, of Mobile, states that during the last five years he has frequently treated chronic conjunctivitis, and urethritis, by direct applications of quinine dissolved in distilled water—in the latter cases, believing that the inflammation usually existed to the bladder, he has directed the injection to be thrown into it. He further says that for ten or twelve years he has treated chronic ulcers, especially those resulting from burns, with a preparation of quinine, prepared chalk, and powdered rhubarb, with marked benefit.

CARRAGHEEN MOSS.—Dr. Frank, of Wolfenbuettel, employs a compound powder of Irish moss as an article of diet for phthismatical patients, and for children affected with tabes mesenterica. It is prepared as follows, and has a most agreeable taste:—Take of Carragheen moss, cleaned, ℥ss; spring water, ℥xvi; boil down to one half; strain with expression; and add to the strained liquor, white sugar, ℥iv; gum arabic, in powder, ℥i; and powdered orris-root, ℥ss; heat to dryness with a gentle temperature, stirring constantly, so as to obtain a pulverulent mass, to which three ounces of arrowroot are to be added with trituration. A jelly is prepared with this powder, by rubbing up a teaspoonful of it with a little cold water, and then pouring a cupful of boiling water.—*Journ. de Chemie Med.*, Sept., 1845.

DISSECTION OF THE MAN MONKEY.—We have already stated that Hervio Nano bequeathed his remains to an eminent surgeon for dissection. The *Literary Gazette* gives the following account of the construction and appearance of the body:—"This extraordinary cripple exhibits the very rare combination of perfect symmetry, strength, and beauty, with a great amount of deformity. The head is remarkably fine in form, and the expression intelligent and benign; the chest, shoulders, and arms form a perfect model of strength and beauty; the arms are exceedingly muscular, and the hands very well and strongly formed; when standing, the arms could reach the ground easily, so as to be employed in progression or leaping; in the place of legs, there are two limbs, the left about eighteen inches from the hip to the point of the toes, the right about twenty-four from the same points. The feet are natural. The easiest mode of explaining the nature of these limbs is to say, that it seems as though the thigh-bones and muscles had disappeared, and the knee-joints been raised up to the hips; the bone on the one side is tolerably like a leg-bone, on the other it is compressed into an immensely strong bone of triangular form, with the base upwards, and knit to the hip with very strong ligaments. These limbs are furnished with the muscles which should have belonged to the thigh, and those of the leg are much increased in size; the muscles of the calf being comparatively small, on account probably of his mode of walking, contribute to give the limb the look of a lion's fore-arm. Nearly double power must have been obtained over the feet by this arrangement; and this would account for his extraordinary feats of leaping, such as following a horse at full speed on the hands and feet, and suddenly springing on its back like a monkey, or jumping ten feet in the air. His mode of fighting, too, was most original; he used to spring in the air, and at the same instant deal the most terrific blow upon his unwary antagonist's head, so that he was a very formidable combatant. It is said that in his palmy days, while driving his cab, a clumsy carter drove against him, and, as usual, accused Hervio of being in fault, at which our hero sprang from his seat on to the back of the man, and gave him a most terrible thrashing. His feats of strength in his monkey characters are well known. A very good cast of the entire figure has been made which will doubtless be shown to those who may be curious in such matters."

The number of persons, says the *Temperance Gazette*, who drink to intoxication, in England alone, is not less than one million!

OBITUARY.—On Tuesday week, at Burton, in Kendal, Westmoreland, aged 69, John Armstrong, [illegible] —Feb. 26, at Cahir, of fever, Michael Daniel, Esq., Surgeon to the Fever Hospital and Dispensary.—Feb. 28, of fever, David Smith, M.D., Medical Attendant at the Middleton Fever Hospital and Dispensary.—Lately, at the Grange, Melton, aged 70, Thomas Bland, M.D., a magistrate of the county of Suffolk.—On the 25th of December last, at Mauritius, where he had gone for the benefit of his health, J. F. Waller, Esq., M.D., of the island of Antigua, and late of 28, New Bridge-street, aged 39.—On the 16th ult., at Southampton, at the early age of 28, Julius Veronge, Esq., M.D., Surgeon of the Royal West India Mail packet Dee.—March 19, Dr. A. M'Lachlan, of Oban, Scotland.—March 6, at Limerick, Dr. Martin, 55th Regiment. — March 20, at Newcastle, H. T. Brummell, Esq., Surgeon.—On the 26th ult., at his residence, in Bedford-square, Thomas Wilkinson King, Esq., of Guy's Hospital, Surgeon.—At Milanthort, on the 23rd ult., Dr. Porteous, Surgeon, R.N.—At St. Alban's, on the 30th ult., aged 53, universally esteemed and regretted, John Coales, Esq., Surgeon, one of the magistrates of that borough.—At Tripoli, February 27, John Dickson, Esq., M.D., Surgeon, on the half-pay of the British navy. Dr. Dickson had been resident at Tripoli upwards of thirty years, and such had been the extent of his gratuitous attendance on the indigent, that his decease was looked upon as a great public calamity. His funeral was escorted by a military guard of honour, sent by the Pacha, and attended by the Foreign consuls, by all the European residents of every class, and by several thousands of Jews and Mahomedans.—March 16, at Southampton, aged 28, Julius Veronge, Esq., M.D., Surgeon of one of the Royal West India Mail packets.—March 20, aged 71, Charles Rochement Aikin, Esq., of Bloomsbury-square, a member of the Royal College of Surgeons, and well known for his scientific and practical knowledge of chemistry.—March 26, in Bedford-square, T. Wilkinson King, Esq., Surgeon, Lecturer on Pathological Anatomy, &c., at Guy's Hospital.—On the 11th of January, killed in an encounter with the Caffres, while on detachment from the camp, on the Kee River, Caffreland, Frederick Howell, Esq., Assistant-Surgeon of her Majesty's Rifle Brigade, son of T. Jones Howell, Esq., of Prinknash-park, Gloucestershire.

MORTALITY TABLE.

For the Week ending Saturday, April 10, 1847.

Causes of Death.	Total.	Average of 5 Winters.
ALL CAUSES........	1051	914
SPECIFIED CAUSES...	1049	900
Zymotic (or Epidemic, Endemic, and Contagious) Diseases†	174	106
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	98	99
Diseases of the Brain, Spinal Marrow, Nerves, and Senses................	171	158
Diseases of the Lungs, and of the other Organs of Respiration	344	275
Diseases of the Heart and Blood-vessels..........	47	[illegible]
Diseases of the Stomach, Liver, and other organs of Digestion	87	70
Diseases of the Kidneys, &c.	13	8
Childbirth, Diseases of the Uterus, &c.	[illegible]	10
Rheumatism, Diseases of the Bones, Joints, &c. ...	16	8
Diseases of the Skin, Cellular Tissue, &c.	4	2
Old Age	54	57
Violence, Privation, Cold, and Intemperance........	25	28

No. 395. SUMMARY. April 24.

ORIGINAL LECTURES.



A COURSE OF LECTURES ON SURGERY,

SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London
Consulting Surgeon to London University Hospital, &c.

Lecture II.

It is necessary, gentlemen, that I should recommend to you those works which may serve as text-books to you in your studies. The only book in which true surgery can be learned is the book of Nature; this is always correct. Entire confidence cannot be placed in any written works or lectures, however great may be the science of the writer or lecturer. Each of you must study the diseases and injuries of the human body for yourself, in the wards of our hospital. You will there gain that experience which I dwelt upon in my introductory lecture, and be enabled to compare the lesson you have received, and the information contained in books, with the diseases and injuries themselves.

As any single individual, however diligent, would be unable to gather all the valuable information now in existence by his sole experience, even by the most assiduous attendance on a large hospital during the whole of his professional life; it becomes necessary to examine what the experience of previous observers have accumulated for our instruction. Books have been the means by which this vast storehouse of experience has been raised, and it is from them that you will derive great assistance in perfecting your professional education.

The works on surgery may be divided into two classes—manuals and treatises. The former are intended to place before the student the outlines; the latter to give him an extended view of the science. Information has also been thrown into the alphabetical form of dictionaries, for greater convenience of reference. In the First Lines of the Practice of Surgery, which I have written as an elementary work for students, you will find the outlines of surgery treated in a clear and distinct manner, and adapted for the initiation of the student into the first principles of the science. Although I may run the danger of appearing to boast of my own performances, I shall recommend this work to you for careful perusal; and I am justified in doing so by the approbation of the profession, as shown in the extensive sale of this manual. I cannot too highly estimate the excellent work of my colleague, Mr. Liston, on Operative Surgery, or impress upon you the necessity of an attentive examination of its valuable contents. As a larger work, and one especially designed for reference, you will find "The Dictionary of Surgery" I have written a valuable addition to your library, containing as it does, perhaps, the largest accumulation of the opinions and practice of modern surgeons in existence.

In addition to these works, I must advise you to dip, as much as your time will permit, into the works of earlier observers, of whom I may mention Hunter, Thompson, Sir Astley Cooper, and Lawrence, among our own countrymen; and Dupuytren, Velpeau, and others, among our continental neighbours.

I would further strenuously advise you to peruse the accounts of cases published in the transactions of societies, and medical journals, as they give you a more definite view of the circumstances which arise during the progress of cases which could not be conveniently introduced into general treatises.

Some preliminary matters must be explained before I can enter upon the particular departments of surgery. These general remarks are equally applicable to medicine and surgery, and will be treated of by the professor of medicine in a more extended manner than myself; but still I am compelled to go over the same ground in a more cursory manner, in order to facilitate the comprehension of the doctrines of surgery.

All diseases and injuries of the human body are usually distributed into three great classes: *physical*, *organic*, and *functional*.

Physical injuries and diseases arise from mechanical causes. Most of these are caused by external bodies, but some depend on the abnormal actions of parts within the body. Among the former are wounds produced by cutting, piercing, or contusing weapons: fractures from blows, falls, or the forcible elongation of the bones; dislocations produced by violence of some kind; hernia or protrusions of the bowels by the forcible compression of the diaphragm and abdominal muscles, and deficiency in resistance of the abdominal walls. Some of these injuries may be produced by violent actions of the body itself, without the interference of an external agent. Thus, fractures may be produced by violent muscular contractions, or the muscles or their tendons may be lacerated from the same cause; but it is truly of little importance whether the cause of these injuries be external or internal: the effect remains the same.

The lodgement of extraneous bodies within the body is another form of mechanical or physical injury. It is of no great importance whether these are introduced from without, or formed within the organs by the agency of chemical or physical laws. Their presence in either case produces mechanical irritation and functional disturbance of the parts.

These physical injuries are not vital phenomena, since we can produce them with equal facility in the dead subject. They may be said to be generally produced independently of life; the vital operations originating subsequently, for the reparation of the injury sustained by the parts.

Organic diseases consist in changes of the natural structures of organs, or in the production of new substances or tissues bearing no resemblance to the natural texture of the parts; or being in some respects analogous to other tissues or organs. By the expression organic disease, we generally understand, in this country, all diseases of structure; but some of our continental neighbours limit the term to those diseases alone in which the normal structure altogether disappears, and is substituted by new and different tissues.

Mere alterations in colour, size, density, and arrangement of tissues are not sufficient, in the opinion of all pathologists, to constitute an organic disease. The changes in structure which constitute organic disease are dependent on the perverted action of the capillary vessels, whose office it is to form the tissues; but we are entirely ignorant why one rather than another of these changes should be produced. We are in the dark as to why tubercle encephaloid, cancer, or melanosis, should be formed, rather than some other modification of organic disease.

From the nature of organic disease, as I have now explained it, you will readily perceive that one great character of it is its incurability whenever it attacks a vital organ, or the circumstances are such that it cannot be removed by the knife.

Organic disease may either exist in an organ without total destruction of its natural tissues, as when scirrhus is produced in the cellular tissue of the mamma, leaving portions of the gland in a natural state; where it is an adventitious production, entirely independent of the gland; or it may attack the gland itself, which is then completely changed in its nature, and is converted into the tissue of cancer. A more correct explanation of this change would perhaps be, that the deposition of the cancerous structure, and its pressure on the tissue of the gland, had caused the absorption of the natural tissue.

Functional diseases differ from organic, in being attended by no perceptible change in the tissues of the organ: they are simply those that depend on imperfect or irregular performance of one or more of the functions which, in a healthy condition of the body, are performed with freedom and ease. It is true that there is no *visible* change in the size, texture, or position of the organ whose functions are impeded; but we may infer that wherever there is functional disease there is an accompanying change in the structure of the organ, although we are unable to discover its nature.

Every part or organ has its own peculiar duty

to perform; but the performance of this duty is not solely dependent on itself, but partially on other organs with which it is mutually connected. All the organs of our body are thus connected, and sympathize with each other: so that injury or disease of one organ puts the whole machine out of order. If it were not so, one organ might perish without injury to the whole body. Hence, in consequence of this mutual connection of all the organs, the function of each organ must be studied in reference to the whole system of organs in the animal economy.

Certain diseases, then, may arise which are not dependent on injury or disease of the particular organ in which the disease is manifested, but depend on affection of some remote organ. Amaurosis, or loss of sensibility of the nerves, occasionally arises from worms in the alimentary canal, or some other gastric disorder, and is removed by treatment directed to those particular states. Convulsions, as is well known, often depend on intestinal irritation, worms, or tension of the gums. Syncope may be produced by powerful odours. These are examples of functional diseases. As these diseases are dependent on mere derangement of function, or, at most, on some trivial change of the organs, they are for the most part as curable as the organic diseases are incurable.

The causes of disease are usually arranged into *proximate* and *remote*, and remote causes are divided into *predisposing* and *exciting*. The proximate cause of disease has given rise to much discussion; but, after all that has been written on the subject, it really signifies not the cause of the disease, but the changes in the system which constitute the disease. As is often the case, want of precision of meaning may be observed in terms which are in daily use in the profession. It is not uncommon to hear the assemblage of symptoms which show the presence of disease confounded with the diseased action, so that we may take the proximate cause as signifying the state of the system which gives rise to the symptoms.

The true causes of disease are the predisposing and exciting. Predisposing causes are those which place the body in such a condition as to render the person liable to disease on the application of the exciting cause; and the term may be applied with equal correctness to previous states of the system of the individual which act in the same manner.

Certain of these predisposing causes are general, affecting a large number of persons at the same time: as sometimes occurs to all the the inhabitants of a large town, city, or empire; to a large body of men crowded together in barracks or hospitals, and preparing the way for diseases of a similar or analogous nature in the individuals attacked.

Peculiarities of parentage, sex, constitution, habits, profession, age, and condition in life are individual predisposing causes. The transmission of disease from parent to child has been a fruitful source of dispute: because healthy parents have often brought forth unhealthy children, while diseased parents have, on the other hand, produced healthy children. Yet there can be no rational doubt that predisposition to particular diseases is transmitted in this way, although a part, or even the whole, of the progeny may escape the disease peculiar to the family. In the majority of cases, however, the rule holds good that predisposition to disease or constitutional peculiarity is transmitted by descent. Sometimes these hereditary diseases disappear in one generation to reappear in the next. Some diseases—scrofula, phthisis, gout, stone, and deformities—are notoriously frequent in particular families.

The different stages of life, childhood, youth, manhood, and old age, act as predisposing causes to particular diseases. Disease may appear at any period of life, from the earliest infancy to extreme old age; but each age has its disposition to certain diseases which are sometimes almost confined to particular periods of life, or show themselves more frequently in these than other stages of existence. Thus congenital hernia, spina bifida, nævi, or harelip accompany the child into the world. Until the seventh year, children are more liable to rickets, croup, scrofula, prolapsus of the rectum, worms, incontinence of urine, ..., porrigo, and other affections connected with dentition. About the period of puberty we observe inflammations of the chest, phthisis, hæmoptysis; and in females all the disorders that accompany the commencement of menstruation. Middle age is characterized by tendency to abdominal affections: hemorrhoids, cancer, and other organic diseases, make their appearance. In old age, apoplexy, palsy, ramollissement of the brain, mental decay, calculus, deafness, cataract, sphacelus, prostatic disease, and other affections of the urinary passages.

Sex predisposes to peculiar diseases, partly dependent on the diversity of organs of the two sexes, and partly on the difference of general habit of body. Both sexes are liable to most diseases; but, from difference of habits and occupations, men are more exposed to wounds and fractures, contusions and dislocations; from the length and narrowness of the urinary passage, stone in the bladder and retention of urine are much more frequent; they suffer more, also, from rheumatism and gout. Cancer, bronchocele, and an infinity of nervous disorders are more common among women. Inguinal herniæ occur most frequently with men, while women are more commonly the subjects of umbilical and femoral hernia. Those diseases which affect the organs of generation are, as a matter of course, peculiar to the sex: thus, men suffer from hydrocele, sarcocele, varicocele, and orchitis: while cancer, prolapsus uteri, diseases of the breast, ovarian dropsy, and others, belong exclusively to the females.

The structure, uses, and situation of individual parts of the body exert an influence as predisposing causes. The lower extremities are thus much more subject to varicose veins, ulcers, and fractures, than the upper. The imperfect ossification of the bones of children permits the separation of the epiphyses—an accident which could not occur in adult age. Weakness of certain parts of the abdominal walls gives a tendency to hernia. Cancer frequently commences in the skin, mucous membranes, and glandular structures. Caries attacks the short and spongy, while necrosis makes its appearance in the long and solid, bones.

The distended or empty state of the hollow organs, as the bowels and bladder, makes a great difference in the chance of laceration of these organs. Falls or blows, when the bladder is much distended, are apt to burst that organ, as you see in these specimens of laceration of the bladder taken from our museum. Such lacerations of the bladder are inevitably followed by fatal peritonitis, gangrene, and death, produced by the effusion of urine into the cavity of the peritoneum.

Trades and professions exercise considerable influence on the health of parties who follow them. Coachmen, postillions, and others, who almost live on horseback, very commonly present themselves with aneurism of the popliteal artery, herniæ, and diseases of the testicle. Those whose occupation keeps them in a standing position are very liable to varicose veins and ulcers of the legs. Chimney-sweepers, again, are almost the only persons attacked with cancer of the scrotum, which here is produced by the constant irritation arising from accumulation of soot in its rugæ. Painters are liable to a peculiar kind of colic, induced by the absorption of lead into the system, and to paralysis of the hands, arising from the same cause. Sedentary occupations induce disorders of the digestive system, obstinate constipation, hemorrhoids, apoplexy, and various nervous affections.

Station of life, again, exercises a powerful influence on disease. The difference of habits, of diet, and even of education, will account for the differences of disease with which each class is affected. Wounds, sprains, dislocations, fractures, scrofula, itch, and other cutaneous diseases, are proportionally more frequent among the poorer classes. Although the poor suffer much from rheumatism, they escape gout—the disease of the rich, indolent, and highly-fed classes of society.

Pregnancy, although it sometimes depends on the progress of disease, as exemplified in phthisis, often predisposes to other affections, such as hemorrhoids and varicose veins. It has been stated that fractures do not unite well during this state; but I once attended a woman who broke her leg while pregnant, in whom the bones united as usual in five or six weeks. Impropriety, excess or deficiency of food, insufficient clothing, and intemperance, are powerful predisposing causes of disease. I might enlarge much on these matters, and show the effect of overfeeding, sloth, and consequent plethora, in producing inflammatory affections; but I must now pass on to the examination of existing causes, which are divided into *common* and *specific*. The common exciting causes of disease may be either diffused through the atmosphere, applied to the surface of the body, or, again, introduced into the cavities or tissues. The discussion of those states of the atmosphere which produce disease is rather medical than surgical, and belongs more properly to a course of lectures on medicine. The causes immediately applied to the body are abundant in surgery. Such are the causes of wounds, stabs, lacerations, or gunshot injuries; all derangements of texture, situation, or figure of organs produced by violence; inflammation, ulceration, and mortification, produced by pressure, and also the action of chemical substances on the body. The venomous bites of serpents and other animals, in which, at the same time the wound is given by the tooth, a venomous matter is introduced into it. Disease, again, may be induced by substances introduced into the cavities of the body, as in cases of poisoning, foreign bodies lodged under the eyelids, in the auditory passage, larynx, or œsophagus.

The retention of matters which are naturally expelled from the body is another source of disease. Retention of urine sometimes produces paralysis, inflammation or rupture of the bladder. Retention of fæcal matters in the colon and rectum may give rise to fever, inflammation, distention, vomiting, and other unpleasant effects. Retention of the menstrual secretion in the uterus causes painful distention of that organ, and great disturbance of the general health.

One disease is not unfrequently the exciting cause of another. Ruptures and wounds of the stomach, intestines, and bladder, permit their contents to flow into the general cavity of the abdomen, and excite fatal inflammation of the peritoneum. The presence of an aneurism may cause absorption of bone, atrophy, and disorganization of muscles, obliteration of large veins, and change of structure in nerves. Strong muscular exertion often gives rise to hernia, prolapsus uteri, and even rupture of blood-vessels. Emphysema of the lungs may be produced in like manner by rupture of the cells of that organ. Occasionally the violent and irregular action of a muscle will tear some of its own fibres, rupture tendons, or even fracture bones.

A COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the Theatre of Queen's College, Birmingham.

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Recapitulation of the leading facts concerning the fever of 1846; type of acute diseases varying with locality and state of health of the individuals attacked; illustrations; effects of bad air in acute diseases; summary of the process of respiration; Blackhole at Calcutta; another case in our own country; minor examples; deleterious effects of

constantly breathing an impure air; ... of ... from

... of ... deleterious effects upon the living system; examples; value of personal and domestic cleanliness both in health and disease.

GENTLEMEN,—I have now said all I have to say, *in detail*, concerning the typhoid fever of 1846, as it affected this town and neighbourhood; but before dismissing the subject, let me call your attention to a few general facts bearing upon it, which appear to me to be worthy of consideration.

I have already told you that this fever seemed to be little affected by, or dependent for its rise and ravages upon, local circumstances. Two of the worst cases of it which I saw were, respectively, in William street, near the Five ways, and in Frederick-street, Harper's-hill—situations as elevated, open, well ventilated, and drained, as most in Birmingham. Though the lower parts of the town suffered severely, and perhaps more so than those better situated, yet the latter were not exempt from the visitations of the malady, which seemed to have little choice in its progress, and to find a locality and a victim indiscriminately and anywhere.

This peculiar feature in the origin and spread of the fever I speak of—a feature I never witnessed in any epidemic or endemic disease before—I can only account for by supposing that its advent and extension were due to some *general* cause or causes—atmospheric or telluric, or both. This seems to me to be the only opinion consistent with the history and particular manifestations of the ailment; and it further harmonizes with a probable explanation of certain phenomena for which both the animal and vegetable world were remarkable during the summer and autumn of last year.

My object in recapitulating this part of a subject upon which I have already dwelt more fully than I had intended is, lest what I have stated as a curious *exception* in the natural history of fever and of most acute ailments should by any of you be construed into a *rule*. The rule in the general spread of maladies is, that they will most incline to, and most devastate, the low, damp, dirty situations where poverty and wretchedness reside. I am the more desirous not to be misunderstood upon this subject because it is one to which I have for some years past paid considerable attention—one which I think it imperatively concerns every medical practitioner to make a part of his every-day study, and one which each of you will, or at least *ought*, hereafter to regard with an anxious interest. Moreover, it is intimately related to the great question of health of towns, which, as you know, is now prominently before the Legislature and the public, with every probability (so let us hope) of being determined consistently with the purposes of civiliz. tion and science.

Acute diseases, with very rare exceptions, as I have told you, either suffer an aggravation or derive some particular type according to the situations where they may prevail, and the previous health of the individuals whom they may attack. Of fever, for example, we have a great many varieties, but it is probable that they are all reducible to a single *radical* whose variations are the offspring of contingencies of person or locality. Thus, a robust individual, inhabiting a healthy elevated district, it attacked with fever, would probably exhibit this in its simplest type; if he lived in an open marshy situation, it would be likely to appear in an *intermittent* form; if this situation were in a hot country, in a *remittent* form; had he just arrived, or been long a resident, or his health previously shaken in any way, the function of the liver would contribute a character to the general ailment, which might thus occur as *yellow fever*; were his digestive organs in a state of derangement at the time of the advent of the fever, this would be likely to appear as the variety called *gastric*; were he in indigent circumstances, and the inhabitant of a low, damp, ill-ventilated spot, the *typhoid* type would be the probable one; were he simply in a state of debility, without his system being depraved, at the period of seizure, *nervous* fever would be pretty sure to be his.

Of the many circumstances which contribute to retard the progress of cure in acute diseases, or to change the character of them, bad air and uncleanliness are perhaps the most prominent. The respiratory function, you know, is of cardinal importance in maintaining the health and strength of the living frame. If this function be impaired, either from defect in the apparatus performing it, or from the *medium* of respiration being insufficiently pure, debility and disease follow as a matter of course. To give you, summarily, an idea of the importance of the respiratory process, and of the requirements thereof, it has been ingeniously calculated, that in every twenty-four hours' breathing, by a man of average age and stature, twenty-four hogsheads of blood are acted upon by fifty-seven hogsheads of air—upwards of eleven hogsheads of oxygen being converted into carbonic acid. This is supposing the atmosphere respired to be of a healthy quality. If this ratio be deviated from, *cœteris paribus*, the living system suffers proportionately. If the supply of air be considerably less than that needed, suffocation sooner or later occurs. The history of the catastrophe at the Blackhole of Calcutta, in 1756, is a pitiable illustration in point. Into this den, eighteen feet square, and furnished with two small windows *on the same side*, one hundred and forty-six Englishmen were thrust! Most of them became apoplectic in about four hours; at the end of six hours, *ninety-five* were dead; in the morning but twenty-three were found alive; and of this trifling number the majority subsequently died of typhus, engendered by the filthy corrupt air they had breathed.

Later, and in the more civilized country which ourselves inhabit, a miniature example of this ignorance and barbarism occurred. A set of drunken constables, according to Walpol amused themselves by capturing all comers i their way, and depositing them in St. Martin's roundhouse. About five-and-twenty persons were thus disposed of for the night, in a small apartment that was denied ventilation either by door or window. The next morning four were found dead; two died shortly afterwards; and twelve were severe sufferers long subsequently.

Respiration, you know, not only takes away the oxygen of the atmosphere, but supplies its place by a corresponding quantity of carbonic acid. Whenever this reaches 10 per cent., the air becomes absolutely unfit to breathe. In such a medium an individual would shortly suffocate. It was thus that death was produced in the instances I have quoted. A milder deterioration, but still a mischievous one, occurs whenever crowds of people meet together, in ordinary, in a space too limited, or ill ventilated. Most of you must remember the oppressive headache, the languor, and stupidity that have followed a long incarceration in a crowded public room, the doors and windows of which (as is customary in these cases) were closely shut. And some of you, I have no doubt, have curiously remarked, on occasions like these, how dimly the lamps burnt at the close of the evening, in comparison with their brilliancy at its commencement. Carbonic acid, the produce of respiration, added to exhalation from the surface of the body, was the cause of all this. Now, you can easily imagine, from a knowledge of the effects thus suddenly produced by confinement in impure air, how mischievous must be the constant respiration of an atmosphere below the standard of wholesomeness. It is not possible, but that deteriorated health, or disease, must result from it. Let me give you an example or two.

It was stated at the Medical Section of the British Association in 1834, by the registrar of the Lying-in Hospital of Dublin, that in 1781, owing to the impurity of the air in the wards, every sixth child died within nine days after birth of convulsions; and that, after complete ventilation had been secured, the mortality of the infants in the five following years was reduced to one in twenty.

In the second volume* of the Poor-law Reports, it appears that in 1836-37, some important disclosures were made concernir g the deteriorated health of children in large day-schools. In one case, after the establishment of suitable ventilation, not less than 1100 children were kept in constant good health, where previously 700 were weakly or sickly.

In Glasgow there is attached to one of the factories an assemblage of buildings for the work-people, called, from its construction, "the barracks." Some time ago this place contained 500 persons: every room contained a family. This crowded state, and the consequent deterioration of the atmosphere, were productive of a typhoid form of fever, of which, in fact, the place was never entirely free. Still the deluded people could not be persuaded to open their doors and windows to secure ventilation. At last, however, they were prevailed upon to allow a tin tube of two inches diameter to be fixed into the ceiling of each room. These several tubes communicated with a general one, and this with the chimney of the factory furnace. In this manner a constant current of air was secured, and the result was, that during the ensuing eight years fever was scarcely known in the place.

One cause of the unhealthiness of Liverpool, in comparison with most other large towns, is the impure air which many of its inhabitants breathe, owing to the small space allotted to each individual. Its condition at this moment, as you know, is frightful from this cause; but, even with its average number of inhabitants, its provisions for the entertainment of the poorer of them are very wretched. At a round guess, every individual vitiates, or renders unfit for respiration, in the course of a night, 300 cubic feet of atmospheric air; yet it is not uncommon in the cellars in Liverpool to find thirty people huddled together in an apartment whose contents, in cubic feet, are only 2000! Can we wonder that, in places like these, fever, in its worst forms, thins the wretched inhabitants? In the best-regulated prisons 1000 cubic feet are allowed to each prisoner, not less than this being considered necessary to the maintenance of his health and strength. In a confined court, in Crosbie-street, Liverpool, two or three years ago, there were 118 people living on an area of 150 square yards—about one square yard and a quarter to each! At the time I speak of, fifty cases of fever (*nearly one half the inhabitants*), besides other ailments, were attended in this place by the dispensary. Liverpool, as you know, is one of the unhealthiest towns in the kingdom, and Birmingham one of the most healthy; for this difference many reasons are to be assigned, but certainly one of the chief of them is the fact that, in the former place, there are 100,000 inhabitants to the square mile, and in the latter only 33,000.

The history of the hospitals of this kingdom is full of instructive truths that relate to this important subject. Numberless are the instances in which fever has been the issue of crowding patients too closely. An eminent surgeon, the late Mr. Pearson, when attached to the Lock Hospital, London, uniformly observed that fever prevailed in the establishment when more than a certain number of patients were placed in any of the wards. Repeated observations of this kind induced him afterwards to limit the number of beds in each ward, and the consequence was, a complete absence of fever from the place.

It has frequently occurred to me, in the discharge of my dispensary duties, to remark how much more common, and more difficult of cure, is fever in the lower and more confined parts of the town, than in those better situated. Many times, when the opportunity has been afforded me of having a patient removed from the one site to the other, this has been done, and very little further treatment has then been necessary. This not only applies to fever patients, but to

others suffering from various affections, both acute and chronic. And old dispensary patient of mine inhabits a small house in Bromsgrove-street, and, assisted by her daughter, keeps a day school. I have seen in her room, certainly not more than twelve feet square, upwards of thirty little urchins perched together. The odour has often been stifling at the moment of entry. The old lady, unlike her daughter, takes little or no exercise out of school hours, and is therefore subject to frequent attacks of dyspepsia. In many of these I have attended her, and, contrary to the general rule of practice, have always been most successful when keeping her in bed—that is, keeping her in a better atmosphere than that of the crowded schoolroom.

You remember what a severe accession of febrile symptoms, with hemoptysis, the consumptive patient Clays had in the hospital, when two extra patients were admitted to the small ward he tenanted; and how much he rallied when removed into another room that was better ventilated. Jones, again, the boy with *diabetes mellitus*, had progressed satisfactorily for eight weeks in the top front ward; but, in consequence of the demands upon our space, we were compelled to put three more beds into that room; and the resulting vitiation of the air so affected the lad that he has never rallied since.

Even the inferior animals suffer to a great extent from being confined in impure air. *Anatomically*, there is no appreciable difference between a tame rabbit and a wild one; but *physiologically*, the difference is very remarkable. All this depends upon the relative air they breathe. Let the former be turned into an open country, and he will soon acquire fleetness and florid muscles, and lose all the characteristics of confinement; let the latter be pent up in a noisome atmosphere, and his eye will become languid and watery, his muscles flabby and pale, and his abdomen tumid: if he do not speedily die, he will degenerate and become scrofulous. I have never yet met with evidence of tuberculescence in a wild rabbit; and I have seldom seen a tame one without it. Cows that are closely confined in ill-ventilated places frequently die consumptive. Those belonging to the milkmen of Paris used to be thus destroyed in great numbers. Since their habitations have been made larger and more lofty, the mortality has proportionately decreased. Horses suffer less from the limitation of their stables, because they are generally out with them in the daytime; but the discovery was not long ago made, that some of the cavalry barracks in this kingdom were too small and too imperfectly ventilated for the number of horses kept in them; and thus was a strange mortality amongst the horses accounted for. It is said that by an improved mode of ventilation of the barracks in the metropolis a saving of several thousand pounds yearly has been effected.

When the atmosphere becomes rendered impure by the exhalations of decomposing animal or vegetable matters, it is absolutely unfit for the purposes of respiration. It becomes deadly, in fact, in proportion to the taint it may have received. The instances [illegible] of death being instantly produced by exposure to certain effluvia of de[illegible]. Nightmen have often thus fallen victims to their unenviable calling. Not many years ago, twenty-three children belonging to a boarding-school at Clapham were simultaneously attacked with excessive vomiting and purging, convulsions, and prostration of strength. Two of them died in twenty-four hours. These sufferings arose from the poor children having been exposed to the effluvia of the contents of a [illegible]spit which had been emptied into their playground. It is calculated that in the island of St. Kil[da] [illegible] out of every ten children die between the eighth [illegible] days of their existence, yet the air and water of the island are [illegible]. The only explanation of the prodig[ious m]ortality rests with the filth amidst which the inhabitants [illegible] and the noxious effluvia that pervade their houses, the floors of which they generally contrive to cover, during the winter, to the depth of several feet with accumulated stores of manure.

When the exhalations of decomposition are not potent enough to produce death in a direct manner, they may yet produce it indirectly by generating disease, or by encouraging the generation of it. It is thus that fevers spontaneously arise, and that epidemic diseases find a "local habitation and a name." When the cholera was prevalent at Nottingham it was confined to a few streets, and those the lowest, least ventilated, and most filthy in the town. The better parts were untouched by the malady. In the village of Bulwell (where I was born), four miles from Nottingham, the cholera raged awfully over a certain spot of ground. This melancholy spot, one hundred yards long by fifty broad, lost one hundred and twenty residents in less than a month! The tenements were small, ill-ventilated, and damp, and there was scarcely one that had not its own manure-heap before its own door.

The village of Basford, two miles nearer Nottingham, suffered almost as severely in those parts of it that were exposed to the filthy exhalations from open sewers, pigsties and other accumulations of dirt and decomposition. The village of Hyson Green, a mile still nearer Nottingham, scarcely registered a case of cholera. It is situated higher than the other two, has a more permeable soil, and its inhabitants are, for the most part, cleanly in their persons and homes.

Fever, of the typhoid type, is the most common consequence of exposure to the noxious exhalations of dying or dead bodies. The "Black Assize" at Oxford, in 1577, is a sad illustration in proof. The lord chief baron, the sheriff, and about 300 others, who were in court, were infected by the stench from the prisoners (most of whom were in a horrible condition), and the majority *died within forty hours*, of a disease resembling typhus. The Old Bailey session of May, 1750, is memorable from the fact, that most of those who sat on a particular side of the court (the lord mayor, two judges, and an alderman, were amongst the number) breathed the emanations from the bodies of the filthy prisoners, and most of them fell victims to typhus.

Wherever the effluvia of decomposition are found, there also will fever of the typhoid or typhus variety be a likely resident. Those of you who have visited patients in the Jukleys, in Park-street, John-street, and other localities of this town, in which ventilation and drainage and domestic cleanliness are not conspicuous, can subscribe to the truth of what I say. Even in a situation otherwise healthy, the temporary deposit of filth has often a very marked effect. I was attending a patient for simple fever in a comparatively healthy part of Birmingham. Just as he was verging upon convalescence, a quantity of animal manure of an offensive kind was deposited in a yard close under his bedroom window. *In less than twenty-four hours he was the subject of typhus.* You remember a similar case under my care at the hospital acquiring a typhoid character directly that the next bed to hers became tenanted by a patient with a large sloughing offensive sore.

Did time permit, gentlemen, I could add to these examples very many more. It is not necessary, however, that I should do so, for you must understand the motive with which I have detailed those already given. They carry their own comment. My wish is to convince you how necessary to the maintenance of health, and to the recovery of it, are cleanliness and pure air.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), M.R.S., P[hysici]an to the Royal Infirmary for Children, &c. &c.

(Continued from p. 128.)

GENTLEMEN, Having said thus much, generally, on the subject of scrofula, I shall now draw your attention more particularly to the nature and character of those morbid actions which are usually considered as scrofulous diseases. You will remember that I stated, that before a person can be said to labour under such affections, he must evince a morbid action going on in his body, either to be reckoned as a form or degree of inflammation and its results, such as exudation, suppuration, or ulceration, or else as a form of true tuberculous disorder. I also remarked, you will recollect, that he may in many cases exhibit the *twofold signs* of this important malady, scrofula. For the sake of clearness, and what I consider of practical utility, I shall draw a line between these two great forms or exemplifications of scrofula, although, as you now know, there exist practitioners who believe that the peculiar deposit called *tubercle* is *always* present somewhere or other in that body which is yielding to the ravages of the great disorder.

It may be very true that both in the *lymphatic glands* and *bones*, and even in *favus*, a deposit of a peculiar character—by some thought to be exactly analogous to true tubercle, by others called "scrofulous," "cheesy," or "lardaceous matter," and supposed to be somewhat different from it—takes place, sometimes before, sometimes after, inflammation has existed; yet I am equally certain that inflammation of a scrofulous character may go on in these and other structures, and yet not be either preceded or followed by "tuberculous," "lardaceous," or cheesy deposit. Now, without referring to the marks of scrofulous inflammation as it evinces itself in any special form of malady, I shall give you its general characters, deduced from several. You will find, however, that scrofulous inflammation and its results present the same characters, in most respects, wherever they may happen to be seated, although, of course, they are particularly easily recognizable when they are seated near the superficial parts of the body: for here you can follow their whole course and progress, and you will soon discover how this specific form of inflammation is to be known from that which is generally understood by common, healthy, or phlegmanous inflammation, from rheumatic and gouty, erythematic and syphilitic, states of hyperemia.

Now, I will just call to your mind the great signs of inflammation, as given amongst the aphorisms of the schools—*heat*, *swelling*, *redness*, and *pain*. Of course you know as well as I do, that, in many healthy or common forms of inflammation, one or other of these signs may be wanting; but in the scrofulous inflammation, marked alterations of every one generally exist. Of course it is in inflammation of the surfaces that these signs of healthy inflammation are best seen; and it necessarily follows that we best find these variations in scrofulous inflammations when it occurs in like situations. The more *acute* the common inflammation, the greater are the heat, the redness, and the pain; the more chronic, as a general rule, these things are less forcible. Now, scrofulous inflammation is generally of a subacute character, or often chronic, and very slow in its progress to any given result. It is true, we may have it of a pretty acute character; but the general rule is, mind, it is not so rapid in its progress, is less active in all respects, than inflammation of another form; and, further still, is far less amenable to the usual forms of treatment. As you would expect, then, the heat and pain are not so considerable, and change of colour does not so readily or early occur, as in other cases; and, when the latter ensues, it is not of the bright red *arterial* hue generally observed: it is often of a dusky venous hue, sometimes even livid. With regard to the *swelling*, however, that is very different: it is constantly greater than in common healthy inflammation; and, what is more, the bulk of the part often becomes materially increased in size before the patient complains of anything else; and, even then, he often only complains of this from the mere mechanical inconvenience. When a gland is affected, it often becomes enormously swollen, and even of a stony hardness; and thus it will

remain for a long time—the surface quite void of inflammatory colour, and no appreciable heat present. What is worthy of notice is, also, that in certain cases, where great increase of bulk takes place in an organ, there does not appear to be that hindrance to the performance of function which you might have expected would result. In many of these cases, also, you have the greatest difficulty either to retard or to forward any future progress: they remain as sluggish as ever, in spite of all you can do.

Although there is this sluggishness of action about scrofulous inflammation, yet, expose a scrofulous person to the common exciting causes of this morbid action of the capillaries, and he more readily yields to them than another constitution does—sluggish as the result truly is, and of course varying in degree according to the tissue or organ which may happen to be attacked.

When suppuration ensues, the pus does not readily and quickly make its way to the surface; and when it does, you do not find it *pointing* in that manner which you see in common inflammation: the skin, however, becomes much disorganized and detached, and yet only a small opening allows the pus its exit. Often, again, the matter formed never comes to the surface at all by its own free will, as it were, but burrows down and around, often making its way into very important cavities and structures; or, on the converse, it may make its way at the surface by several narrow fistulous openings, formed for the purpose, or the result of old scrofulous sores. There is another point, in connection with suppuration, I must speak of, which is, that the matter which forms, and the discharge which results, differ from like points observed in common inflammation. Of course they will vary according to the degree of acuteness or sluggishness of the inflammatory action: the more chronic this is, the more will they differ from those of the common form. In point of consistency, the effusion will vary from thin serum to that of concrete pus: the former may be seen coming from a chronically inflamed gland; the latter observed in the meninges at the base of the brain, in certain very important affections of children. I do not pretend to enter upon the chemical and microscopic differences of the scrofulous discharge and effusions seen to exist, from those observed in other instances: you will find plenty of information on this point in the various late works on animal chemistry; but I must inform you, nevertheless, that I believe no *specific* composition can be assigned to them, nor any constant, unvarying characteristics. Sometimes the discharge is very like common purulent matter, in which, however, the pus globules will become fewer and fewer, and the effusion gradually more and more watery; or in the transition you will find small thin flakes of aplastic albuminous material, or a curdy, cheesy, or lardaceous substance, or tuburculous matter. Let a scrofulous abscess be opened which has been attended with inflammatory action of *acute* character, and you may have very nearly *laudable* pus. This abscess, instead of filling up, will discharge a thin serous fluid, charged with albuminous flakes or curdy matter; but if the inflammatory action has been chronic, very sluggish from the beginning, the primary effusions at once partake of the latter character.

The ulceration which so generally succeeds to suppuration is, like the previous action, slow, sluggish, languid, and inactive. The disposition to heal is but little, and constantly thwarted by the tendency to the formation of nasty fistulous sores. The very appearance of the "wound" is bad; it does not look as if it had the least intention of becoming healed; and thus it will often remain for a long while with a thin ichorous or sanious discharge. Sometimes, again, when a scrofulous ulcer heals, the surface of it at once betrays its unhealthy character, and it looks as if it was always ready—and it really is in many cases—to break out again on the supervention of the least amount of exciting cause. The skin retains an unhealthy redness or blueishness: it looks as if it had been forcibly stretched over the surface of the sore and compelled to unite with it against its will; there is a puckering of it; a marking of its surface by radiating lines and striæ, and in point of texture it looks weak and thin. Upon some slight disturbing cause, either locally or constitutionally applied, the cutaneous covering again ulcerates, and once more gives forth its thin unhealthy discharge. From this reiterated ulceration and peculiar puckering of the integument of the sores, when they do heal, you sometimes find the greatest deformity, especially when the face is the seat of the disease; and the deformity in extreme cases produces perfect hideousness of appearance. If you will take the trouble to refer to No. 388 of the *Medical Times*, you will find such a picture drawn by Dieffenbach that will make you shudder.

Now, gentlemen, from the insidious nature of scrofulous inflammation and effusion, it becomes very important that you should always be upon your guard when, in a suspicious-looking child, local indurations or enlargements are seen in or near important parts, such as about the neck, axilla, &c.; since the effusions may burrow amongst important vessels, or press upon the trachea, or do great mischief by infiltration into the cellular tissue. Sometimes very extensive chronic scrofulous inflammation of the cellular tissue, &c., exists, and only betrays its presence by the symptomatic irritation observed in the patient, which latter shows itself by fever of a peculiar form. Very often collections have taken place, and only been known *after* one-half of the effusion has been absorbed from its original place of deposit. In those cases, also, where we have abundant signs of what is going on, from the irritation upon the system induced by the very long-continued action of low scrofulous suppuration, from the absorption of effusions and formation of secondary deposits, from the inability of the assimilating powers to uphold the body during all this wear and tear, *hectic fever* is a common follower in the train. When the joints are involved, this symptomatic fever is seen to its full extent.

There is a very interesting point connected with scrofulous inflammation which I must draw your attention to; it is this—that it may exist to such an extent that its effects shall kill the patient, and yet you shall be scarcely able, from appreciable signs, to say for certain it is going on. This seems to be an extraordinary thing to say; it is true, notwithstanding. The only doubt I feel in saying this, arises from the debatable question, as to whether or not some kinds of effusion, the results of this inflammation, are or are not tuberculous; and hence the cases I allude to should more properly come under the other division which I made; however, I will refer to this point presently. Let me here tell you that inflammation may exist in a scrofulous child, invading the meningeal coverings of the brain, and in whom not a trace of tubercle or granule shall exist in the contents of the cranium. It is true, the readily-identified deposit shall exist in other organs, but not in the brain, and the patient shall die from their effects. In some of these cases, the symptoms of cerebral derangement during life are evident enough; but in others they are so "chronic" or "latent," and present symptoms so very variable and uncertain, that the attendant is surprised when the child suddenly goes off with "brain symptoms" of an acute character, or, on dying from an intercurrent malady, he finds the insidious mischief which has been taking place in the cranial cavity. Now, in very many cases of this peculiar form of meningeal disorder, undoubtedly, after death some tuberculous deposit is found in the brain or on its coverings, and you, perhaps, know how much we are indebted to Dr. Hennis Green for his researches into this peculiar "latent" form of tuberculous disorder. But in other cases we find only concrete pus effused, and no evidence of what I should call tubercle. If, of course, microscopists and chemists could make out this effusion to be tuberculous, these cases would belong to another form of scrofulous disorder; but this has not, to my mind, been done, and I believe them to be examples of scrofulous meningitis, without tuberculous deposit. I shall have, however, to refer again to this interesting subject when I talk to you about "hydrocephalus."

Again, primary chronic scrofulous inflammation may go on in the peritoneum without tuberculous deposit existing in the abdomen, although the latter exists in the lungs. At first the symptoms are often masked or latent, or attention is drawn to an intercurrent malady; but sooner or later the peritoneal affection will be apparent enough.

This scrofulous inflammation, of whose more general characters I have been speaking to you of, may occur almost anywhere, in some one or other of its forms. The skin, glands, and mucous membranes, however, are more frequently attacked by it: and hence you observe so frequently subacute and chronic inflammation of the cervical glands, eczematous affections, and inflammation of the edges of the eyelids, conjunctiva, lining membrane of the nose, and ear-passages, as well as of the organ of generation in the female child. It also attacks the cancellated structure, more particularly of the heads of the large bones, this being the first step in the progress of the affection, known by the name of *scrofulous disease of the joints*. It is not very apt to occur, however, in their shafts, and when it does it is always sooner or later accompanied by a yellow lardaceous deposit. But in all portions of the smaller bones, such as the phalangeal, metatarsal, and metacarpal ones, scrofulous inflammation will occur. It is seen also in the bones of the ear in bad cases of otitis. In some of these latter cases a true scrofulous caries results, or scrofulous necrosis may become engrafted upon the latter when it has attacked the more dense and compact portions of the skeleton. Of the frequency of the bodies of the vertebræ being attacked you are of course sufficiently aware. Articulating cartilage is liable to scrofulous inflammation, as a secondary disorder to the disease, first beginning in the cancellated tissue of the adjacent bone; but whether it is ever *primarily* attacked is a very doubtful point, and it is a point also too surgical for me to attempt to give an opinion upon.

The coverings of the brain, I have already told you, may be the seat of scrofulous inflammation, and this without necessarily being followed by the deposit of granulation of a tuberculous character; and it is probable that there are certain cases of white softening of the central portions of the cerebral substance itself, having scrofulous action as its main cause or foundation.

Whether the *nerves* themselves are ever subject to inflammation of truly scrofulous character, and in children, I am unable to tell you from any experience of my own; but I may remark that I have seen it stated in a German journal that *post-mortem* examinations of tuberculous subjects often show some abnormal appearance of the *sympathetic nerve*, although they may not have died really of the results of tubercle. Sometimes the nerve is found to be stiff and dry; in other cases, again, the ganglia are seen in a condition of gelatinous softening, or with a collection of reddish-coloured serum around the sheath. It has also been affirmed that the *cardiac plexus* has been found changed into hollow cells and tubes, surrounded by a red-coloured exudation.

When scrofulous disease attacks the lungs and air-passages, it is my opinion that it usually does so by first depositing tuberculous matter. Of course a morbid action of the vessels and circulating fluid must precede this deposit, both general and local in its character; but if this morbid action is not to be regarded as inflammation—and I believe in the greater number of cases it is not—why, then, we must regard the tuberculous deposit as the prime feature in the malady. But, notwithstanding this is the general rule, yet there does occur scrofulous inflammation of the lungs, and which may even kill

without there being a single tubercle deposited there. This inflammation may also occur primarily, and be rapidly followed by diffuse deposit of tuberculous matter; and this latter fact is by no means uncommon in children. In the scrofulous inflammation which attacks the lungs, and kills without tubercles being there, the deposit is different from that of common pneumonia: it answers all the same purposes as tubercle it softens, breaks up, and gives rise to excavation. If I were to enlarge, however, upon this point, I should get beyond children as patients; as also, were I to talk to you of the inflammation of the upper air-passages which supervenes in adults upon the scrofulous disorder going on in the lower portions of the respiratory apparatus. You know, perhaps, that in children scrofulous disease of the latter does not *usually* go on to such an extent as it does in more aged persons. The scrofulous disorder of the lungs is more frequently complicated with other severe disorders, under which the child sinks before the mere lung affection proceeds itself to the extent necessary to kill; or the child dies, overwhelmed by the mass of malady its little frame is subjected to, no one *single* form of the disorder being actually the fatal one. It is well known to most medical men, now, that scrofulous inflammation often attacks the peritoneum, although it has been by some wrongly imagined that tuberculous deposits *always* accompany it. This is certainly not the case; however, it is frequently in children met with, in whom no tuberculous deposits exist, although it is very often an intercurrent affection of tuberculous disorder. This subacute or chronic peritonitis, it must be admitted, whenever it occurs, should always render us very suspicious of what may be going on in adjacent and other structures. The mesenteric glands are very liable to be attacked, either primarily or secondarily; and from the frequency of remittent fever in children of the scrofulous diathesis, in which disorder gastric intestinal inflammation is so usual a lesion, I am disposed to believe that the digestive mucous surface is specially amenable to inflammation of the character we are now discussing.

ORIGINAL CONTRIBUTIONS.

OBSERVATIONS ON THE ACTION OF MERCURY IN INFLAMMATION, AND ITS EFFECTS ON THE SYSTEM.

By HENRY SMITH, M.R.C.S.,
Late House-Surgeon to King's College Hospital.

(Continued from page 133.)

Having endeavoured in my last paper to show that mercury acts in inflammation by producing a change in the quality of the blood, I shall now proceed to consider the injurious effects which it produces when it has been given with a view to affect the system; and I shall begin first with excessive salivation. We shall see that in this case, the symptoms are almost entirely referrible to absorption of a poison into the blood.

Now the effects of this powerful medicine are so well known, practitioners are more careful in its administration, and therefore seldom bring on that excessive state of salivation which was deemed to be necessary a few years ago. But, nevertheless, cases do occur where we have an opportunity of studying the bad effects of mercury, and every one who has seen much of hospital and dispensary practice has doubtless seen many severe cases of salivation and its concomitant evils; as that caution which is necessary in the taking of mercury is not, from obvious reasons, so well employed. There are many persons of a peculiar idiosyncrasy who appear to be susceptible of a very small quantity of mercury, and are terribly salivated by the mere administration of one dose, which is given to act as a purgative or alterative.

The symptoms belonging to excessive salivation are general and local. The former consist in great prostration of the strength, a low irritative fever, and extreme rapidity and feebleness of the heart's action; there is also in some cases, but not in all, a marked disturbance of the nervous system. The local symptoms belong to the mouth and face. There is immense swelling of the face and eyelids, so that the features of the person cannot be recognised; the tongue protrudes from the mouth, and there is a profuse flow of saliva, of a horribly fetid smell; scarcely permitting the attendant to approach his patient. Beside these, the gums, tongue, and cheeks ulcerate and slough; the patient is not able to open his mouth, and he is hourly in danger of being suffocated. Hemorrhage sometimes takes place to a great extent, either from the nose or mouth; and, finally, if the case is to terminate fatally, gangrene of the cheeks appears, and spreads rapidly. Many instances of a fatal nature have been related, but fortunately we seldom witness such an occurrence in these days; but I have had the misfortune to witness one case of the kind since I entered upon the study of the medical profession, and although it occurred some years ago, and I have not exact notes of the case, it made so much impression upon me at the time, that I shall be able to give a pretty accurate account of it. In the year 1844, a boy, nine years of age was attacked with dropsy, after scarlet fever; calomel, in moderate doses, with diuretics and diaphoretics, was used, with some slight improvement at first; the symptoms, however, increased, and sudden effusion into the pleura took place. The gentleman who was called to the case saw the danger of speedy suffocation, unless the fluid could be absorbed; he therefore, with this view, prescribed one grain of calomel, every two hours, with great benefit; the effusion gave way rapidly, but, unfortunately, the numerous and frequently repeated doses of calomel produced intense salivation. At this time the boy was left under my charge, in consequence of the absence of his ordinary attendant from town. The symptoms increased. The whole face was enormously swollen, the flow of saliva was profuse, and the fetor in the room was almost insupportable. There was so much inability to move the jaw that, in order to get anything into the stomach, I was obliged to use the handle of a spoon to force open the teeth; and this was accompanied with so much pain that it was quite distressing for me to do it. The mouth was blocked up with a foul viscid fluid, which it was necessary to clear away with the fingers. Ulceration of the gums and cheeks took place, and sloughing followed. There was extreme depression of the vital powers, and the suffering was intense: the poor little lad could only express it by some means, for he could not speak. He remained in this state for several days, and I thought the symptoms appeared to lessen somewhat, when, unfortunately, hemorrhage from the cheek came on twice to a large amount (I suppose from implication of the labial arteries in th sloughing process), and shortly afterwards gangrenous spot appeared on the left cheek, and rapidly increased. The general symptoms were much aggravated, and he rapidly sank. It was the most horrible and distressing case I ever witnessed, and I hope I may never see such again. Everything that could be thought of was done: leeches and fomentations were applied to the jaws; gargles of chloride of soda; alum and other astringents were used; the constitutional powers were supported by bark, ammonia and as much nourishment as could be got down I think he would have recovered had not the sudden hemorrhage, which was to a large amount, taken place: this appeared to me to have been the cause of the gangrene which followed, and which indicated such a disorganization of the blood and the powers of life that recovery could not be looked for. Here there was no peculiarity in the patient, but a large quantity of mercury was thrown into the system, and its effect was enhanced, no doubt, by the blood being already impoverished from the disease of the kidney and it is rather a curious fact, that mercury appears to act with greater energy and do more mischief in those diseases where the blood is drained of its more solid parts. In less formidable cases, even though the symptoms may have been extremely severe, recovery takes place; but the local mischief produces most serious results, and often renders the patient miserable for life. My friend Mr. Druitt has referred me to a case which happened under his own care, and which he published in "The Provincial Journal," vol. ii., p. 428. It is so interesting a case, and so well shows the unfortunate accidents which may take place from excessive salivation, that I shall sketch it for my readers. The patient was a young married lady, whom Mr. Druitt attended with an attack of puerperal convulsions. He prescribed, as a purgative, eight grains of calomel with some jalap; a few hours afterwards her tongue was painful and swollen; next day it increased greatly, and the face began to swell; there was frightful salivation, face and throat were enormously swollen, and the eyelids were perfectly closed by the œdema; the tongue protected from the mouth, and the membrane covering its under surface, and the inner side of the gums and cheeks, sloughed, and the saliva was so profuse that it saturated six dozen napkins in twenty-four hours. In the midst of this misery she was delivered of a child. By great care, however, she rallied, "but" (says Mr. Druitt) "a new misfortune happened. The inside of the cheeks and gums, and the under surface of the tongue, which had sloughed, healed with a dense white cicatrix, which greatly impeded the motion of the tongue in speech and mastication, and prevented the mouth from being opened more than an inch."

This sloughing of the mucous membrane of the mouth, and the subsequent healing and cicatrization of the parts, is a very serious consequence, as it is very difficult to prevent the parts which are in contact from uniting, and thus, adhesion may take place between the membrane lining the cheek and that lining the alveoli of either jaw; or such a firm and contracted cicatrix may take place inside the cheek, that the muscles which move the jaw may become involved, and the powers of motion seriously affected; or the tongue may become adherent to the gums, or to the side of the cheeks. An instance of the latter I am obliged with by Mr. Haynes Walton, who saw the case. The patient was a female who was severely salivated for some venereal complaint; the local symptoms were of a formidable nature. There was such great protrusion of the tongue that it could not be reduced; the membrane lining its inner sides and the corresponding part of the cheek sloughed; firm adhesions took place, and after the salivation had subsided, her tongue remained protruding and united with the cheek, so that it was necessary to perform an operation, which finally succeeded in restoring the tongue to its proper situation.

Cases are frequently seen in which salivation has been carried to an unnecessary extent, and very uncomfortable, but not injurious, results have followed. The symptoms, although of somewhat the same character, do not run on to such a formidable extent. There is great swelling of the face, soreness of the mouth and throat, so that the patient is not able to swallow the blandest fluid; there is a great flow of saliva, but ulceration and sloughing do not take place as in the more severe cases; nevertheless the patient suffers extreme distress, and sometimes there is considerable prostration of strength, especially when the subject is a female; and I have noticed that women are much more easily affected by mercury, and more frequently exhibit severe cases of salivation, than men.

All these symptoms above mentioned indicate that the chief mischief is acting through the blood, and that the constituents of that fluid are greatly altered in quality. The sloughing and gangrene of the cheeks show an exceedingly altered state of the blood, which produces severe local inflammation and its results. These facts, then, I think go far to prove that this mineral acts by becoming absorbed into the blood, and changing its qualities: for how are we to account

for them? Not surely by its action on the capillaries, nor by its effect on the sympathetic system of nerves.

In the cases which I have been speaking of, nervous symptoms are not particularly noticed; but when mercury has become absorbed through the lungs and skin in large quantities, as happen in artisans working in mercury, we find poisoning by it, accompanied with well-marked nervous symptoms, constituting the disease very aptly called mercurial tremor. Any one who has seen a severe case can judge well of the effects on the nervous system. The incessant trembling of the limbs, and inability to control the muscular movements, the great agitation and depressed state of the mind, all show that the nervous system is severely implicated; and this is easily explained by the fact that all substances which are powerful and poisonous in their action produce a much more severe effect when absorbed by the lungs as vapour, than when taken into the stomach; and this effect is most marked on the nervous system. How quickly do we now see the action of ether produced, when inhaled, and how marked is its influence upon the nervous system! How much more quickly and severely does a person become intoxicated by inhaling the vapour of alcohol, than by merely taking its fluid into the stomach!

I shall now proceed to consider another injurious effect of mercury, which often proves very troublesome and even dangerous to the patient, and perplexing to the practitioner. I mean the violent purging which ensues when mercury is given in moderate doses with a view to its acting specifically on the system. It often takes place even when the mercury has been carefully given and combined with correctives, and it is most frequently noticed to take place when the gums cannot be affected. In fact, it appears as though the mineral was not able to act energetically upon the system at large, and upon the secreting apparatus of the intestines as well: for when salivation is produced, the bowels become constipated and require purgatives, and, on the other hand, when a profuse secretion is taking place from the bowels, no effect on the gums is noticed This fact did not escape the observation of Sydenham, who says—"Non dunquam accidit, quod post unam vel alteram inunctionem. Natura illico per intestina hunc hostem expellere satagat, unde non solum dejectiones mucosæ et tormina ventris, ut in iis quid dysenteria laborant, eveniunt, verum etiam curatio morbi impeditur utpote qui salivationi tantummodo cedere solcat." He then, after recommending some remedies, says—"Diarrhœâ tandem cohibitâ, salivatio debito modo procedere solet, quæ antea vix apparerit."

Sometimes, however, cases are seen where there may be profuse purging, at the same time that there is a specific effect produced on the system, as evidenced by the state of the gums; although, for the most part, if purging is produced early and to any great degree, there will be a great difficulty in affecting the system in a satisfactory manner. This affection of the bowels comes on sometimes quickly and severely, sometimes more gradually. But it is when it comes on very suddenly, after a larger quantity of mercury has been taken, that it proves the most troublesome and dangerous: for that it does prove dangerous, and even leads to a fatal result, I shall presently show; for I shall relate three cases which were under my own care, where a most alarming catharsis was suddenly produced, and, if not the immediate cause of death in one, at least caused a more speedy termination.

The first case was that of a woman, aged thirty-eight, whom I attended for a violent attack of puerperal convulsions, which was followed by most severe uterine inflammation. Bloodletting was employed, and I prescribed calomel, carefully combined with opium, every four hours. She took about ʒij., without any sign of the system being affected; but when she was recovering sensibly from her dangerous attack, a most violent catharsis set in and brought her again into a most alarming condition. The eyes became sunk, the face anxious, and the pulse running on at a most rapid rate, and I was afraid I was about to destroy my patient with the remedy which I had used; but by the speedy administration of opiate enemata, by the use of diffusible stimuli, and by constant watching, she rallied, and ultimately recovered, although her convalescence was long. I fortunately had the advice of my friend Dr. Fincham, of Spring-gardens, to whose attention the salvation of this woman's life was chiefly due. I must confess that at one time I was seriously alarmed for her safety.

About six months after this, Nov. 2, 1844, I was again much alarmed for the safety of my patient, through an occurrence of the same kind, and quite as severe, although the condition of the patient was not so bad as the first when it happened. It happened in a female, aged thirty, whom I attended for a severe attack of acute rheumatism accompanied with symptoms of heart disease There was an unusual state of depression in this case, not generally observable in rheumatism she had a great tendency to faint. Bleeding was not resorted to, but I prescribed calomel, gr. j. Dover's powder, gr. iv. every six hours; on the 3rd it was taken every four hours; on the 4th it was taken every six hours, and the Dover's powder increased to gr. v.; no affection of the mouth at all. In the night of the 5th she was suddenly seized with most violent catharsis which was harassing her all the night, and reduced her to such an extent that delirium came on, and when I was summoned to her I found her in a very low condition, and was obliged to give ammonia and wine, with medicines to check the secretions from the bowels. By care she came round again and soon got well. There was one curious fact I noticed which although foreign to the subject, is worth mentioning. The painful affection of the joints was suddenly removed by the purging; but when this was stopped, and the system had become tranquillized, they returned with great severity again.

In the third case the sudden and severe purging was the cause of death, or at least greatly accelerated the fatal termination. It happened in a fine young unmarried woman, whom I attended for an attack of typhoid puerperal fever, Nov. 1, 1845. The collapse was great, and the uterine inflammation severe. Calomel gr. ij. P. ipec. co. gr. v., was prescribed every three hours, at nine A.M. At eight P.M. I saw her; she was evidently better, and I felt more easy about her; the mercury had not affected the mouth. Nov. 2, I called at eleven, and was sorry to see a great change in my patient; on asking about the cause, I was told that purging had suddenly set in a short time after I had left her the preceding evening, and had harassed her dreadfully all night; but they had not the sense to send for me. I found her in a dreadful condition: collapse had again come on; countenance was anxious; great restlessness; rapid and feeble pulse. The purging was restrained as soon as possible, and stimulants were given; but from this time, although she rallied somewhat, the symptoms were much aggravated; extreme depression came on, and she died in the night of the 4th.

(To be continued.)

ON SOME POINTS CONNECTED WITH DIABETES.

By M. BOUCHARDAT.

Translated for the MEDICAL TIMES by ALFRED MARKWICK, Esq., Surgeon to the Western German Dispensary, and formerly Externe to the Venereal Hospital, Paris, &c.

(Continued from p. 114.)

This case relates to a young lad aged fourteen, who had been suffering from diabetes for more than six months, and who was continually falling away, notwithstanding an enormous appetite, which he satisfied by good food, in which, however, feculents were included. His strength had greatly decreased; and his moral depression was so great that it was found necessary to interrupt his studies.

The first time I saw this young patient, he had eaten the day before with an excellent appetite; feculents formed a portion of every meal, but to what extent was not determined. He passed in twenty-four hours 6·25 litres of very pale urine, of specific gravity 1·040 at + 15°, having to the naked eye a rotation of + 14° in a tube of 303 millimètres, and containing 104·65 grammes of glucose per litre.

This patient was immediately covered in flannel, and the diet I have previously described was rigidly followed. He took from one litre to a litre and a quarter of Bordeaux wine in the twenty-four hours. The urine, when examined eight days afterwards, contained no glucose, and the patient himself regained his strength and flesh so quickly that at the end of two months, his parents believing him cured, sent him back to school. But ordinary diet, into which bread largely enters, was prejudicial to him: the thirst began to return, and his energy diminished. He was again taken from school, and his urine brought to me. It amounted to 2·25 litres in the twenty-four hours, was of a light amber colour, and of specific gravity 1·034; the molecular rotatory power was + 11°.5, in a tube of 303 millimètres; and it contained 82 grammes of glucose per litre.

I did not see this lad afterwards, but I firmly believe that, if the regimen has been properly persevered in, he is completely restored.

In the patient whose history I am about to relate, there are several circumstances similar to those I have mentioned in the foregoing case:—1st, it is that of a young man in whom the disease became manifested while living on ordinary diet; 2ndly, the disease was very severe; all traces of it, however were promptly removed by a proper regimen; 3rdly, a return to the school diet caused the same symptoms to reappear.

This patient had passed twelve months in a school where youths are subjected to great intellectual labour. He became diabetic, but his disease was overlooked; his strength, however, diminished; his intelligence was no longer so active, and, being unable properly to undergo his examinations, he was obliged to renounce his future prospects. It was at this period that I saw him; his disease was very severe, his appetite considerable, and his thirst excessive; his mouth was remarkably dry, and his tongue presented, to a very great extent, the appearance that has been often observed in diabetes, *i. e.*, it was entirely covered with a brownish fur. He passed in the twenty-four hours about seven quarts of a very pale urine of a whey-like odour, and of specific gravity 1·036 at + 15°. When examined in a tube of 306 millimètres the deviation was + 13°.5, and it contained 106 grammes of glucose per quart. Finding that a retired life in Paris was not suited to this patient, I advised him to return home to his parents in the country. I made him thoroughly acquainted with the regimen I recommended, insisted on the use of flannel, and prescribed for him carbonate of ammonia and theriaca. All this was rigidly persevered in, and in three months the change was such, having gained flesh so much, that on his return I was completely astonished.

He adhered strictly to my regimen: feculents formed but a very small part of his food, and there was no glucose in his urine. This case might pass for a complete cure; in fact, the patient gradually took to his former kind of food and regimen. But after a time his strength began to diminish; the thirst reappeared, and with it the glucose in the urine. He again returned to his native country, where he a second time became perfectly restored. Tired of an idle life, he came back to Paris, resumed his occupation, and deviated from his regimen. The symptoms again made their appearance, and on then examining his urine I found them to exercise a deviation of + 9° in a tube of 313 millimètres, and to contain 68 grammes of glucose per litre. The patient again went into the

cou... , and confined himself rigidly to the regimen. Since then I have not heard of him. This case proves that in youth we may hope for a speedy cure, and that unremitting attention is necessary in order not to destroy all the good that may have been done.

The last case I have to relate in this second series refers to a patient who was very severely affected, and on whom the disease had taken so powerful a hold as to lead one to expect a fatal issue; and yet this patient succeeded by uncommon willingness, rare intelligence, and, by daily care, in regaining a state of health which many persons would envy.

He has suffered from the disease, in all probability, for several years, and has at length become considerably emaciated. Formerly he was tolerably stout; but now he is literally skin and bone, and he can scarcely advance a few steps without feeling fatigued. The least labour overcomes him, and he is compelled to abandon the important matters which he directs.

Several methods of treatment having proved unsuccessful, his medical attendant had recourse to the one I have recommended in my "Annuaire." The patient derived considerable benefit from it; but owing either to its not having been strictly attended to, or to being unacquainted with my remarks, and consequently unable to apply them, his condition remained stationary and sufficiently alarming to induce him to come to Paris for my advice.

He was greatly reduced, pale, and remarkably weak; he passed on the 8th of November, 1844, in the twenty-four hours, three quarts of urine of specific gravity 1·040 at + 15°. This urine when examined in a tube of 303 millimètres, exercised a rotation of 11°.5, and contained 82·19 grammes of saccharine matter per litre. I had the common bread immediately replaced by gluten bread, and ordered him a quart to six pints of good Bordeaux wine, to wear flannel, and to take carbonate of ammonia and theriaca. The urine was analysed again on the 15th of November, when the specific gravity was found to be only 1·031, and the rotation to have decreased to 3°.5; the proportion of glucose per litre was now only 31·07 grammes, and the quantity of urine voided in the twenty-four hours but a litre and a quarter. The atmosphere at this period became cold and damp; the patient increased at his meals the amount of feculents; and, under this twofold and baneful influence, the glucose progressively increased in his urine. Thus, on the 21st of November he passed a litre and a half of urine, of specific gravity 1·034, exercising a rotation of + 5°, and consequently containing 38·4 grammes of saccharine matter per litre. On November 27th, the quantity of urine remaining the same, the specific gravity rose to 1·039, the deviation to + 9°.5, which gives the proportion of 71·66 grammes of glucose per litre; on the 3rd of December the specific gravity returned to 1·040, and the deviation was + 8°, which makes 61 grammes of glucose per litre, the quantity voided being two litres. On the 14th, the density and quantity remaining the same, the deviation rose to + 8°.5, which is equal to 66·5 grammes per litre. I ought to mention that, during this period of recrudescence, the carbonate of ammonia had been replaced by bicarbonate of soda, the dose of which had been gradually increased to 30 grammes in the twenty-four hours. Carbonate of ammonia was, therefore, best adapted for this patient, and we, therefore, returned to it. From this time the quantity of urine passed in the twenty-four hours remained nearly stationary until towards the end of the treatment, being about six pints, which but little exceeds that of health; its composition, however, progressively improved, as will be seen. On the 26th of December the density was only 1·036, the rotatory power + 5°.5, and the quantity of glucose had become reduced to 41·7 grammes per litre. On the 2nd of January, 1845, the specific gravity being the same, the deviation decreased to + 5°, and the quantity of saccharine matter to 38 grammes. On the 9th the density was still the same, but the deviation had still diminished to 4°.5, while the proportion of glucose was 35 grammes. On the 18th, no alteration had taken place in the deviation, and consequently in the quantity of glucose, yet the density became increased to 1·038; but on the 25th it descended to 1·030, and the rotation was only 3°, and the urine contained only 23·30 grammes of saccharine matter per litre. We had now arrived, for this period of winter, at the height of the improvement. A slight increase subsequently took place: thus, on the 1st of February, the density rose to 1·034, and the deviation to + 4°. On the 3rd of February we had reached a specific gravity of 1·026, and a deviation of + 6°.5, which makes 50·5 grammes of glucose per litre; still it must be stated that great lowness of spirits coincided with this slight increase in the diabetic symptoms. On the 8th the density returned to 1·032, and the deviation to + 4°; and on the 15th, the density being 1·038, the deviation became 4°.5, which corresponds to about 35 grammes of glucose per litre. Notwithstanding an unfavourable season, this patient continued to proceed towards a complete recovery. His strength, vivacity, and moral energy had gradually returned, but he had not entirely regained his flesh, although there was in this respect likewise considerable improvement. It was decided that this patient should return to the country, and engage himself as much as possible in manual labour, and particularly in gardening, and at the same time recommence his mental occupations. On the 17th of March some of his urine was sent me; the quantity was somewhat less, but the specific gravity was still 1·036, and the deviation + 5°, which is equal to about 38 grammes of glucose per litre. From this time the improvement was tolerably rapid: thus, on the 17th of April, the deviation was only + 2° and the density 1·028, the urine, consequently, containing only 15·5 grammes of saccharine matter per litre. I again analysed the urine four times up to the 2nd of September, and its composition was found to be nearly the same; it diminished but little in quantity, but the general state of the patient continued to improve. At length, on the 7th of September, the last time I examined the urine, the specific gravity was only 1·024, and no deviation could be detected with Biot's apparatus.

The preceding case, in my opinion, is a very remarkable one; it is that of a patient who was as strongly affected with diabetes as it is possible to be: the disease, moreover, was of long standing, and had produced effects which might have been considered as irreparable. But aided as I was by a man who was desirous of getting well, and who, to attain this end, was willing to sacrifice everything—a man of determined will and rare intelligence—I succeeded in effecting an unexpected restoration.

To witness now the activity, the ardour, and the good looks of this patient, one would imagine, as indeed do his relations and his most intimate friends, that he is no longer ill. In one sense, this is true; but, to preserve a good state of health, constant attention and daily care will still be for a long time necessary, and I have the firm conviction that in this M. will not be wanting.

Before concluding this case, I may state that several therapeutic remedies that were recommended, both by the celebrated physicians whom the patient consulted and by myself, were of considerable benefit. Of these I will mention, first, the preparations of iron which were in almost constant use; the wine of bark, which he took for a long time; and calcined magnesia, often prescribed as a laxative when the bowels were at all constipated. I need not allude to the carbonate of ammonia and theriaca as they constitute an essential part of my mode of treatment. The fixed alkalis, as the bicarbonate of soda, proved more injurious than useful.

THIRD SERIES.—CASES OF RECOVERY.

[Our author gives five cases of recovery in females, three of which I subjoin, and states as the result of his experience, that "diabetes is more uncommon in France in females than in men," and that, "when there are no tubercles in the lungs, the cure is more prompt and more easy."]

Madame A., aged sixty-six, was formerly of a strong and robust habit of body, but her strength has gradually diminished, and she has lost flesh considerably. She consulted a skilful physician, who, on examining all the functions, immediately detected the relation that existed between the dry state of the skin, the excess of urine over the quantity of fluid drunk, the intense thirst, and the emaciation rapidly progressing, notwithstanding an enormous appetite and an abundance of food. Madame was sent to me: I examined the urine, of which she passed 5·50 litres in the twenty-four hours; its specific gravity was 1·011, and it exercised a molecular rotatory power of 10·50 in a tube of 308 millimètres, and contained 80 grammes of glucose per litre. I ordered her to wear flannel, and to persevere with the regimen I have already alluded to; which she did. She called on me again at the expiration of eight days; she then passed only a litre and a quarter of urine of specific gravity 1·031, producing a deviation of + 3°.5 in a tube of 303 millimètres, and containing 32·07 grammes of glucose per litre. I then prescribed boluses of carbonate of ammonia and theriaca; the dose of the carbonate being gradually raised to five grammes. At the end of eight days I again analysed the urine, and its density was only 1·023. Optical examination and Frommherz's test proved that it contained no trace of glucose. Fifteen days afterwards I found it to be still absent. Madame had completely regained her strength, and she returned to the use of feculents, although in moderate quantity; and, notwithstanding that, the urine was found to contain no trace of saccharine matter when examined six months afterwards. Madame then indulged to the utmost her taste for feculent food: the consequence—the thirst returned, the urine became more abundant, and the previous symptoms reappeared; but, warned by experience, she had immediate recourse to the former treatment. I analysed the urine a few days afterwards, and found that it had no rotatory power. Since then Madame A. has regained her usual health.

Madame B. is at the head of rather a large establishment, where great activity is required. Although tolerably robust, she was taken suddenly, after suppression of the perspiration, with intense thirst, without any diminution of the appetite. The skin is dry, and the urine so abundant as to attract the attention of both the patient and the physician. It was sent to me to be analysed. It was limpid and pale; had a slight odour of whey, and a specific gravity of 1·041. The quantity in the twenty-four hours amounted to about eight quarts. Examined in a tube of 303 millimètres it had a deviation of 11°, and contained 82·19 grammes of glucose per litre: a very large proportion, considering the amount of urine passed in the twenty-four hours.

Madame B. immediately took to wearing flannel, and likewise to the regimen before described. The urine immediately diminished and became reduced to the normal standard. I examined it six days afterwards. It had then no action on polarized light; did not reduce Frommherz's test, and consequently contained no glucose. I analysed it again at the expiration of eight days, and found it still free from glucose. I have since repeatedly heard of this lady. Her health continues excellent, and she has had no relapse. She uses feculents in moderation. This case is remarkable for the rapidity and the certainty of the cure, although it must be owned the treatment was commenced at the onset of the disease.

Madame C., aged sixty, of a very robust habit, complains of general weakness, of great thirst, and a more abundant excretion of urine than natural. There is no alteration in the appetite. On the 9th of March, 1845, she passed in the twenty-four hours about three quarts of a light amber-coloured urine of specific gravity

1·041; examined in a tube of 303 millimètres, it exercised with the polarizing apparatus a deviation of + 10°, which gives 77·57 grammes of glucose per litre of urine. Madame immediately put on flannel clothing, and 'followed exactly the regimen I have described.' She soon improved; the skin became moist, and the urine normal in quantity; still she persevered in the regimen. On the 26th of March she passed a litre and a half of specific gravity 1·025, having scarcely any action on polarized light, the deviation being barely + 1°: it contained per litre 7·5 grammes of glucose. Madame still continued to rigidly adhere to the regimen which had proved so successful; and on the 5th of May I again examined the urine. The quantity in the twenty-four hours then amounted only to two pints and a half; it was of a dark colour, had a specific gravity of 1·015, but no molecular power, and consequently was free from glucose, which was also proved by Frommherz's test. Madame therefore returned, although to a very moderate extent only, to the use of feculents, taking care, at the same time, to observe every other hygienic rule. When last examined, the urine had a specific gravity of 1·020, and was free from any rotatory power. This may be considered a perfect cure, Madame C.'s health being as good as before the diabetic attack.

M., a physician in the prime of life, and of a strong constitution, having a very extensive country practice, to the laborious duties of which he attends without fatigue. Gradually, however, his strength diminished, and he became emaciated. On examining the state of his functions, he found that he was labouring under diabetes, and he immediately came to consult me. He passed in the twenty-four hours 3·50 litres of urine, of specific gravity 1·037, containing 55 grammes of starch sugar per litre.

M. immediately had recourse to the regimen I prescribed for him, and took care to cover himself with flannel. The urine was examined at the end of two days; it had no power on polarized light, and contained no trace of starch sugar; its specific gravity was 1·030, and its colour and composition were normal. Before M. left Paris I again analysed his urine, and found that the glucose had returned in [illegible] The following is an extract of a letter I received from M. on the 18th of January, 1841:—

"I am happy to inform you that since the 8th of October, the day on which I left Paris, I have not detected a single atom of sugar in my urine, either with the *densimeter* or by mixing and subsequently boiling it with one-third of milk of lime. Once, it gave me 1·030; but when boiled with the milk of lime, it became as clear as when first passed; now, it does not exceed 1·015 to 1·028, neither has it for a long time past. Sometimes when passed immediately after a meal, which is very rare, it has only the density of water, viz., 1·000. Generally speaking, however, it has a well-marked amber colour, an acid reaction, and is small in quantity (from 1·50 to 2 litres in the twenty-four hours). I have wonderfully improved in strength and flesh, and my sight, which had become so weak, is now completely restored. I feel likewise (and it is this which leads me to believe in a cure, if not already effected, at least very near at hand) that internal sensation of health, and that courage which one cannot describe, but which one experiences after having been deprived of them. Thanks then to you, Sir, who have done so much towards combating this, in the opinion of all physicians, fatal disease. Those diabetics whom you have treated, or who have been so by others on your principles, ought to feel themselves, as I do, greatly indebted to you.

"The only addition I have thought proper to make to your treatment has been to conjoin with the total abstinence from feculent food the internal administration of the preparations of iron. Loathing is soon felt when one is deprived of bread; and those preparations, if they have only the advantage of promoting an appetite, appear to me greatly to be recommended. You have doubtless, like myself, tried these remedies, and must have found benefit from their employment.

"In concluding my remarks on the treatment you have prescribed for me, and which has proved so useful in my case, I may state that I intend visiting you as soon as I can, for the purpose of getting you to again analyse my urine with M. Biot's apparatus, by which alone a correct estimate of this fluid can be obtained."

This patient visited me on two occasions, and I always found the urine to be free from starch sugar; notwithstanding, however, it appears, from the examinations he himself continually made, that on one or two occasions, after having taken a rather larger quantity of feculents, glucose appeared in his urine; but it immediately disappeared on again returning to the regimen.

Although for a day or two a few traces of sugar could be detected in the urine, still I consider this a case of complete cure; in fact, if we were to examine our urine daily, with this view, is it not possible that we may occasionally find in it traces of glucose? Our experiments on the digestion of feculent and saccharine matters warrant this supposition; it is therefore a slight and simple aberration of a natural function.

Since M. came under my care he has himself had three others, in which he has tried this mode of treatment; but, like myself, he has obtained different results according to the difference of fortune and intelligence of the patients.

Prout, who is a very great authority in diabetes, says that in his great experience he has only once found the urine of these patients return to its normal composition. In the sixteen cases reported by M. Bouchardat in this series, it has not been a transitory change, but a lasting return to its healthy composition; they are cures from which there has been no relapse for several years.

Langham-place.

A NEW MODE OF TREATING UTERINE HEMORRHAGE.

By T. R. TORBOCK, M.D.

(Continued from p. 116.)

CASE III.—Mrs. M., aged forty-four years, an exceedingly delicate female, and of a strumous habit, had given birth to several children, her last accouchement being followed by great exhaustion consequent upon flooding; more than once her life had been despaired of. Not being her usual medical attendant, I requested to be sent for in good time, her mother having informed me "she had very quick times." The period having arrived, her accouchement took place—natural; there being nothing untoward until the removal of the placenta, when truly it may be said the blood flowed forth in a torrent; being now prepared with a suitable apparatus, I at once injected into the uterus three ounces of whisky diluted with one-third water, when contraction instantly followed, the hemorrhage being completely arrested. It is somewhat singular, in this case, that the patient did not suffer from afterpain, which had been a source of the greatest distress in her former accouchements; her statement to me was, that "she had never recovered so well in all her former labours."

CASE IV.—Mrs. P., aged forty-two, a female of spare, delicate habit, from the neighbourhood of Wolsingham, had come to Sunderland for the improvement of her health: utero-gestation being, as she supposed, about three months advanced. A few days after her arrival she was seized with violent pain in the loins, attended with "bearing down," which continuing, terminated in the expulsion of the fœtus, accompanied by severe flooding. A messenger was immediately despatched for me; but her residence being at least half a mile from my own, there was consequently considerable delay. On my arrival I found her apparently *in articulo mortis*, her friends looking over her for dead; that "I had arrived too late to be of any service, and that the loss she had sustained was dreadful." It was true, there was no pulsation at the wrists, neither did she appear to breathe, and when fluids were poured into the mouth they flowed by its sides, being unable to swallow, such was the state of prostration. On examining the uterus, *per vaginam*, I at once found the cavities throughout filled with coagula. I immediately introduced the uterine tube of the apparatus, and washed away the whole of the coagula. The mouth of the uterus was exceedingly loose and flabby; three ounces of gin were then injected, when feeble contraction took place—the hemorrhage ceased. In the interim the region of the heart was rubbed with stimulants, and which were also administered by the mouth, being now restored to consciousness, so as to be able to swallow; notwithstanding the patient continued in a very feeble state for some time, the hemorrhage was arrested completely, and she ultimately recovered.

CASE V.—This case, at the period in which it came under his care, was reported to me by my much-esteemed friend, Wm. Reid Clancey, consulting physician to the Sunderland and Bishopwearmouth Infirmary, who is an accoucheur by diploma from the University of Edinburgh; and, though he has ever since practised as what is called a *pure physician*, his valuable advice, during a very lengthened period has been held in high estimation in obstetric cases, in the sphere of his extensive practice. To this gentleman I had made known my views and experience upon the point in question, some time previous to his having been called to the case, and taking sole management of it; and, according to the information which I had furnished him, the time had now become opportune when he was enabled to suggest their adoption. Mrs. B., a plethoric female, aged forty, was suddenly seized with violent pain in the loins, accompanied with "bearing-down efforts;" at this period she was said to be in the third month of utero-gestation; her usual medical attendant was sent for, and on his arrival discovered the ovum had been thrown off, and the hemorrhage abated. Two or three days had not elapsed when a profuse hemorrhage ensued. Dr. Clancey was immediately sent for by the family, and on his arrival, found, on inquiry, that the placental portion had not been thrown off. The medical attendant was instantly summoned, when the doctor ordered the injection of spirits of wine, diluted, into the uterus. Shortly after the injection (which was performed by the medical attendant) the placenta was expelled without pain, and the hemorrhage ceased, though the patient's strength was considerably prostrated. This female, a few months afterwards, became *enceinte*, which affords a direct proof that the normal functions of the uteras had not suffered detriment from the timely use of the alcoholic mixture.

Kirkby Stephen, March 30.

PROGRESS OF MEDICAL SCIENCE.

France.

ACADEMY OF MEDICINE.

Meeting of April 13; M. BEGIN in the Chair.

YELLOW FEVER.

An official letter from the Minister of Commerce was read, containing a communication from the French Consul at New Orleans. For the last few years cases of yellow fever had become less and less frequent, and since the beginning of this year not a single case had been observed—a result which his Majesty's vice-consul was inclined to refer to the recent drainage of considerable marshes in the vicinity of the town. It was probable that, in consequence of this sanitary improvement, the ships homeward bound would all receive this year clean bills of health.

M. F. Dubois remembered that some years since similar hopes had been entertained at Vera Cruz, but were not realized. Baron de Humboldt

had noticed in these latitudes periods of eight and ten years, during which no cases of yellow fever were observed, and at the end of that time the disease had had reappeared with all its former malignity.

SATURNINE INTOXICATION.

M. Martin Solon read a report on a communication from Dr. Millon, referring to the diagnosis between poisoning by lead and by copper, and to their treatment by sulphurous preparations.

M. Orfila remarked, that the paper asserted that the viscera of persons affected with colica pictonum contained lead. The learned professor did not think that this assertion was supported by sufficient chemical proof. Two cases might occur: in one, saturnine preparations had been taken into the stomach, and symptoms were produced which had but little analogy with those of persons labouring under the painter's colic. The phenomena observed were those of irritating poisons. In this case the metal was taken up in the stomach by the absorbents; and when the liver was merely boiled in water, this fluid became loaded with the poison without affecting what may be called the normal or natural lead. When, on the contrary, chemists have endeavoured to detect the poison in the organs of persons affected with colica pictonum, the viscera had been carbonized previously to any analytical research, and in these instances the lead discovered was that which he would call normal, *i. e.*, naturally existing in the system. Mere maceration in boiling water of the liver of persons who had died of painter's colic would in no instance permit the extraction of the poison.

M. Martin Solon stated that the urine of patients affected with colica pictonum contained lead—a circumstance which showed the importance of acting on the kidneys, in order to facilitate the expulsion of the poison from the system.

M. Guibourt was of opinion that the lead and copper found in the viscera of healthy subjects arose exclusively from the vessels in which the food had been prepared in the countries in which the use of iron vases was general. M. Guibourt was convinced that neither copper nor lead could be detected in the viscera by the strictest analysis.

M. Orfila asserted this to be an erroneous opinion: the learned dean had always found lead and copper in the organs of man, whenever he had sought for it; the presence of these metals in the body was certainly not the result of accident. From M. Sarzeau's statistical researches, it appeared that in France only, during the course of one year, 2650 kilogrammes of copper were absorbed with the food.

Meeting adjourned at five o'clock.

PARISIAN MEDICAL SOCIETY.

Meeting of April 7; Dr. SHRIMPTON in the Chair.

HALLUCINATION RELIEVED BY ETHEREAL INHALATION.

The following interesting case was communicated by Dr. Trayer:—

In the year 1821, a young lady was deprived, by a short and fatal illness, of a highly-valued and much-beloved friend. Under this severe affliction she imposed upon her feelings a degree of restraint, the evil consequences of which showed themselves eight days after, by the sudden manifestation of a most distressing hallucination, which has persisted ever since that period: it consisted of the vivid and constant perception of the countenance of her departed friend close to, almost in contact with, the eyes, and of dimensions so much greater than natural as to be monstrous, with a painful expression, and surrounded by other accompanying horrors. Several months passed without any alteration occurring in the original phenomenon: change of scene was of no avail; and, at the expiration of one year, symptoms of a violent spasmodic nature made their appearance. The hours of day were now passed in a species of trance, while at night the patient awoke not only to consciousness but activity of mind, the vision being always present during her waking hours. This condition lasted for about six months, when she recovered from it, but not to health, being during nine years more a prey to various forms of this ever-changing malady. The original affection of the sight was, however, an unvarying symptom—the connecting link that chained all these sufferings into one disease. About this period the hallucination began to disappear for a short time during the summer months, but never remained long away, always disappearing suddenly, and as suddenly returning. Shortly after, the vision ceased with regularity, from June to December. During sickness it seemed to produce a momentary species of delirium of a very curious nature. It ran on the same melancholy topic which originated her disease, but was of a quiet, mild character, ceased by a powerful exercise of volition, and never incapacitated her from arranging with precision the most minute domestic concerns. At the end of Dec., 1846, the spectre returned at its usual date, and with rather increased intensity, becoming a serious impediment in walking, reading, &c. Dr. Trayer was called into the patient during the month of Jan., 1847, when he recommended a tonic, and at the same time antispasmodic line of treatment, together with bodily exercise, &c. The patient declined for the present taking any medicines, and shortly afterwards Dr. Trayer was induced to hope that the unconsciousness produced by the inhalation of ether might exercise a favourable influence upon this singular and painful disease. These hopes were realized. Ether was inhaled on five successive occasions, and at each the vision gradually diminished in size and distinctness, finally departing altogether more than six weeks before the usual period of its disparition.

EXTRACTS FROM PERIODICALS.

DIAGNOSIS OF VENOUS ANEURISM.—In several forms of spontaneous aneurism, or of false circumscribed aneurism, the tumour is the seat of a certain tremor which might lead to an erroneous belief in the existence of aneurismal varix. In order to render more positive the diagnosis of this condition, in which a vein and an artery are placed in communication with each other, M. Nelaton assigns the following three signs to venous aneurism, and considers them as pathognomonic of the disease:—1. A double souffle, corresponding to ventricular contraction, and to arterial systole. 2. A continuous tremor. 3. The existence of this tremor in a considerable extent of the course of the vein.—*Gaz. des Hôpitaux.*

PARTIAL ALBINISM.—This cutaneous disorder, which M. Cazenave calls "vitiligo," consists in a limited discoloration of the skin and of the hairs growing from the affected part. It has often been confounded with "porrigo decalvans," and is probably of the same nature as the white leprosy, so common during the middle ages. The disease is a most obstinate one: in a recent case observed at Hôpital St. Louis, the treatment consisted in the daily exhibition of one twelfth of a grain of arsenious acid; a very unimportant amendment has been obtained.—*Ibid.*

THE URINE DURING PREGNANCY.—The great frequency of the occurrence of a deposit in the urine of pregnant women is now very generally admitted, and has given to that deposit the value of a diagnostic sign of some precision. The nature of that deposit is still, however, unknown. M. Nauched, who of late years brought the subject before the profession, was of opinion that it was constituted by the caseum formed in the breast during gestation. The recent researches of organic chemistry demonstrate the fallacy of this notion. M. Regnault, having observed the urine in a great number of cases of pregnancy, does not hesitate to assert that the cloud observed in the secretion, when allowed to stand for thirty-six or forty hours, is due to the decomposition of an amount of azotized matter secreted in excess by the kidneys during gestation. This matter would act as a ferment in the urine, and hasten the progress of the following reactions, to which the opacity of the urine should, according to Dr. Regnault, be attributed: gradual decomposition of urea, formation of carbonate of ammonia, reaction between the latter and the phosphate of lime existing in the fluid, and deposition of carbonate of lime. At the same time the urine loses its acidity; crystals of phosphate of magnesia and ammonia may be seen, and also an immense number of microscopic animalculæ, and in such abundance that, examined with an enlargement of 500 diameters, the white layer seems to consist only of the assemblage of vibria and phosphatic crystals. The deposit observed in the urine of pregnant women is not therefore due to the spontaneous coagulation of a substance having primitively in the urine a distinct existence. It is due to the gradual decomposition of the fluid, and does not take place when the urine is protected from contact with air, and is placed, for instance, in an atmosphere of hydrogen.—*Revue Medico-Chirurgicale.*

FRACTURE OF ONE OF THE CONDYLES OF THE FEMUR.—M. Malgaigne endeavours, in a short and interesting memoir, to elucidate the history and diagnostic signs of this fracture, of which no correct description has been hitherto given. The principal signs upon which M. Malgaigne chiefly insists are the transversal enlargement of the anterior aspect of the knee due to the separation of the condyles in front only; and the remarkable deviation of the leg—the tibia following the fractured condyle in its displacement. In the fracture of the external condyle, therefore, the knee protrudes inwardly, and the outer aspect of the limb presents an obtuse angle; the reverse is the case when the inner condyle is broken. An obscure crepitus may usually be felt on pressing the patella; but the great pain which this determines, and the often very considerable effusion in the joint which follows the injury, should deter the surgeon from any very rigorous search for crepitation. Sir Astley Cooper recommended the limb to be kept extended, and a roller to be applied around the knee, over a piece of pasteboard. Sir Astley Cooper's object in recommending the leg to be placed in extension was to preserve the condyles on the same line—an intention which, according to M. Malgaigne, that position does not carry out. He prefers slight flexure of the extremity, and the application of one splint on one or the other side, according to the deviation of the leg: if it be thrown into exaggerated adduction, for instance, as in fracture of the internal condyle, the splint should be placed on the inner side, in order that a handkerchief or a bandage may destroy the displacement, by drawing the knee towards the splint.—*Ibid.*

TREATMENT OF CORYZA.—M. Deschamps, pharmacian of the Hospital of Charenton, asserts that coryza may be arrested in its incipient stage by injections, repeated twice or three times at two hours' interval, of a fluid, containing two grains of extract of opium to two-thirds of an ounce of distilled water.—*Repertoire de Pharmacie.*

GUN-COTTON is used in the hospitals of Turin for the purpose of applying cupping-glasses; the deflagration of the cotton creates a sudden vacuum in the glass, and does not burn the skin.—*Giornale dell' Academia R. di Torino.*

D. M'CARTHY, D.M.P.

CONFLICT BETWEEN MEDICINE AND SURGERY.—A Government regulation, battling against quackery in every form, has been well received by the bulk of the *intelligence* of the country, which is accustomed to have their lives and limbs protected *ex officio*. It is to the effect that the drugs and preparations for homœopathic cases, can only be procured from the regular (licensed) apothecaries in their state and concentration enacted by the Pharmacopœia. These the homœopathist may dilute and use as he thinks fit, but has to state on the prescription the degree of dilution, dose, &c.—a very praiseworthy precaution indeed. The Faculty of Medicine (the only branch to which a *little* action is allowed in Austria) are busily engaged in the reorganization of their old (!) statutes. They deprecate the interference of surgeons in internal maladies; while

the latter petition Government for being authorised to act in this capacity—a subject to be treated by us on another occasion. The medical statistics of Austria in 1846 are as follows:—Doctors of medicine, 6395; surgeons, 3985; apothecaries, 2784: which does not include those employed in the military medical service.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct from the Office of the Medical Times *to Annual Subscribers sending by a Post-office order, directed James Angerstein Carfrac, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.*

A HANDSOME PORTFOLIO *for holding the* "MEDICAL TIMES" *—very desirable to those who would keep the numbers clean for binding, and easy of reference—may be had, by order of any Bookseller, or at the Office, price 5s. An allowance is made to the trade.*

A Navy Surgeon *will much oblige us by furnishing us with all the data on the subject of retiring pensions in his possession. We have already considerable information on the subject, and intend to consider it in all its bearings, with, we hope, some practical influence on the Government authorities.*

Mr. Francis C. Burges.—*The six lectures by Dr. Knox have not yet been published, but will be shortly.*

Mr. Wm. Smith *is thanked for his offer, which is declined.*

C. H., Hampstead-road.—*The practice you refer to is alike destructive to health and happiness. Carry out your resolutions; and, if necessary, consult some medical gentleman in the neighbourhood.*

C. W. A.—*The impromptu would have been better if a little more consideration had been exercised. We are compelled to decline the communication.*

M.D.—*No.*

A Correspondent *informs us that Professor Flourens has made experiments with ether of different kinds on animals; and that ether prepared from chloric acid acts more energetically than the sulphuric, while "its action ceases also in the same ratio."*

A Bartholomew Student *complains that the examinations at the end of the session, with a view to award prizes, &c., to the most diligent students, conducted by written questions, and in the library, were this year held in the hall of the College; and the time limited, to the manifest disadvantage of those who could not move their fingers or tongues with sufficient velocity.*

F. A. S.—*No.*

Spectator Medicorum *says that "he has been amused, but not edified, by reading Dr. Golding Bird's ideas on the subject of the title of "Dr." Our correspondent thinks "we have too many baby doctors turned out of Edinburgh, St. Andrew's, Aberdeen, and Glasgow, every year."*

"Tower Hamlets" *has forwarded us the copy of a circular, issued by an individual in St. John-street, Clerkenwell, asking for money to defend the criminal proceedings instituted against him for practising without a license, which circular exemplifies the fears of the author.*

A. B. C. (Edinburgh) *informs us, that there has been a clinical puff in a local newspaper, in reference to a certain doctor who performed the operation for squinting on a child under the influence of ether; when the notable discovery was made, that the nerve of the eye retained its sensibility longer than any other part of the body.*

Dr. Torbock's *communication has been received.*

An Old Subscriber.—*Yes.*

T. O. W.—*Of course.*

"Cornuo" *has made known the circumstance that his groom "pruned his dog's ears and amputated his tail under the influence of ether; and that the tail retained its sensibility (wagged of course) about two or three minutes longer than other parts of the body."*

Not Perfect.—*A little rest would be necessary after the operation mentioned. Consult your surgeon.*

J. S.—*If without a warrant, no: if with a warrant, yes.*

Mr. Sharp *has our best thanks.*

Mr. Close *will see that his communication has been duly regarded.*

φιλος *has been received.*

Mr. Thompson's *paper is under consideration.*

Kāf.—*We are much obliged by our friend's outline, which is very excellent. The congratulations are acknowledged with thanks.*

Mr. Churchill's *note had its wish anticipated.*

We have received communications and letters from Dr. Wright, Birmingham; Mr. Hilles; Mr. Close, Manchester; Dr. Hilbers, Norwich; Mr. Smith, Crawley; Mr. Buller, Ipswich; Mr. Lambert, Farsley; Dr. Nichol, Crask; Mr. M'Cheyne, Edinburgh; Mr. Langlois; Mr. Hopgood, Chipping Norton; Mr. Snowden, Ramsgate; Mr. West, Camelford; Mr. Beck, Sawbridgeworth; Mr. Roe, Eccles; Mr. Croston, Manchester; Mr. Ellis, Walsham-le-Willows; Mr. Lambert, Bath; Mr. M'Bride, Gelford; Mr. Ball, Burslem; Dr. Grey, Liverpool; Mr. Brady, Dunfanagly; Dr. Coghlan, Wexford; Mr. Boxall, Horsham; Mr. Couch, Penzance; Mr. Rusher, Pershore; Mr. Glaisher, Blackheath; a Constant Reader, Edinburgh, Mr. Kay, Plymouth; Dr. Tolbock, Kirkby-Stephen; Mr. Churchill, Pimlico.

Our correspondent at Ramsgate should order Dr. Ayres's Lectures on Agricultural Chemistry in the Pharmaceutical Times.

We shall endeavour to find room for the communication on the Medico-Chirurgical Society in our next.

The letter of Z. to the Army Surgeons shall have early attention.

THE MEDICAL TIMES' PRIZES FOR THE BEST REPORTS OF MEDICAL AND SURGICAL CASES.

The results of our last Prizes have been so far encouraging that we propose for Professional Competition, for the year 1847, the following Prizes:—

Twenty-five Guineas for the twelve best reports of original cases in hospital or dispensary practice.

Ten Guineas for the twelve reports of original cases, as above, second in merit.

Five Guineas for twelve reports of original cases, as above, third in merit.

In offering these prizes we repeat that our aim in this, as in other matters, is to promote the SCIENCE of our Profession. The groundwork of the best part of our *practical* science and of most of our subsequent Professional worth is laid down in our studentship; and the great and the only true teacher of the student must ever be—hospital practice. Lectures and books have their uses; but it is by the bed which holds a human being, with the joy of health or the pain of disease, the chance of life or the peril of death, depending on the aids of science, that we acquire our true knowledge. There is there for the student no listless ear, no dull eye of the lecture-room; it is not the memory alone that is appealed to, or some abstract love of a pedantic and inapplicable lore. Every power of his mind is engaged: he is forced by the sympathies of his nature to hear and see, to observe, to reason, to prognosticate, to be EXPERIENCED: each patient's case is a volume of medical science in its most practical aspect, forced on his acquaintance for life!

The authors must be students who shall not have received any medical diplomas or licenses.

Six of the cases are to be medical, and six surgical.

The cases must have occurred during the year; and the names of the gentlemen under whose treatment they may have principally come must be distinctly mentioned.

Three arbitrators will be appointed—one surgeon, one physician, and one general practitioner—whose names will be duly announced. The decision will be on the 1st o July.

The Prize Reports will be published in succession in the "Medical Times," with the names of their authors.

They are to be sent to the Editor of the "Medical Times" on or before May 1, 1847, accompanied by a certificate from a surgeon or physician to a hospital, declaring that the writer is *bonâ fide* a medical student. A motto or device must be inscribed on each report, to identify the author, whose name, with a duplicate of the motto or device, must be mentioned in a private note, which will be opened when the award shall have been made.

THE MEDICAL TIMES.

SATURDAY, APRIL 24, 1847.

HOW STANDS MEDICAL REFORM?

It is an arduous, perhaps a disconsolate, task to work up a great movement in antagonism to the apathy and indifference of the public. The stone of Sisyphus is a universally-accepted illustration of the axiom. We are, at any time, in danger of a recoil, and the danger is greater in proportion to the elevation we have attained. Nevertheless, all labour partakes more or less of this character: even a labour of love is a warfare against difficulty; and the difficulty, in ardent and enterprising minds, only serves to increase their love.

The National Institute are embarked in such an undertaking; they are no doubt surrounded with embarrassments, the object itself being as bold and difficult of attainment as any which the moral daring of man, in consideration of its resources, has selected for its accomplishment. We believe this to be the case in reference to the *end* which this body seeks to compass; what are the *means* that are employed to bring round the result?

Every practical man will ask this question. We may admire the chivalry of engaging in a perilous design, we may esteem the generosity that dictates heavy personal and pecuniary sacrifices, we may applaud an unwearying perseverance in labour; but, after all, we covet one thing—a power of practical development, that old English habit of making deeds the exponent of our labours, of realizing by the hand what the head finds for it to do. In the silence of fact is the most eloquent of arguments.

We might almost say that, in holding their *conversazione*, the National Institute have commenced a new career. They have abandoned the system of all agitating bodies—that of waiting upon Providence, and have apparently resolved to wait only upon their own energies and resources. "The gods help those who help themselves" is henceforward to be the motto of the Institute; and we are glad of it, as it conveys to the popular mind an intimation of that unchangeable resolution which must increase the confidence of their supporters, and eventually accomplish their great enterprise. The *conversazione* is then the first fact of the new era; and is, in itself, the most interesting mode of evidencing to their brethren the advantages of a general incorporation. The general practitioners have shown what they are able to do, even under the ban of corporations and the indifference of the Government; and we can only guess at the useful results that they might work out under a favourable or even a just system of legislation. Perhaps the Council of the College of Surgeons are unable to see the potency and effects of this reunion: they are burrowing blindly, like moles, in their own corruption; they are so unaccustomed to the light, that a mere glimmer shuts up their eyes; if they would see, they cannot; physical defects and long-accustomed habits have rendered them incapable of judging correctly of the sphere they inhabit. It is unfortunate for them, but perhaps advantageous to the profession at large.

The satisfaction which the recent meeting at Hanover-square gave to the members of the Institute cannot fail to react favourably upon

public opinion. The members who attended are so many missionaries of good tidings to their brethren in distant parts; and, unless the profession are totally indifferent to their own welfare and the general good, they must be roused to a renewed and warm support of the Council in carrying out further arrangements. The profession owe as much to the Council as the Council owe to the profession; and as we ventured, some time since, to remind the Council, as an elected body, of its responsibility to its constituents—a remonstrance that has been promtly attended to—so we now repeat that the Council, however anxious to promote the interests of their constituency, can do nothing without their liberal assistance. Without such assistance, confidence, and good will, they will be paralysed. We expect no miracles in these days. The man sick of the palsy cannot stretch out his hand on a mere command: the strength must be supplied, or the sinews are motionless. In the midst of the fight he is utterly impotent. The sinews of war are money. Of this, enough.

Other facts are yet to be realized by the Institute—a museum, a library, a common hall, &c.; and we hope to see them all in their turn. We cannot but think that the present decided step of the Institute is one of peculiar significance in the complex situation in which we find medical interests now involved. In sequence to the *conversatione*, they have advertised their intention to summon a public meeting so soon as that long-promised measure, the Medical Registration Bill, shall have been introduced to Parliament and printed. We have only one fear—a grave one—on this matter: it is, that if the Council defer their general meeting until the Medical Registration Bill be a reasonable contingency, another public meeting will never be held. This is a very serious matter for the interests of the profession; it may be very adroit for the Council thus to defer a meeting with their constituents *ad infinitum*, but really we think the profession should immediately abrogate the plea.

There is something extremely amusing in the transformations this measure has at different times assumed. We remember, in our boyhood's days, seeing peripatetic jugglers performing sundry tricks of legerdemain with painted paper—it was now a fan, now a slipper, and now a fool's cap; we think the last the most suitable form which our political mountebank can give to his bill. It is scarcely worth while to refer more seriously to this scheme, as we feel quite satisfied, for a multitude of reasons, that it will never occupy the serious attention of the Legislature.

The Council of the National Institute must, therefore, continue to pursue an independent course. They have chalked out for themselves a plan from which no transitory considerations—perhaps designedly placed in their way with the intention of frustrating their exertions—should induce them to depart. The Council of the College of Surgeons may entertain new schemes, in the hope still more deeply to submerge their members, and to fasten more firmly the chains that now bind the various members of their profession in their respective grades: no plan of theirs can ever succeed while the National Institute does its duty. They are the watchdogs of the citadel, and it is a part of their duty to give the alarm when any new attempts are made in any quarter to fetter down the full and independent spirit of their brethren.

There can be no question that medical politics will ere long assume a different character and bearing from any of its preceding phases. Powers, hitherto inoperative and despised, are now assuming an imperative and overwhelming influence. An act of Parliament, hitherto esteemed rather of technical than real value, has acquired a new force, and threatens insecurity to one half of the existing practitioners of medicine in this country. The success of the prosecution at Bolton has utterly changed the relations of the differently-qualified members of the profession; and, while those gentlemen who have simply the diploma of the Royal College of Surgeons are at any hour liable by a summary process to a prosecution and imprisonment for practising as apothecaries, it is manifest that the question of Medical Reform cannot stand still; that it is, in short, the all-commanding interest of the members of the College to push forward the consideration of a general measure.

Are these not powerful reasons for supporting such a body as the National Institute? The members of the College should enrol themselves at once, and assist the labours of the Council. There must be but one voice to the Government on the part of the general practitioners. Emancipation in the College of Surgeons is now of less importance than ever; it is their position, their character, their bread, that they must now defend. A jealous rival, a low informer, an aggrieved patient, can, at any time, ruin a surgeon in general practice. This is too serious—too perilous a state of things to continue; and we only trust that, under this strong pressure, the profession will at last become unanimous, and require, as one man, a complete and comprehensive measure of reform, putting all the general practitioners upon a perfect equality, in rank, privileges, and immunities.

THE CRONIN CASE, AS LOOKED AT BY THE PUBLIC AND THE PROFESSION.

The philosophy of medicine, as a profession, is a something which, however well understood by medical men, is not exactly comprehended by the public, or, at least, not in the same way as by us. The people, to do them justice, resemble children in one respect: they look at actions for their conclusions, rather than words, however frequently repeated. We have been in the habit of speaking of ours as one of the most learned, liberal, and benevolent of the professions, and, doubtless, with more real than apparent truth; but the fact is, we have been unable to make the public believe us. There are numbers who will think that we push our benevolence in the face of the world to attract its applause; that we are more anxious to enjoy the reputation of wisdom than to possess the quality; and that, while we would appear busy in uprooting the foundations of error, we would erect in their place a towering colossus of pride, which we would have the world adore. In a word, and to change the figure, we are put down as old-fashioned Jacobites, satisfied with things as they now exist, utterly opposed to any innovation, and yet such Ishmaelites in constitution as to be engaged in an everlasting warfare with each other.

These remarks have some bearing on an article which appeared in the last week's number of a very widely circulated journal, and which, recently at least, exhibits a very considerable display of talent in the editorial department. The writer goes to work upon "Doctors and their Differences" with a resolution about which there can be no mistake. Physicians he takes at once by the ears, or, rather, by that prominent organ in front, which he stoutly pulls. The poor coroner for Middlesex he makes bite the dust in a very unbecoming manner—speaking of him as one who "embraces in his own person the somewhat piebald and incongruous characters of a tribune of the people, a judge, a political partisan, a coroner, and the editor and proprietor of a medical journal called the *Lancet*." "A rival professional periodical," he goes on to say, "has ventured to point out the incongruity, and the tendency which such diverse vocations has to turn the stream of justice into a puddle. Mr. Wakley has prosecuted it for libel, and the court has very significantly intimated to the learned coroner for Middlesex, that he does not come before it with clean hands, and that the *Medical Times* 'served him right.'"

Without adverting further to the misdeeds of the individual—which we are not responsible for—let us ask, do we merit such chastisement inflicted upon us, as a profession, by that powerful instrument—the Press? Dr. Cronin was denounced and condemned by the coroner so indiscriminately, and in advance, that large numbers at once manifest their sympathy, and stand forth in his defence. The Giessen physician has been expurgated by Wakley's censures; and hence the Press—at least a great portion of it—has stood up to shield the man who has been charged by the profession with an insult to science, and a disregard of prudence to such an extent, indeed, as to produce the most lamentable results, and public censure is averted from him by a counter-charge against the whole body of medical practitioners. We may learn some very important truths, even from the lips of those who censure us.

Miss Collyer is dead—Mr. or Dr. Cronin is acquitted—Mr. Corfield still attends to his shop, and Mr. Jacob Bell yet patronizes and illuminates the Pharmaceutical Society. With the exception of an assassination and a lesson, everybody and everything safe in the old position! What is that lesson? This: that the druggists, as a body, are not exactly in the possession of that amount of knowledge which persons ought to have who dispense medicines of the most energetic description.

The public entertain the notion, at least the poorer part of it, that those who sell medicines are acquainted with their properties. The idea has been diligently encouraged by those who are interested in the matter; hence, there is scarcely a physic-shop which has not its matchless antibilious pills, irresistible corn-plasters, and gout-destroying mixtures. The battle between physic and disease, carried on under the eye of the venders of drugs and chemicals, is, according to the testimony of many of them, one which must terminate in a decisive victory under the combined forces of boluses, tonics, and cathartics. Were it not for the "counter practice," nine-tenths of the trade must shut up shop: for the number is but small who would make more than a few shillings per day by the sale of drugs which their customers might require.

The leaders of the trade feel that something ought to be done to elevate their community in professional knowledge, and they established the Pharmaceutical Society to accomplish this great work—with what measure of success recent events show. The public must not have mere machines to make up prescriptions—men who,

without a single caution, will send from their emporiums poisons which will kill

"As swift as hasty powder fired
Doth hurry from the fatal cannon's womb."

and then shelter themselves under the leaf of paper marked with the hieroglyphics of medicine.

The Cronin affair teaches us further to make up, where we can, our own prescriptions. Some very delicate physicians in small practice would, doubtless, think it a pretty thing to be compelled to use their abundant leisure in saving Corfields' scientific blunders, and Miss Collyers' tragic deaths. Fashion, we admit, is a strange thing; but for the life of us we cannot see why it is dignified to prescribe and derogatory to dispense; and this, too, when there is more leisure for the one than knowledge for the other.

Mr. Cronin has been severely censured, and not without reason; yet it is enough for him to bear his own stripes, without receiving those which are due to Messrs. Bell and Corfield. Had he acted his own apothecary, as at first, he might not now have been chewing the cud of self-mortification. But how could Mr. Bell have sent from his shop a bitter-almond water of such strength as to prove fatal to life in a small dose, without a caution: knowing, as he states in his evidence, that there were *two-and-twenty* different descriptions? He had no means of knowing he says, for what purpose it was to be used, and, therefore, in his ignorance, he commits just the same error as Dr. Cronin, by not specifying the strength of the water sent. Mr. Corfield is perfectly ignorant about the varieties—so it is aq. amygd. amaræ he cares not—nor does he take any trouble to enlighten his darkness till the astounding intelligence is brought that one draught consigned the young and unsuspecting girl to the embrace of death!

We remember, some years ago, that a gay druggist's apprentice, wishing to spare himself trouble, kept for this purpose, by him, a good stock of *peas*, ready coated with powder—not for soup, but pills; and for some time he comforted the bowels of his master's customers by administering them instead of nauseous physic. An old gentleman, with bowels which wanted rather to be disturbed than comforted, complained to his physician—the dose was increased; no movement, however, was produced, till at length the patient, wearied by flatulence and peas, brought the supposed pills to the druggist, who, in his attempt to break one, discovered the fraud, and relieved the gentleman. This freak of the apprentice was comparatively an innocent one, so far as the peas were concerned, but it must have been a source of disappointment to the prescriber, and might have lost him many guineas if the trick had not been discovered in time. The profession have not yet acquired the lesson that their safety and success are *often* connected with the dispensing of their own medicines.

We are taught, too, the necessity of medical reform. The public are taken with high-sounding titles; the members of the profession know it, and numbers hang out the imposing letters as a bait, which is swallowed by the unwary without thinking of a hook. Time was when there existed post-office dubs, now there are Giessen doctors; and, under the present order of things, there will be men who will deal in parchment, that they may dabble the more successfully in physic.

For the sake of all that is good, may we speedily have such a change as shall put down quackery of every description, whether in diplomas, advertisements, or cunningly worded inquiries addressed to professional brethren. With the renovation of the medical body, the druggists will receive such benefit that they shall not be mere fools to physic or poison her Majesties subjects.

TREATMENT OF PAUPER LUNATICS.

In another part of our columns will be found an account of a prosecution of two individuals by the Commissioners of Lunacy, for brutal conduct to an insane pauper named William Rank.' The prisoners were engaged as assistants in one of the wards of the asylum in which the unfortunate patient was lodged, and under their brutality died. The *post-mortem* examination showed fractures of three or four ribs, with perforation of the pleura. Such is doubtless the melancholy end of many entitled to our sympathy, not only because poor, but because deprived of that which constitutes and dignifies the man—his mental faculties. Of all the misfortunes that can happen to an individual, this surely is one of the most appalling. If benevolent feelings are called into exercise on the contemplation of ordinary suffering, how much more ought they to be exercised when poverty and madness combine to afflict an individual? Much has been done to alleviate the sufferings of those who are the inmates of eleemosynary lunatic institutions; and it is right that Government should keep a strict watch over the conduct of those who act as officers in these places. The time is gone by when it was considered necessary to use gags and chains and brutal lashings to tame into submission the unfortunate subject of mental disease; and one powerful means to prevent a recurrence of these enormities is for the public to manifest an interest in all that pertains to the comfort and ultimate restoration of this class of unfortunates. It is to the credit of the medical profession that its members have appeared in the front rank of benefactors to the insane. Attention has been strenuously directed to the best means of soothing them in their affliction, and of ultimately restoring them to the enjoyment of wonted health; and it is to the profession that the public are indebted for the abolition of those barbarous and disgusting practices which increased rather than diminished the malady so ill treated. It would be an act of injustice to us, as well as to the unfortunate patients themselves, if any maltreatment, by servants or others, should go unnoticed or unpunished. The public should have the *whole* benefit of our improvements.

DR. WRIGHT'S CLINICAL LECTURES.

Our readers are generally aware, in the best way we hope—by the possession of the pamphlet—that Dr. Wright has published the masterly Lecture introductory to the course which now weekly ornaments our columns in a separate form. Our contemporary, the organ of the Provincial Medical and Surgical Association, bears, in its last number, the following handsome testimony to the writings of our experienced and able contributor:—

"We are induced to notice this lecture by the Clinical Professor of Queen's College, Birmingham, chiefly because it emanates from one of our provincial schools. The observations of its author are highly judicious, and embrace a brief summary of what is expected and required of those entering into the medical profession, to render themselves competent to the serious duties on which they are about to embark. 'There is no nobler profession than ours,' observes Dr. Wright, in his concluding remarks, "and there is none more responsible. There is something awful in having to take charge of human life: it tells us that we have both a moral and a medical duty to perform to our patients. Never look to the worldly condition of individuals, to know how much professional attention you are to pay them, and what claims they are to have upon your sympathy with their sufferings and anxiety for their welfare.' We regret we have not space for the entire passage; it is replete with the highest principles of medical ethics, and happy will it be for the students of the school if such principles sink deep into their minds, and become those on which they shall hereafter be guided in the exercise of their professional calling."

SHERIDAN KNOWLES.

Our friend (it is our pride to call him so) whose name, illustrious, forms the heading of this article has favoured us with a brief acknowledgment, intended to be public, of his obligations for restored health to the good offices of Dr. Charles Mackintosh, a homœopathic practitioner, of Torquay.

Cowper says—

"What obvious truths the wisest heads may miss!"

and the great dramatist is here no bad illustration of the aphorism! We, who know the robust and vigorous constitution, the happy temper and temperament, the inflexible temperance, the careful regimen, and wise habits of our friend, see as a "simple and obvious truth," that such a man—and at Torquay too—required no medicine to recover from any little debility or exhaustion arising from faculties much and sedentarily exercised. Mr. Knowles wanted no remedy but rest—a fact which, as a physician *himself* and the intimate of our immortal Jenner, *he* must have suspected; and, because that rest had its tedium lightened by homœopathic manipulations, the bard gives to Dr. Mackintosh the praises really due to his own care of a constitution magnificently worth it! There is a peculiarity in Knowles's once "missing a truth" as in his general rule of hitting it: 'tis done with a thorough goodheartedness. In his generosity to friends he can even fall into a blunder, and to his own disservice: a very practical antithesis to the conduct of that Government which, in point of gratitude, good feeling, and good taste, should never hear the name of Knowles without a blush!

THE HOUNSLOW INQUEST.

We can state on authority to which we attach perfect credence, that some of the parties who have been injured by the way in which the Hounslow Inquest was conducted, and by the manner in which their characters and opinions were subsequently criticised, at certain public meetings, by the coroner who presided on that occasion, are about to move the Court of Queen's Bench for a criminal information against that honourable functionary.

FALSE MEDICAL CERTIFICATES.

We understand that the case of a person in the western counties who secured a fellowship in the College of Surgeons by a course of studies carried on in a baker's shop, and which was brought under professional notice some time ago in the *Medical Times*, is now receiving the consideration of the authorities in the College of Surgeons; and that a prosecution for false certificates is likely to be instituted against the offending party.

WIDOWS AND POISONS.

(From the *Pharmaceutical Times*.)

Widows may *now* be divided into two great classes—the voluntary and the involuntary—those who could have prevented their widowhood, and those who could not!

Should the reader be startled at the boldness of our proposition, or think this classification of widows uncalled for—at least in our pages—let us inform him now, at once, in our very prologomenon, so to speak, that this classification is absolutely necessary to the justification of our coming remarks.

The pale-faced widow, who, still in the heyday of life and health, mourns with unfeigned grief the loss of the partner of her youth—whom she loved, honoured, and obeyed in health, nursed in sickness, wept over in death, and followed with heartfelt sorrow to the grave—*she* honours the black crape! Heaven forbid that any levity of ours should slight upon her! but not whole torrents of hypocritic tears, whole wardrobes of black crape, or the shroud-like, plaited, impressive ugliness, the widow's cap,—or any other outward sign of flesh mortified and spirit subdued, can lessen our horror and indignation of that hybrid abomination,—half goat, half tigress, under the form of widow, who, to facilitate the enjoyment of her own little amours, cuts short the existence of her lord and master—by giving him poison!

Widow Johnson, at Barton-upon-Irwell, we are delighted to say is proved judicially to be a widow of the involuntary, the honourable class—pronounced, we say, innocent of the poisoning charge. The three pennyworth of arsenic which she was proved to have bought—was for rats! All honour, then, to widow Johnson!—we cast no imputations on her!

Professor Leigh, of the Pine-street Medical School, Manchester, lecturer on organic chemistry and forensic medicine, we are just as delighted to find may consider himself *inferentially* acquitted of incompetence to discover arsenic; because it is now established, by the scientific record of a British jury, that when Professor Leigh examined the body for arsenic, and could not find it, the poison might not have been there,—and that the arsenic ultimately found, when the body was exhumed, might have soaked into the body dissolved in some water which was discovered in the grave. All honour, then, to the scientific merits of Professor Leigh! Our remarks cannot be unpleasant to him!

But, seeing that a considerable time has elapsed since the first particulars connected with this extraordinary case were brought before the notice of our readers, a slight recapitulation of the same may not be unnecessary.

Elizabeth Johnson, then, a widow some thirty-three years old, did possess a husband, but, far from concentrating her affections on the aforesaid, she had been heard to express a remarkable attachment for a Mr. Abraham Hewitt's—little finger.(a) Now, this peculiar digital adoration of Mrs. Johnson seems to have carried her occasionally beyond the strict boundary of female propriety; for the evidence of another witness (Elizabeth Wood) went far to prove that Mrs. Johnson had been seen in Abraham's bosom—in other words, the witness deposed that she had seen them in bed together. Thomas Brooks, again, proved that Abraham was not backward in adoration, for he had been seen to kiss his inamorata's lips!

Truly, however much of romance there may be in the above recital, there are elements of much disquietude for a husband. But the lady's improprieties did not end here. She had been heard to indulge in the expression of sundry evil wishes and maledictions directed towards her husband; and here we would remark, that it seems judicially determined beyond power of controversy that evil wishing is endowed with a potency; that the arch fiend may listen to and grant the malignant prayer; for here we see an evil wish speedily followed by all the symptoms of arsenical poisoning! Strangely enough, too, the Evil One so entangled this mysterious affair in a mist of collateral circumstances, that not only was Mrs. Johnson for some considerable period subjected to the imputation of murder, but Professor Leigh—since pronounced inferentially a competent man—was considered for a brief period somewhat the reverse of this. On the 27th of November Mrs. Johnson purchases three pennyworth of arsenic to kill rats; and, strangely enough, on this very day her husband began to suffer from a disease precisely simulating a case of arsenical poisoning. Friends call to condole with the grieving wife, and say, "Your husband will soon be well again;" when she, with the prophetic spirit of a Delphian oracle, says, "He will die this night"! And so he does.

(a) Prisoner had told witness that she liked *Hewitt's little finger* better than *Johnson's whole body*.—(*Vide* Evidence of Ellen Gateley.)

On the 4th day of December, the day after Johnson's death, his viscera are subjected to the chemical scrutiny of Mr. Leigh, who, on using Marsh's test, discovers a trace of something—arsenic or antimony, he thinks—which he cannot tell! This is his evidence. In the *Pharmaceutical Times* of that period we penned some strictures on this chemical examination, and on the 9th of March the body was disinterred, and subjected to re-examination by Mr. Leigh; assisted *this time* by Mr. Henry Hough Watson, who, at the trial, stated that he was an analytical chemist at Bolton, and had been so for fifteen or sixteen years. Had considerable experience in testing substances for detecting the presence of arsenic. Was with Mr. Leigh and Mr. Hepworth at Deane churchyard on the 9th of March. Furnished the jars for the purpose of removing portions of the body. They were well washed and quite clean. After portions of the body were put into them the lids were put on, and tied over with bladders. The substances taken were the heart and some blood in one jar, a kidney in another, the tongue and gullet in another, a portion of muscle from the right thigh in another, the intestines in another, and a portion of the liver in a glass jar. The jars were then put into a hamper, with the exception of a glass jar containing the liver, which he took home with him. The hamper was sealed by him and Mr. Leigh, and delivered to Inspector Maybury. Submitted the liver to Marsh's test, and had evidence of the presence of arsenic. [The metallic deposits on slips of glass in small glass tubes, and on Wedgwood's ware pestles, were here exhibited to his lordship and the prisoner's counsel.] That liver had never been out of his custody, except for a minute or so that the policeman held it while he was engaged in getting other portions of the body. Unpacked the hamper himself; it was precisely in the same state as when packed up and secured. Believed that the glazing of the jars would have no effect upon the various substances which were placed in them. Earthenware is sometimes glazed with lead, and sometimes with common salt; he did not know what the brown ware jars had been glazed with in which he had the substances from the body put in Deane churchyard. He detected arsenic in all the substances taken, but most in the intestines. There was some in the kidney also, and a very slight indication of it in the gullet and tongue. He used Marsh's test, which was the best for detecting small quantities. He placed the utmost reliance upon Marsh's test as an accurate one. He also used Reinsch's tests for some portions of the intestines. He burnt some of the gas produced by acting with Marsh's apparatus in the bulb of an oxidizing tube, and he got some water condensed in the bulb, which he found to be arsenious acid on trying it with ammoniacal nitrate of silver, which produced a yellow precipitate, and by ammoniacal sulphate of copper, which produced a green precipitate. He also tried it with sulphuretted hydrogen, which produced a yellow precipitate. He tried experiments with the metallic deposits, by applying chloride of lime to those obtained by Marsh's process on glass and porcelain, which removed them. That, together with the other results, indicates that the metallic deposit is not antimony, and that it is arsenic. From his own experience and knowledge he should say it was arsenic, though he cannot say that chloride of lime will not remove other substances besides arsenic. It will not remove antimony. He also exposed some of these metallic deposits on glass to a temperature ranging from 356° to 365°, by which they volatilized and left the glass; this is another proof that the metal is not antimony, but arsenic; antimony does not volatilize at the temperature mentioned, but remains permanent, while it is one of the properties of arsenic to become volatilized at that temperature. Some of the slips of copper on which he had got a strong steel-like metallic deposit by Reinsch's test were exposed to heat in a glass tube, and the metallic deposit became oxidized, and deposited itself higher up in the tube. That oxide he afterwards boiled in some distilled water, and tried again with the ammoniacal nitrate of silver, ammoniacal sulphate of copper, and sulphuretted hydrogen, and they gave the same precipitates as before, from which he concluded that the water contained arsenious acid. He had no doubt that the body he saw exhumed contained arsenic. He cannot say how much—perhaps not more than a grain, if so much, in the nineteen ounces of intestines he operated upon.

It seems, then, that Mr. Watson most satisfactorily proves the presence of arsenic in the disinterred body in the beginning of March, although Mr. Leigh could not do so on the preceding 4th of December! The learned judge's (Alderson) charge to the jury contains some significant passages. He commented particularly on the circumstances under which the arsenic had been detected; he said Mr. Hepworth, the medical man in charge of the case, had admitted he was not so much a chemist as a surgeon; and that, of the two medical men who performed the first analysis, Mr. Leigh should have been the more competent; he was a lecturer on medical jurisprudence; and if, on the first examination of the body before interment, he was not satisfied whether arsenic was present or not, he ought not then to have stopped; certainly that was the most likely time to have found the arsenic if any was present. On this occasion, remarked the learned judge, he did not detect anything which he was sure was arsenic; and it was not till the second examination of the body, after it had been exhumed, and when he had the assistance of Mr. Watson, the chemist, that he was sure of the presence of arsenic (this was Mr. Leigh against Mr. Leigh). If, before the body was buried, he was not satisfied, nothing could have been easier than to have gone to the coroner and told him so; when, undoubtedly, he would have had an order given him to go and obtain such other parts of the body as he might require. Mr. Leigh says Mr. Watson made the chemical examination after the body had been exhumed, and we have heard (said the judge) that *that* skilful chemist tested his distilled water, and all the other ingredients which he used, and the vessels in which he operated on the various parts of the body, to be sure that they were quite pure, in order to preclude the possibility of arsenic, by such medium, from entering into the parts he operated upon; but the quantity of arsenic which Mr. Watson found was but very small, not more than a grain, if so much, in the nineteen ounces of intestines; and, as the grave was wet, may there not be a possibility of this small quantity of arsenic being derived from water which had drained into the body out of the soil of the churchyard? It would have been more satisfactory if the arsenic had been detected in the first instance, instead of after it had been lying for three months in the ground. His lordship drew particular attention to the statement made by Mr. Leigh, that in cases of poisoning by arsenic white or yellow spots are usually found on the coat of the stomach, and that in this c

such were not in the stomach when the examination was made only a few days after death, but there were red patches. He advised the jury to weigh carefully the evidence bearing upon the purchase of arsenic by the prisoner, and that also which tended to show a motive for her making use of it in order to remove her husband. Her conduct during the illness was not thought inconsistent with the conduct of a wife attached to her husband. The questions for the jury to decide were these,—Were they satisfied that the deceased died from the effects of arsenic? Were they satisfied that the prisoner bought the arsenic just before the illness? Were they satisfied that she had a motive for getting rid of her husband? And was her conduct such during his illness as to lead them to a conclusion that she administered the poison to him? If they were of opinion that he died from arsenic, then the charge against the prisoner would become a serious one for their consideration.

We need not tell our readers the result. The jury acquitted Mrs. Johnson, because, in their opinion, the arsenic found by Mr. Watson had percolated into the viscera of the corpse since interment. Thus we see justice *has been done*, and all parties have gained. Widow Johnson has gained her liberty; toxicologists have gained most peculiar information; and Mr. Leigh has gained an inferential verdict in favour of his competency to undertake a chemical analysis. This inferential verdict was no less than the scientific character of this distinguished lecturer on forensic medicine required.

MISCELLANEOUS CORRESPONDENCE.

HOMŒOPATHY.
DR. HILBERS *versus* DR. ORPEN.

[To the Editor of the Medical Times.]

SIR,—I must beg the favour of your inserting the following observations on Dr. Orpen's last letter. We now see that he has entirely shifted his ground of attack on homœopathy and the homœopathists. In his first letter he stated that "the whole of our statements, practice, and books, was a system of enormous lying and deliberate humbug of the public, for lucre." Why? Because, forsooth, he could not produce those effects with the infinitesimal doses which Hahnemann and the homœopathist, assign to large or even poisonous doses of the same substances. I trust that I have already said enough to convince all unprejudiced persons of the injustice and illiberality of this accusation and, therefore, I shall say no more on the subject. But Dr. Orpen must not forget that it is a dangerous thing unjustly to tamper with the the honour and integrity of others, for he who wantonly does so must of necessity seriously compromise himself.

In the letter now before us, he endeavours to prove that the infinitesimal doses are insufficient to cure disease. As I have again and again said, I do not mean to attempt to prove the contrary although I myself am fully satisfied, and verily believe, that they are amply sufficient. The extent of my ambition is to induce others to submit them to the same ordeal that I have done I shall, therefore, only observe, in the words of Hahnemann, that, "if he who calls himself a seeker after truth will not make his search where alone truth is to be found, and that is in experiments, truth must remain undiscovered. It will not be got at by means of the multiplication table." The only deduction which can be attempted to be drawn from the abstruse calculations of Dr. Schenks is, that matter will no affect the animal fibre, except when applied to i in bulk, or in a concentrated form. This, as I before showed to all orthodox physiologists, is manifestly not true, because we know innumerable instances in which matter *does* powerfully affect the organism in quantities inconceivably minute. The experiments of Spalanzani showed that the 2,994,687,500th part of a grain of frog's spawn was capable of impregnating the ovum. The cool way in which Dr. Orpen accuses Bell, Muller, Carpenter, and, I believe, all other physiologists "of repeating only a common error," is very amusing. I must, however, leave your readers to decide between this gentleman and these eminent philosophers.

I shall now very briefly notice some of the other arguments contained in this letter against the homœopathists and their system.

First, then, as regards the Liverpool Dispensary. I stated that the average weekly attendance of patients now amounted to 300. Away goes Dr. Orpen for the reports, and finds that there have been only 10,240 patients admitted in the four years during which it has been established. Now, he has indeed discovered a mare's nest: my own words condemn him. How is it possible that, if 300 patients are *now* prescribed for weekly, only 10,240 should have been admitted in four years? I should have imagined that it would have required no great stretch of ingenuity to solve this problem. I would, however, suggest to him the idea, that it is more than probable that the weekly attendance has greatly increased since the year 1842, when the institution was first opened; and that, perhaps, in the first week the numbers, instead of 300, were under 30. Could not the discrepancy be fairly accounted for in this way?

2. Now, another wonder appears. One of the Liverpool homœopathic physicians has actually committed an error in diagnosis. This, indeed, is a powerful argument against homœopathy! It is true, that a greater disease has been mistaken for a less, which is rather unfortunate. With all respect, I would put it to Dr. Orpen's conscience, whether he himself has never fallen into error as to the nature of a disease; but would he like to be considered dishonest on this account? I wish I could say that I had never done so; and yet I confidently hope that my professional brethren will not condemn me because I make this confession. I could give Dr. Orpen the particulars of a case in which one of the ablest surgeons in England mistook sciatica for hip-joint disease; and yet I would defend this gentleman's honesty as I would my own.

3. He next favours us with one of his sweeping assertions, unsupported by a single jot or tittle of evidence. He says that we grossly exaggerate the cases we are called on to treat, and that the report of the Vienna Homœopathic Hospital is greatly falsified. Let him bring forward any reasonable evidence to prove this if he can, and I will meet him in the best way I am able; but, if he cannot, I for one unhesitatingly assert that the charge is false, and the mere baseless fabrication of his own disordered fancy.

I must notice one other of his arguments, and then I shall have completed my unpleasant task. During the last two years, it seems that Dr. Orpen has known of three cases which "have been killed by homœopathy." During the same period I have known at least three dozen persons who have been killed by allopathy, if the word "killed" means that they died under allopathic treatment. Such an argument as this would be all very fair if we contended that homœopathy and immortality were synonymous terms; that under our system patients never died; that, in fact, we were able to secure them from the ordinary fate of mortals. As, however (to the best of my belief), this has never yet been done, and as we at present merely claim superior powers over disease, and not a complete and irresistible power over death, I humbly submit that the death of Dr. Orpen's three friends, under the homœopathic treatment, is no proof of homœopathy being false, or of our being cheats and impostors.

I have neither time, patience, nor inclination to notice further such arguments as these. Indeed, I think that an apology is due to your readers for having apparently doubted their penetration by attempting to refute them. I cannot believe that the enlightened members of the medical profession, who are accustomed to weigh evidence, will attach more importance to them than they justly deserve. In future, therefore, I shall entirely abstain from trespassing on their attention, unless I see some better reason for doing so than I can discern at present. Besides, I manifestly labour under a great, almost an insuperable, disadvantage. It is easy to frame an accusation (such as that respecting the Vienna Hospital, for instance) in half a dozen lines, whereas it would take almost as many columns satisfactorily to refute it.

Before I conclude, I must once more beg most respectfully to urge on the profession the evident necessity there exists for investigating this subject further. The field is open to all; there is nothing required but a little patient experiment to solve a problem which has puzzled the medical world for half a century. If homœopathy is false, nothing else will so surely and speedily overthrow it. If it is true, nothing will be so likely to establish it; and I feel convinced that, if the profession were once assured that such was the fact, no considerations of personal inconvenience would hinder their gladly availing themselves of the advantages it offers them.

HOMŒOPATHY.

[To the Editor of the Medical Times.]

SIR,—There are a class of men existing and moving in the medical world for whose natural talents and amiable dispositions I entertain the highest respect, derived from a personal acquaintance with some of them. Sincere and honest, but credulous and erratic, they are liable to be driven about by every wind of new doctrine or heresy that may blow upon them.

One was a highly-estimated anatomical preceptor of mine. His prospects then promised well, and would undoubtedly have been realized had he been content steadily and perseveringly to "bide his time"; but he wandered from established medical science into the perplexities of mesmerism i and from one watering-place to another (a well-known migratory propensity of the genus), and at last launched on the ocean of hydropathy, where I greatly fear he will be drowned.

Another, when I was a student in the metropolis, was a promising physician, a member of the Westminster Medical Society, where I have once and again witnessed the coruscations of his intellect. He, too, left the beaten path, already well trodden by his professional fathers, pursued a similar course to that of my friend the anatomist, and is now lost in the labyrinths of homœopathy.

For such men (and for the unwary) my communication on homœopathy was chiefly intended. I wished to point out to them, that in their ardent search for truth they were actually stumbling over her. I suggested that they should examine whether their *similia similibus* be of the pure flame of Truth, or a deceiving *ignis fatuus*, likely to lead them into the quagmire of disappointment and disgrace; that the law they sought would probably be found internally, and not externally—latent and acting, or ready to act, and not needing to be introduced; that it was highly probable the agents of *régime* and *hygiène* were those to which they were altogether indebted for any success which might follow their efforts.

I am glad to have attracted the attention and inquiry of one of these worthy "Truthseekers," of whom, however, it may be feared that, "slight as may be his experience in the science (as he will have it) of homœopathy, he is already an adept in the art to which that system speedily leads—viz., the art of mystification, or the science which teaches the best mode of throwing literary dust in the eyes of readers." But I would ask my truth-seeking friend, if to disregard the substance, to set aside the facts, to dwell upon mere hypotheses, to carp at a figurative representation, to make quotations without their contexts, to cavil at a grammatical construction, be means likely to open to him "the door of the Temple of Truth? which is effectually

guarded," not only "against the footsteps of prejudice, bigotry, and intolerance," but also of captiousness, quibbling, and cavillation.

A full and fair reply to the observations of "Truthseeker" on my friendly communication "on homœopathy" might be made by its reiteration—*verbatim, literatim, et seriatim.* But, as I intend briefly to show the captious character of his remarks, I will content myself with a few repetitions, embodying the main points which I am anxious to keep before the mental view of our readers, as forming those upon which homœopathy will ultimately stand or fall in the estimation of the simple and sincere searchers for truth—those which "Truthseeker" has completely overlooked; fixing his undivided attention and twisting ingenuity upon those points, in the defence or support of which I am not desirous to give much consideration.

One proposition I hold is this, "The patient's diet being submitted to proper regulation, I am prepared to prove practically and ocularly that any case, curable as it is supposed by the administration of homœopathic medicine, is equally curable without the exhibition of an atom of medicine of kind." If "Truthseeker" consider this "a side blow at allopathy," so let it be; I neither wished, nor intended, to defend allopathy in the character that term indicates. Legitimate or established medical science is not *allopathy.* "A disease of the same nature, acute or chronic, existing in two or half a dozen patients, of like age and circumstances, subjected solely to a proper arrangement of diet, air, temperature, and exercise, shall disappear as quickly as when homœopathically treated—in fact more quickly, if the practitioner have a better knowledge than his opponent of the virtues and influences of those hygienic agents." If this stand the touchstone of experiment, as I am fully prepared to prove, or to try, then of what value are homœopathic drugs? Let it be put to the test; let it be subjected, as "Truthseeker" proposes, "to a tribunal of men of acknowledged abilities." Let the so-called facts, or, more properly, *fictions* of the system be first subjected—then its principles—"to a fair and impartial analysis, and judgment be pronounced accordingly." For I still hold and believe the assertion, that "facts are the only basis," or, I would say, to meet "Truthseeker's" sensitiveness as to grammatical accuracy (not my own sense of the elegant and the concise), the only *sure foundation* "of accurate knowledge." But facts alone are not sufficient, and unless they be collated, and their relations to each other and to general laws be deduced, by a careful induction, they lose the greater part of their value, and become, to use the apposite illustration of an able writer on political economy, little better than the undigested erudition of an almanac-maker, and afford no means of judging of the truth or falsehood of a principle or rule of practice." (a) "But I should like to know of one well-authenticated, undoubted, and modern or recent instance in which"—to meet "Truthseeker's" translation of Hahnemann—the "usual allopathic doses," in their effects, confirm Hahnemann's provings and statements; or in which that experiment has been satisfactorily repeated and confirmed which Hahnemann tried on himself when, as Dr. Hilbers gives it, "the thought occurred to him that it would be highly interesting to know how quinine, so noted in its efficacy in the cure of ague, would act upon himself. He at once tried it, and a febrile attack was the result; it produced in him what it cured in others; it brought his bodily system into the state out of which it removed others already in it. To his inductive mind this was clue enough to the principle of *similia similibus curantur.*" "How we apples swim!" or, in my own words, "Show me any other phenomenon said to arise from the use of homœopathic medicine; but let that result be clear, definite, direct; not occult, not needing to be deduced or made to appear: then I shall consider it a figment worth attention, though requiring the recurrence of the same results under the same circumstances, nine times out of ten, or ninety-nine times out of a hundred, to establish the facts beyond all question." I have often been amused by hearing a medical friend, possessed of quick mental perception, at once disperse some *wonderful* narrative, by saying to the relater, "My dear Sir, I question the facts." So, in spite of the opinion of "Truthseeker," in his own estimation, "an unprejudiced and independent reviewer," "that in his judgment the propositions of Dr. Hilbers have not been at all affected by the arguments of his opponents," I say Dr. Hilbers has never proved his propositions. The fundamental facts of the system are not confirmed. I question its facts. And it should be remembered that Dr. Hilbers first and spontaneously came forward to "indoctrinate" the readers of the *Medical Times* (see vol. xiii., page 79) in the art and mystery of homœopathy.

Another point I reiterate and maintain is, "In proof of the utter nullity of homœopathic drugs, I will engage to produce" many cases of disease of the character I have before enumerated which have been cured without the administration of a particle of medicine—to illustrate and confirm the first proposition I have reiterated; and, lastly, I can relate well-authenticated cases of the dangerous nature of homœopathic dogmas in cases of acute disease.

I shall now, in a few words, dispose of "Truthseeker's" cavillings. "He should at least have taken better care to instruct himself" that "analogy in philosophy denotes a certain relation or agreement between two or more things *which, in other respects, are very different.*" He should also have known that "integral, or integrant, is an appellation, in philosophy, given to *parts* of *bodies* which are of a similar nature with the whole."

As to the term *vis medicatrix*, I have anticipated many of his remarks by the passing observation (*Medical Times*, vol. xiv., p. 330), that "homœopathy, though it passively permit many of its confiding but deluded victims to perish by doing too little, will equally teach the thoughtful practitioner to confide in hygiene; to give less physic in some cases, to trust more to the *vis naturalis*, not always, by-the-by, the *vis medicatrix.*" Unite this passing remark with that made in my last communication. This law, the *vis naturalis vel medicatrix*, "acting not upon matter merely, but upon *living* matter, its phenomena are essentially connected with life itself; and, until the properties and contingencies of life be understood in their full extent and bearings, its extent and power will remain undiscovered," and we have a text upon which I shall be glad to hear "Truthseeker" expatiate to his heart's content. There is an illustration of his which somewhat aptly illustrates my figurative representation of the *vis*, viper-like, inflicting a fatal wound upon itself. In peritonitis, we have not the *vis medicatrix vel naturalis*, but the *vis abnormis vel morbida*, not probably "pouring into the membrane an excessive quantity of blood," but permitting its excessive accumulation. Then comes in the *vis medicatrix vel naturalis* to the rescue. Serum passes out of the vessels by exosmose into the peritoneal cavity, to be removed by the action of the absorbents. We imitate the efforts of the *vis* by the application of revulsives and derivatives, and by exciting the absorbents. We, perhaps, succeed; or the *vis morbida* being more powerful than the *vis naturalis*, although assisted by the efforts of orthodox science, causes us to fail. The law, "Dust thou art, and unto dust thou shalt return," reigns and forms a contingency which renders the *vis medicatrix* not a law "as unfailing and unchangeable as the laws which govern the phenomena of inert matter"; and perhaps we injudiciously and erroneously echo the "affirmation of the late Dr. J. Johnson, that in the exhibition of remedies he believed he had done more harm than good."

The doctrine of idiosyncrasy is certainly of a deeply interesting character, and "relates so particularly to peculiar tempers and dispositions not common to others," that I do think its further study is highly calculated to shed light upon the strange vagaries and hallucinations of the advocates of homœopathy.

A. [illegible]. Close.

Grosvenor-street, Manchester, April 12.

[We have thought it but an act of justice to our respected correspondent to insert his letter, and we must now decline opening our pages for further controversy on the subject.—Ed.]

(a) Quotation by Mr. Noble from Dr. A. Combe.

PRACTICE v. PRECEPT.

[To the Editor of the Medical Times.]

Sir,—The manly independence and unflinching consistency which characterize the conduct of your Journal I have hitherto been content to contemplate and ruminate upon in silence. Fain would I now indulge my mental *siesta* uninterruptedly, and little amiable do I feel at having my reverie disturbed by such a flagrant contrast as I have this day been betrayed into witnessing—a contrast which would move even stones to murmur. A sorry scribe, I entertain a wholesome aversion to writing myself down an ass; excuse me, therefore, if I ask the most obscure corner of your forthcoming number wherein to prefer my plaint. As the victim of seduction, of a misplaced confidence, I would seek, but dare not ask, your pity. You might justly reproach me with a hint that—

"It's well to be off with the old love,
Before you be on with the new."

To be candid, Sir, misled by syren signals, I have surrendered myself to the perusal of a contemporaneous print for a few weeks past. "hinc illæ lachrymæ."

Quackery is avowedly the bane of my unhappy profession; flatulent denunciations of its mischievous maraudings have appeared, a deadly war of extermination has been declared, and the heads of the profession have been called upon publicly to lend their aid by disclaiming, or otherwise, the surreptitious use of their names in connection with certain quack announcements: Morrison, the mesmerists, Holloway, the hygeists, homœopaths, hydropathists, Dalbys and Dinnefords, Locoeks and lollipops, have been apparently crucified, hashed, grilled, devilled, and dished up with a piquancy of style that might satiate a salamander, in a profusion that might mock the maw of a cormorant, and provoke this glutton to a Dandonian feat of self-indulgence, especially as Cockle's antibilious pills stand only a notch or two down in the bill of fare. Judging from the crafty records I had been perusing, the work of annihilation seemed all but complete, in the fond belief that the time was fast approaching when a quack would become a *rara avis*, like as a black swan or the fabulous phœnix, in my simplicity I had culled the laurel and twined it in a wreath to deck his brow, when the "exterminator" should be proclaimed throughout the land.—

"Vie misere mihi! quanta de spe decidi."

It was all a dream, a cruel delusion, which, reaching its climax, has exploded in my hands this blessed Saturday, the last that ever was. Doting, as usual, I seized with avidity the "——" (odious thing, "I can't say the word if I try"); but coy, as the American maid who describes the male of the poultry-yard as a "rooster," I would suggest that I seized the "*fleam*," plunged into a bloodthirsty refection on the mangled remains of the Cronins, Coffins, Flitcrofts, *et id genus omne*, till, as my glutted eye wandered in search of a fresh whet, the veil was suddenly ript from before it. Was this a dream? or that mesmeric manifestation, "clairvoyance?" If the latter, what will it *not* see through? In rampant and unblushing quackery out-Heroding Herod, the serpent, which had insinuated itself into my bosom under the guise of a scientific publication, was clutched convulsively in my hand, and stared me in the face, throwing back as from a mirror, into my very teeth, the humi-

liating portrait of an unmitigated fool. I, who claim to be a scientific member of a liberal profession, caught myself conning "Molly Coddle's Journal."

"Mary I believed thee true,
And was blest in thus believing."

Should I be preserved to my friends, and restored to my position in society, after such a narrow escape from scientific suicide, I do most unconditionally promise henceforth and for ever to abandon all M.P.rical medical literature, keep myself distant as Indus from the pole, stand off as far as "Mullin's Physics."

What has thus disturbed the equilibrium of my philosophical teapot? You might well ask, seeing that, midst shame and confusion, I have neglected to explain.

My nerves are so shaken I have barely energy to point to page 423: there it was I saw, or thought I saw, under the attractive heading "MEDICAL NEWS."—"COLLEGE FELLOWS," the very counterpart of an announcement which in *your* journal had been assigned its proper place, the *advertising columns*. Yes, there in the garb of medical news stood the *ipsissima verba* of a quack advertisement, which transplanted to so genial a soil, and under such a sunshine, had actually regenerated and wagged with impudent defiance that venomous tail of which you, even as an advertisement, had prudently docked it, sting and all.

The devil is the father of all mischief, and doubtless this black job will be saddled on one of his imps. How could an *infernal minor* be expected to diagnose as *hideous* in another that caudal continuation so ornamental in *propria personâ*, and which, bearing only a sky-blue tint upon the *ipse dixit* of his parent, the world has been content to recognise as the line of demarcation between *neat* and *gaudy*. Far be it from me to plead in aggravation of punishment to this delinquent. I address myself to *you*, Sir, in a spirit of friendship now, to warn *you* against betrayal by any such hopeful scion of the house of Beelzebub. Once *you* unwittingly allowed a back number to *slip out of* your office; *you* personally paid the penalty; but, should *you* permit such medical news to *slip into* your columns, Fate only knows upon whose devoted head the penalty might descend.

Little did I deem, when listening to Mr. Slangwalloper Lawrence, fifteen months ago, that I should be found joining in the response, "true, oh King!" but, when newly-fledged members of a higher grade, to wit, fellows, are to be found wallowing in the polluted mire of the filthiest and deepest abyss of medical quackery, then do I proudly acknowledge my error, and declare that to *extra*-ordinary emergencies such as these, the simple members are utterly incompetent. Thus is the dignity of the College upheld with a vengeance. I ken not what kind of document might be issued to distinguish a "fel low" from the common herd; nor the decorative design which might have been selected as a headpiece. If the furnishing a prize motto is still matter of competition, be so good as register in my name, "Quo lapsus—quid feci."

Can you inform me, Sir, at what respectable society in London the following proposition would be fairly discussed? By how much were Messrs. S. and R., on retiring to bed as *fellows* of the College one Wednesday night, better surgeons than they were on awaking as simple *members* on the morning of the same day?

I am, Sir,
Your obedient servant,
O TEMPORA! O MORES!
Member of the Royal College of Surgeons of England, and Odd Fellow, B.O., Manchester Unity.

April 17.

P.S.—Great discoveries have been stumbled upon by accident; possibly my remarks might throw a light on the periodical *complaint* of your contemporary's oppressive weight of correspondence in the quackeric region. A knowledge of disease is half its cure.

THE PONTYPOOL SULPHURIC ACID POISONING CASE.

Hannah Thomas, 25, was indicted before Mr. Justice Maule, on Monday, the 12th inst., for the wilful murder of James Thomas, her illegitimate son. The case excited much interest, and the court was crowded throughout the whole of the trial. The prisoner wept during the whole of the proceedings, and seemed to feel her painful position. Mr. Greaves and Sir T. Phillips conducted the prosecution, and Mr. Cooke defended the prisoner. She pleaded "Not Guilty."

Mr. Greaves, in opening the case to the jury, said, in any case where a jury were called upon to investigate the circumstances of a person's death when the crime of murder was involved, it was a matter for their most serious and attentive consideration. But when the case was the death of a child at the hands of its mother, he thought they would agree with him its claim to their attention was much enhanced. This, unfortunately, was the nature of the case they were now called upon to investigate.

Ann Perkins was the first witness examined. She deposed that she was the matron of the Pontypool workhouse; knew the prisoner at the bar; she (Thomas) was admitted into the workhouse on the 3d of December; was then pregnant; was delivered of a male child on the 16th of February; on the 26th of February she was going her round, and went into the lying-in-room, where the prisoner slept; it was between eight and nine o'clock at night; the prisoner was in bed; asked her how the child was; she said it was poorly, and had been so all day, and would not take rest; she thought the child had fits. Saw nothing in the appearance of the child to induce her to suppose the child was ill. Margaret Thompson, a pauper, slept in the room. She acted as a nurse. Saw the child next morning; the child was then dead. Its lips were black and scorched. The bottle produced was kept in the women's kitchen. The teacup produced was similar to one which was near to the bottle. They both contained a lotion for application to children's scald heads. There is a regulation in the house that no person confined in the lying-in-room or the sick ward shall leave those rooms without the permission of the master. This was known to the prisoner. I informed her of it. The dining-hall is between the kitchen and the lying-in ward, and the door was kept locked.

Moore Matthew Perkins, the master of the Pontypool workhouse, and the husband of the last witness, deposed that on the morning of the 27th of February he was called for to see the child of the prisoner; went to the lying-in ward, and found the prisoner there; she was in bed; appeared to be pretty comfortable; the child was lying dead alongside of her; examined the child, and found no marks of violence on it; afterwards saw it in the dead-house, and there observed that the lips were scorched and burnt; fetched the medical officer, who also made an examination of the child.

Mary Miller deposed that she was a pauper in the Pontypool workhouse; that the bottle and cup produced contained a lotion which was given to her for her children's heads; they had the ringworm; the doctor sent the lotion; recollected the prisoner sitting beside her while she was dressing the children's heads; left some of the lotion in the cup; should think about two or three tablespoonfuls; left in the cup a piece of rag with which was applied the lotion; after having done with the cup put it back in the window in the kitchen on the right-hand side of the yard-door; went into the kitchen a second time, about eleven o'clock, and saw that the bottle and cup had been moved to the middle of the window; there was no lotion then left in the cup; the rag was there; stripped the prisoner's child when it was dead and laid out the body; there were no marks of violence about him, excepting in the lower part of the lip, which appeared to have been burnt; asked the prisoner what was the matter with the child's mouth; she replied she did not know; the clothes produced are those which she took off the child; Charlotte Harris, Ann Lewis, and herself, washed the clothes, and among them the clothes worn by the child; all engaged noticed that on washing them they tore in a similar way to that in which her children's caps did when they were washed; there were stains upon the clothes like yellow, the same as was on her boy's cap; saw the shirt in the evening; it was torn in a similar way; the napkin with which the prisoner wiped away the froth from the child's mouth was similarly torn.

Cross-examined: The mark on the lip of the child was red and about the size of a pea; the place where she left the bottle was about a yard and a half from the ground.

Jane Rees, a girl fifteen years old, deposed to seeing the prisoner in the kitchen two days before the child died; she saw her near the window, and heard the rattle as of a cup; there was a bottle on the window at the time; after dinner she was in the lying-in-room; she there saw the baby who was sick; what she saw it throw up was black and red; the prisoner said there was nothing the matter, and she should be glad if the child was to die.

Ann Lewis, a single woman, living in the Pontypool Union, also saw the prisoner in the kitchen; prisoner stood near the window; the bottle and cup were there, and she saw the prisoner with the cup in her right hand; when she went in the prisoner pushed the cup towards the bottle; the baby was crying. This witness also saw the child throwing up some yellowish stuff.

David Conway Evans, an apprentice to Mr. Lawrence, surgeon, of Pontypool, mixed up the lotion contained in the bottle. It consisted of one part of sulphuric acid to twenty-nine parts of water.

Mr. Cossens, surgeon, of Pontypool, was next examined. He said: I attend the union workhouse as a medical officer; the child of which Hannah Thomas was delivered was a very fine and healthy child from its birth; I saw it dead on the Saturday. I first examined the body externally, but could find no marks of violence on it, nothing more than an abrasion on the external border of the lower lip; I inquired of the prisoner the cause of her child's death, as far as regarded the symptoms it exhibited; she told me the child had had catchings and jumpings, which I thought was the result of fits or convulsions; I asked her whether it had vomited; she replied that it had not; she also said that she had given the child nothing but the breast. I repeated my questions; but she replied in the same way. I asked her why she had made no communication to the master relative to the child's illness; she said that she had told those around her. I made no further investigation that day. Prisoner asked me whether she might leave on the following Monday; I said, "No; since we are not perfectly satisfied as to the death of your child." On Tuesday I opened the body; I examined the mouth, the throat, the passage to the stomach, and the stomach itself, and the small intestines. The mouth was in a very healthy condition, but in the back part of the throat the mucous membrane was corroded and detached in several places; the same was the case down to the stomach; the stomach was slightly inflamed in places; the mucous membrane was softened so much that it could easily be removed by being scraped with the nail; the small intestines were also corroded, but in a less degree than the stomach; I tested the parts with litmus paper, to ascertain whether there was any acid in them; the reaction on the litmus paper was very slight; acid would not, in the natural state, exist in that part which lies between the throat and the superior orifice of the stomach; I believe acid might exist in the stomach from natural causes; I also examined the lungs, the liver, and the brain; I found them congested; the internal portion of the brain, however, was comparatively healthy; the sur-

face of the brain seemed congested. I was led to believe, at first, from my own examination, that intense inflammation was the cause of the corrosion observed.

Sir Thomas Phillips: Now, Mr. Cossens, assuming that the child was in a healthy state on Thursday morning, in your judgement could the state of things which you found, and which you have described, have made their appearance on Saturday evening from natural causes?—It is not at all probable.

His Lordship: You are not asked whether it is probable or not. The question is a plain one, and it is a wonder you cannot answer it directly. Could those effects have been produced in this short time, or could they not?—In my opinion they could not.

Sir Thomas Phillips: But it might have been produced by the administration of sulphuric acid?—Yes.

How much would have been requisite to have produced those effects?—A tablespoonful would have been enough on an infant of that age. The burning of the lip and the frothing at the mouth would have been produced by the same cause. I have examined the clothes; the marks on them, and the condition in which they appear, are likely to have been produced by acid, such as I have described; the first effect it would have would be to produce a stain, and when put in water and washed it would be very likely to produce holes similar to that produced; on coloured linen it generally produces a red stain; I have tried acid diluted to the same extent as this is on some linen, and have found the effects to be such as I have described, as far as I can judge; I analyzed the contents of the stomach, but could find nothing therein to explain the cause of death; the vomiting would account for the absence of acid in the stomach.

Cross-examined by Mr. Cooke: Have you told the whole truth, Mr. Cossens?—Certainly, so far as I know.

Upon your oath, sir, were not the appearances you saw likely to arise from natural causes?—Not very likely.

Could the state in which you found the stomach, and intestines, and other parts, have been produced by natural causes?—No; it could not.

Were you able to find in the stomach and intestines any trace of sulphuric acid, or any other deleterious substance likely to cause death?—No.

Why did you not tell us that before?

Sir T. Phillips: I did not ask him the question.

Mr. Cooke: I understand you to say that there was a slight abrasion on the lip?—I did.

Now, my learned friend spoke of excoriation; what is your opinion on those two words—are they of a different meaning?—The difference is little.

As a highly-scientific man, do you say that you know no difference between abrasion and excoriation?—No; there is none.

Very well, sir. Would an ulcerated nipple in a mother produce any effect on a child?—Yes; it does sometimes. I don't suppose it always does.

Did you examine the poor woman to see whether she had a nipple bad or no?—I did not.

Is not froth at the mouth a natural result of convulsions?—Yes; it is sometimes produced by convulsions.

Is it not a natural result, I ask?—It is.

Supposing the child to have died of convulsions, would you not expect to find, on examination, its lungs and the vessels of the brain congested?—Yes.

And in the case of the blood being thrown to the brain the remaining part of it might be healthy?—It might.

Do you not know, Mr. Cossens, that a person apparently well might be, from convulsions, perfectly dead in an hour or two?—I do.

Am I rightly informed by the medical books I have looked at that illegitimate children are larger in growth than legitimate children?—Really, sir, I cannot answer that question.

Is it not a fact that full-grown children more frequently die suddenly than those who are more weakly?—I don't know.

Do full-grown children suddenly die in infancy?—They do.

From convulsions and other causes which the medical science cannot explain?—Yes.

Do you happen to know that sulphuric acid is used in bleaching cloth?—I am not prepared to answer that question.

Did you never hear of its being used to take iron moulds out of shirts?—No.

Do you not know that sulphuric acid is used to discharge the colour out of cloth?—I am not prepared to say; it may be the case.

When you examined the child's mouth, you could find no clue to the child's death; there was no ulceration?—No.

I take it, Mr. Cossens, that an infant ten days old would be a considerable time in swallowing sulphuric acid and water?—Perhaps it may be so.

Why, sir, sometimes when you give sugar and water to a young baby ten days old it would refuse it, will it not?—Yes.

Were you not surprised, then, to find the entire absence of ulcers from the mouth?—I was rather surprised.

It had been suggested to you that it was supposed that the child had died from poison?—It had.

Sulphuric acid is extremely sour, I believe, and the taste very disagreeable, worse than vinegar?—It is.

It is, in fact, diluted oil of vitriol?—Yes.

When did you first learn that Mr. Brew, your assistant, was coming here as a witness?—On Saturday last, I think.

Did you send for him?—I did not.

The witness then, in answer to his lordship, said that if acid, as strong as that contained in the bottle, had come in contact with the mouth of the child it would have produced sensible and visible effects. Unless it was poured down the throat without touching the mouth, he could not account for the absence of any effects on the mouth.

Charles Brew: I am a surgeon, and assistant to Messrs. Lawrence and Cossens; I have been in practice since August, 1842; my practice has been very extensive. Mr. Cossens showed me the passage which leads from the mouth to the stomach, which he had taken from the child, and some portion of the intestines; in these parts I observed the almost total destruction of the lining or mucous membrane; it was destroyed by its removal from the subjacent parts; it was what we call corrosion; it was not removed by inflammation arising from natural causes, decidedly; I cannot say whether it was taken off by the surgeon; I am decidedly of opinion that it was removed by some corrosive irritant; diluted sulphuric acid is an irritant that would be likely to produce those effects; I prescribed the mixture in the bottle produced—sulphuric acid and water; a tablespoonful or less would produce the effects. In my experience as a practitioner, and from my knowledge derived from reading and other sources, I decidedly do not believe that any natural causes have produced the appearances; an ulcerated nipple on a mother's breast would not produce such effects on a child, nor convulsions, nor sudden fever.

Cross-examined: I did state that the detached parts of the mucous membrane might have been severed by a surgeon's knife, but that was a mistake; I now say quite the contrary; a surgeon's knife would injure the muscular fibre beneath; I was first spoken to about coming as a witness yesterday; the examination of the parts of the body was made by me before the coroner's jury delivered their verdict.

Mr. Cooke: Having mentioned your great experience, perhaps you can tell us whether a young infant put to swallow vinegar would not resist it so as to cause some portion of it to remain in the mouth?—It might do so; it depends entirely on the strength of the vinegar.

His Lordship: Take the weakest kind of vinegar?—I think it would.

Have you any doubt about it, as a scientific man, with all those years of experience?—No.

Do you consider that the mouth is less sensitive than the throat?—The mouth is less sensitive.

The learned counsel for the prosecution said this was the conclusion of their case; but, with the permission of his lordship, he would recal Mr. Cossens and put to him one question. It was this: Did Mr. Cossens remove the mucous membrane with a knife?—Mr. Cossens: Decidedly not.

Mr. Cooke then addressed the jury for the prisoner. They might suppose that a poor woman just come from a parish workhouse had but very little means for employing an advocate to appear in her defence. She had, however, to thank some humane and considerate persons, who were not willing that she should stand her trial here to-day with all these prejudicial circumstances against her with what they were pleased to consider the benefit of counsel. He did not appear before them, therefore, instructed by an attorney, and with all the advantages which were generally enjoyed by barristers in such cases. It was usual in cases which involved the crime of murder to endeavour to ascertain a motive which might have induced a party to commit an offence so unnatural. Love of plunder, desire of revenge, were frequently brought forward to satisfy a jury in this particular; and, in cases where a mother was charged with the destruction of her illegitimate offspring, the inducement might be found in the endeavour to conceal her shame. This, however, could not be said to apply to this case. There was not only no concealment attempted, but the mother came into the house supplied with clothes for her child; and, not only this, but up to the very hour of death was she proved to have exhibited the utmost anxiety, solicitude, and affection. There was but one witness—he wished he could pass over it without remark—who had attempted to insinuate that the mother had acted indifferently in the matter. Only Mr. Perkins, the turnkey, the policeman, the quondam West India something, had said that the prisoner appeared pretty comfortable when he came in. They had the evidence of the pauper that slept in the room to show to the contrary. He remarked on the impropriety of a man visiting the lying-in-room, and of leaving poison in a pauper's kitchen; he should have thought the regulations of the poor-law commissioners would have prevented this. He then commented on what he called the shuffling way in which the medical witnesses gave their evidence, and said it was a pity that parties belonging to a profession so useful, and, when properly carried out, so honourable, should be led to bias their minds on a matter of such importance. He thanked goodness he was not brought up to the profession of a country surgeon. He would impress upon their consideration the fact that no traces of unfairness were to be discovered in the mouth of the child. There was no pretence either for saying that a spoon had been used; and how could a poison so strong and disagreeable to the taste be got down the throat of an infant so young without leaving some ill effect behind in the mouth of the child? He enlarged on the fact (acknowledged by Mr. Cossens) that all the appearances in the lungs, brain, &c., of the child might be accounted for by natural causes. A great deal had been said about the state of the clothes. Why, it was acknowledged that the children with the ringworm went to all parts of the house, and where would they more probably go than to see the last new baby? Besides, one of the articles that was said to be torn by the acid was the child's cap, so that at least they would acknowledge that it was not likely that the top of its head would be affected by what was poured into its throat. It was well known that children the most healthy had frequently died

suddenly of convulsions. Especially in this neighbourhood, where the heir-apparent of one of the proudest families in the country had died, was this fact known. And if this was the case—if a child, surrounded by all the luxuries and comforts which this life could afford, had baffled the most eminent of the medical profession in the kingdom in the attempt to discover the cause of its death—was it not probable that the son of an unfortunate pauper, possessed of none of these advantages, might die under similar circumstances? He was sure they would give the fullest consideration to the evidence which had been laid before them; and he was perfectly convinced that they could then arrive at no other conclusion than that it was insufficient to warrant them in finding this woman guilty of murder.

His Lordship then summed up the evidence. He thought, with the learned counsel, that it would be far better that a woman should perform the duties of visitor to the lying-in-room, and that it was highly improper to leave a bottle of deadly poison in a pauper's kitchen, especially where there was, as was the case in this instance, an idiot in the same room. He went through the whole of the evidence and commented on prominent parts of it. With reference to the evidence of the medical witnesses, his lordship remarked it was generally a matter of conjecture, of guess, which their scientific knowledge enabled them to make. It was not like the statement of an eyewitness, who might, for instance, see another person on a road. It was rather like seeing their footsteps, or the vestiges they might leave behind them, of which a person might form a very strong opinion that they were the footsteps of the certain other person. It was a matter of opinion and not a matter of fact. In this case, then, there were vestiges which might have been produced by other substances and not by the poison itself. He had heard that during the last twenty years the medical science had made rapid and wonderful advances. So he dare say it was said twenty years ago, and so it would undoubtedly be said twenty years hence; and probably the science would never arrive at perfection. It was very true that "man is fearfully and wonderfully made." The younger surgeon who had been called before them had spoken more confidently on the matter. They generally found it to be the case that the rising generation were more confident and thought they knew a great deal more than those who went before them; and undoubtedly they had the experience of those who preceded them. But he always found it to be the case that the more a man knew the less confident he was, and the more he found he had still to attain it. He then desired the jury to take the case into consideration, and return their verdict according to the evidence which had been brought before them.

The jury consulted for a few minutes, when they returned a verdict of *Not Guilty*.

The court then rose.

DEATH OF A LUNATIC FROM VIOLENT TREATMENT.—COMMITTAL OF TWO KEEPERS.

Thames Police-office.—On the 13th inst., two powerful men, named Samuel Garrett and James Downes, late keepers at the Grove-house Lunatic Asylum, Bow, Middlesex, were brought before Mr. Yardley, on remand, charged with having caused the death of a lunatic pauper named William Rank.

Mr. Clarkson, barrister, and Mr. Law, solicitor, prosecuted on behalf of the Commissioners of Lunacy. Garrett was defended by Mr. Pelham; and a gentleman from the office of Mr. Vann, a solicitor, appeared for Downes.

Mr. Clarkson, in stating the case for the prosecution, said the Commissioners of Lunacy, for whom he appeared, charged the prisoners with the manslaughter of a poor lunatic who was under their charge. They had no desire to excite any prejudice against the men at the bar, but to put them fairly on their trial for the manslaughter of the deceased. He proposed, in addition to the evidence given on a former occasion, to call a convalescent patient, who saw the violence committed on the deceased, and who was in a fit state to give evidence. He should also produce other persons, whom the legal gentlemen engaged for the prisoners might call if they pleased. One of those persons had assisted in securing and beating the deceased, but he did not feel justified in charging him with the prisoners.

Mr. Pelham said he might see a necessity to ask some questions of the party mentioned.

Mr. Clarkson said he was in the court, and that the commissioners would keep back nothing.

Mr. Yardley would like to hear the opinion of the medical superintendent of the asylum as to whether the convalescent patient could be examined with safety.

Dr. Palmer, the gentleman appealed to, said the patient was quite free from excitement, and that he was to be discharged from the asylum to-morrow.

William Pride stated that he was an assistant to Mr. Byers, at the Grove-house Asylum, and had been so three months. He was engaged in No. 3 ward. The prisoners were employed as assistants in No. 1 ward, On Saturday, the 27th of March, the deceased Rank was a patient in No. 1 ward. On that day he heard a noise in No. 1 ward, which was next to the one where he was. He heard the prisoner Garrett ordering Rank to put his clothes on, and saw Rank standing on the floor in a tottering manner. Both prisoners were standing about three yards from him, and one of them had a strait jacket in his hand. They appeared to be frightened at Rank, and stood aloof from him. Witness seized Rank, whose back was towards the door, as he entered the ward. The blood was running down Rank's cheek in a stream. Garrett immediately placed a handkerchief round the deceased's neck and threw him on a bed. Garrett then pressed his knees on the lunatic's chest, and Downes at the same time commenced beating the deceased in a savage manner, and struck him ten or twelve blows with his clenched fists on the left side of his body. While Downes was beating Rank as hard as he could, Garrett stood up with one foot on the floor, and his other knee upon Rank. It appeared to witness that the whole weight of Garrett's body was upon Rank. While Downes was inflicting the blows with merciless severity, Garrett called out, "Give it to him; serve out the old devil." Witness repeatedly begged of them to desist; but they continued their ill-treatment, and struck him and kicked him again. Witness said, "Drop it." At that time Rank was getting nearly exhausted, and could not make any noise. The handkerchief was held tight round the man's neck by Garrett, and he could not breathe. The poor man foamed at the mouth, from which also the blood was flowing copiously. The prisoners then dragged Rank off the bed on to the floor, and put the strait jacket upon him. Rank never spoke after the sleeves of the jacket were tied or crossed behind him. Garrett was unable to fasten the tape of the strait jacket between the arm and the chest, and he took Rank by the shoulders and struck him four or five times with his knees in the right groin. Rank sighed and groaned heavily; he leaned forward, and the blood gushed from his mouth and nostrils. Garrett then gave orders for the patient to be taken down stairs and locked up in the cell.

In answer to questions by the magistrate, the witness said, that when Garrett forced his knee against the diseased, he said, "Keep in your belly, you old devil." He never saw Rank alive after he was locked up in his cell. He saw the body after the coroner's inquest. There were marks on the left side of his chest, where he was struck. They were black marks. He saw no violence on the part of Rank, nor any marks of violence on the persons of either of the prisoners.

In cross-examination by Mr. Pelham, Pride said that Rank was struggling at the time he was lying on his back, but he did not see him kick or bite either of the prisoners. Rank was always a violent man, but he was not in the refractory ward.

Walter Mecklenburgh, a convalescent patient of Grove-house Asylum, who gave his evidence in a very precise and collected manner, stated that he slept in the ward No. 1, and the prisoner and the deceased also slept there. At daybreak on the 27th of March, Garrett called to him for assistance, and he got out of bed and found Rank attempting to strangle the keeper. One hand was grasping the keeper's throat, and with the other he was putting a strap over Garrett's head. Witness immediately seized him by his arms, pinioned him, and pulled him into the middle of the room. A struggle took place, and they both fell. They soon got up again, and Rank then recognised witness and said, "Oh, it is you; the last person I should have expected." Garrett then called for another keeper named Chumley, who slept in the next ward. Rank fell on his right side, with the arm of witness underneath. Chumley pulled the deceased back, threw him down, and struck him with great violence. Chumley got the deceased on the floor by kicking his legs from under him. Garrett had previously gone down stairs for a strait jacket, and when he returned he struck the deceased on the mouth and caused the blood to flow. Downes came into the ward at the same time and attempted to put the jacket on Rank, who resisted. Garrett called for a scarf or handkerchief, and one was thrown to him, which he made fast round the deceased's neck, and held him down with his knees on his body till the jacket was put over him. Rank became quite black in the face; his tongue protruded, and his eyes glared. It was such an appearance as a man would present who was being strangled. Rank struggled for a time, but the handkerchief round his neck was too much for him. He was overpowered and became quiet. The jacket was then made fast over him, and he was dragged to his bed. He was sure Rank became exhausted by the violent means used to subdue him. Garrett put his knees upon Rank, but not with any degree of violence. Downes struck the deceased several times, while he was down, about the body and side. Rank was striving to get away at the time. Garrett said to Downes, "Gently, that will do." He did not see Rank kick either of the prisoners. The deceased was fastened to his bed, and was not released until the other patients had breakfasted. The strait jacket was then taken off, and he became as violent as ever. He struck at Downes, but the blow did not take effect. Downes then struck him a violent blow on the side and knocked him down. Garrett went to the assistance of Downes, and held Rank down and pressed his head against the floor to prevent his rising. He did not see Pride offer any violence to the deceased.

The witness underwent a long cross-examination by Mr. Pelham, from which it appeared Chumley was in the ward at the commencement of the affray, and that Garrett would certainly have been strangled in his bed if the witness had not gone to his assistance.

Thomas Lynch, an assistant keeper, was sworn, and answered a few unimportant questions.

Mr. E. Palmer, the medical superintendent of Grove-house Asylum, stated that he was called to see the deceased on Saturday, the 27th of March. He was then confined. The strait waistcoat was upon him in a proper manner, and his arms in front. The patient was in a very excited state. Garrett had reported that Rank was violent, and accompanied him to the cell. The deceased began to threaten Garrett. He observed the man's left eye was contused, but saw no other marks of violence at that time. He gave orders for the patient to be kept in a state of seclusion, and prescribed medicine and a proper diet for him. In the evening he found the patient in bed, tranquil, but very sullen. He complained of pain all over. Witness asked

Garrett how the contusion on Rank's eye was produced? to which he replied, that Rank had attempted to strangle him; that, with the assistance of other keepers and Mecklenburgh, he had put a strait jacket upon him and confined him to the bed; and that when he went to get him up at breakfast time he was very violent, and he put him in confinement. Garrett also stated that the black eye was produced in the scuffle, but in what way he could not exactly say. On the same evening he again examined Rank, and found several contusions upon the left side, just over the ribs, and a contusion on the chest, which might have been produced by pressure. He passed his hand carefully over the man's ribs; they might have been fractured without his making the discovery then. The marks were those of recent bruises. He believed he did inquire of Garrett how the bruises were occasioned, and he answered by a general statement that the deceased was exceedingly violent. On the following morning the deceased complained of some pains and a giddiness in the head. The patient died on the 1st of April. On the morning after the occurrence in the ward there was considerable reaction, and he bled the patient. The symptoms gradually became worse till the evening of the 31st, when he discovered that an effusion of blood had taken place into the left pleura. From this period exhaustion progressed rapidly, and he died on the following day. The deceased had been under treatment for a disease of the heart while in the asylum, and he showed great mental excitement when the action of the heart was increased. After death, in consequence of the rumours that were communicated to him by other patients that the deceased had been cruelly treated, he wrote to the coroner, and an inquest was held on Saturday, the 3rd of April, and a verdict was returned, attributing death to a disease of the heart. In consequence of the evidence of Pride given on the inquest, he made a *post-mortem* examination of the body, and found contusions on the left side of the chest and in the left groin. The fifth rib on the left side was obliquely fractured at about three inches from its cartilage, the broken end of the anterior portion having perforated the pleura. The sixth and seventh ribs were transversely fractured about an inch further backwards than the fracture of the fifth rib. The eighth and ninth ribs were also transversely fractured, about an inch still further backwards. The broken ends of the sixth, seventh, eighth, and ninth ribs were in apposition, and the surrounding textures not torn. The witness, after describing the appearances at great length, said death was caused from effusion into the chest resulting from inflammation of the pleura, induced by the perforation of the fractured end of the fifth rib. He thought the ribs might have been fractured by pressure or severe blows, or by pressure of the knee. He afterwards examined the head and found nothing to alter his opinion as to the cause of death.

After a long conversation between the learned counsel and Mr. Pelham,

Mr. Yardley said he should commit the prisoners for trial for manslaughter.

Mr. Pelham made an energetic appeal to the bench in applying to the magistrate to accept of bail.

Mr. Yardley said he could not think of taking bail in a case of this serious nature, and committed the prisoners to Newgate for trial.

The deceased was fifty-eight years of age.

THE LATE RICHARD CASSON, Esq., SURGEON, &c.

On Friday, April 2nd, died, at his house in Gracechurch-street, London, Richard Casson, Esq., Surgeon. He had been in practice for many years at Hull, in Yorkshire, where he was highly respected for his sound professional qualifications, and for his sterling worth and honourable character.

In conjunction with the late excellent and worthy Dr. Alderson, he established the East Riding Lunatic Asylum, which is now under the superintendence of his son, Mr. F. W. Casson surgeon. In this institution he manifested all the higher attributes of his character by devoting his clear and lucid intellect to ameliorate the physical and moral condition of his patients. And so kind and considerate he was with them, that his daily visits diffused a gleam of pleasure even to the most melancholic.

Facts might be cited to prove that his love for his profession was sincere, and his ardour in obtaining a thorough knowledge of it, zealous and untiring. This was not only the case in reference to his general practice, but was shown in his benevolent efforts to mitigate the real or imaginary sufferings of the insane, in which he was aided by his benevolent colleague, who thus jointly introduced every rational treatment, and were, therefore, in advance of their age.(a) In his manners he was mild and firm; and possessed great self-dependence, with extraordinary presence of mind in any sudden emergency. And such was his urbanity and gentlemanly bearing, that when consulted by his juniors, or by men of his own standing, he never *dogmatized*, or suffered any expression of his opinion to lessen their own self-esteem. His opinions were put in such a way that it would seem as if the intellect of his professional querist had excogitated them. His *diagnoses* were always sound, because he did not treat for symptoms, but for their causes. And, although in an extensive practice for many years, he always found time to keep up his knowledge of every discovery in medicine, surgery, pathology, &c. His sound and discriminating judgment showed great facility in distinguishing the *obvious* and the *true*, from what was merely speculative or hypothetical.

Indisposition obliged him, two or three years since, to leave the place of his nativity, and the field of his extensive usefulness. And, as London seemed to agree with him better, he became a partner of Mr. English (one of his talented pupils), and, had his life been spared, he would in all probability have obtained an extensive practice in the metropolis. He died a comparatively young man, not quite fifty-six years old, from an exhausted frame (b), but with a mind full of knowledge, and a heart full of kindness; respected by his contemporaries, esteemed by numerous friends, and deeply lamented by his intelligent widow and numerous family.

The writer of this brief notice will long cherish his memory, not only for his worth as a man, and for his professional ability, but for his *moral* courage. Among other evidence of the latter might be cited the fact that he advocated phrenology when it was *tabooed* by the profession, and by the public it was regarded as a species of "black art." But he was one of its earliest advocates in this country, acknowledging, on all occasions, his conviction of its importance in the treatment of the insane; and about the year 1825 or 1826 he formed, with some few medical men, "The Hull Society for Phrenological Inquiry;" a society not satisfied with mere assertions; and the late illustrious Dr. Spurzheim often, when speaking of it to the writer, called it a model institution worthy of imitation.

The *Hull Advertiser* of April 9, after speaking of his demise, concludes the article with the following just and honourable tribute:—" In all relations of private life he was amiable, upright, and benevolent. His attachment to liberal principles was as steady as his views were sound and comprehensive. He will long be lamented by a wide circle of friends, and by none more sincerely than the poor, whose friend he was throughout the whole of his professional life."

Brighton, April 18. J. L. L.

(a) The writer of this article alludes to a period of more than twenty years past, when he himself in practice in Hull, without detracting anything from the merits of Dr. Conolly, &c.

(b) Not having heard anything of a *post-mortem* examination, I am not certain what caused his death. He used to acknowledge that he was suffering from chronic bronchitis.

GOSSIP OF THE WEEK.

Apothecaries' Hall.—Gentlemen admitted members, April 8:—Frederick Mason, Charles Astley Walters, Charles John Gibb, Charles William Izod, Thomas Sympson, Henry John Waterland, John Lloyd, John Jones Parrish, Samuel Osborne Habershon, Howard Frederick Johnson, John Packer, Richard Branwell, John Willan, Joseph Marshall, Simon Caldcleugh, and Samuel Clewin Griffith. April 15:—Frederick Freeman Allen, William Palmer, William George Harvey, William Mott, William Ellis Hambly, Abraham Jubb, junior, William Price, Edward Haycock, and William Alexander Bryden.

Royal College of Surgeons.—The following gentlemen, having undergone the necessary examinations for the diploma of this college were admitted members on the 16th instant—viz.: Messrs. Peter Augustus La'Farque, Asylum-road, Old Kent-road; Walter Yonge, St. Ives, Cornwall; Frederick Moore, Shelsley, Beauchamp, Worcestershire; Samuel Wilks, Camberwell; Hugh Robert Rump, Wells, Norfolk; Thomas Webb, Cheadle, Staffordshire; John Edward Ellerton, Aberford (near Leeds); Edward Adams, Great Barton, Suffolk; William Daniel Michell, Truro, Cornwall; David Hughes, Plas Trewydd, Llandegla, Ruthin; and Charles Munday, King-street, Snow-hill. At the same meeting of the Court Mr. Henry Piers passed his examination for naval surgeon; this gentleman's diploma from the same college is dated December 11, 1840.—April 21st: H. B. Gibbon, J. S. Pearse, J. E. Gannon, J. T. Campion, A. Ferguson, W. P. Shipton, W. H. Sproston, J. V. Hughes, W. M. Fairbrother, J. L. Cotter, J. Harwood, R. D. Harris, and G. Fry. The Jackson Prize has been given to Messrs. Callaway, jun., and Mr. Hulme.

Middlesex Hospital.—There has been another meeting during the last week of the Governors of this hospital, the affairs of which are as mismanaged as most others of our London Infirmaries, and are even in worse confusion. Some complaints against the medical officers were abandoned; and the hospital is left in no improved position by the termination of the squabbles.

MORTALITY TABLE.

For the Week ending Saturday, April 17, 1847.

Causes of Death.	Total.	Average of 5 Winters.
All Causes........	981	914
Specified Causes...	981	909
Zymotic (or Epidemic, Endemic, and Contagious) Diseases............	139	166
Sporadic Diseases.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat........	109	99
Diseases of the Brain, Spinal Marrow, Nerves, and Senses...............	167	158
Diseases of the Lungs, and of the other Organs of Respiration	322	275
Diseases of the Heart and Blood-vessels........	54	29
Diseases of the Stomach, Liver, and other organs of Digestion	69	70
Diseases of the Kidneys, &c.	9	8
Childbirth, Diseases of the Uterus, &c.	17	10
Rheumatism, Diseases of the Bones, Joints, &c. ...	13	8
Diseases of the Skin, Cellular Tissue, &c.	5	2
Old Age.................	54	57
Violence, Privation, Cold, and Intemperance.........	23	28

ORIGINAL LECTURES.

A COURSE OF LECTURES ON SURGERY,

BY

SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London
Consulting Surgeon to London University Hospital, &c.

LECTURE III.

At the conclusion of my last lecture I noticed the circumstance that one disease may be the exciting cause of another. To afford you some further illustrations, I may mention that fractures, wounds, or dislocations, or other mechanical injuries, may cause abscess, necrosis, tetanus, and other forms of disease. Aneurism is often the secondary result of atheromatous or osseous deposits between the coats of the arteries; and these osseous deposits, frequently occurring in old age, so diminish the calibre of the arteries of the extremities as to prevent a sufficient supply of blood to the limbs, and produce chronic mortification or dry gangrene. Disease of the bladder is by no means an unfrequent result of injuries to the spine. The bladder becomes paralysed; the urine accumulates, or is imperfectly evacuated, is rendered ammoniacal, and causes irritation and inflammation of the coats of that organ, often attended with softening. Again, disease of the bladder is frequently the result of enlargement of the prostate gland. The walls of that organ become thickened or sacculated, so that pouches are formed between the fibres of the detrusor urinæ. Thickening of the bladder, the formation of sacculi, ulceration of that organ, and fistulæ in the perineum are by no means unfrequent results of strictures of the urethra.

Under specific exciting causes, we include the animal morbid poisons which give rise to contagion. The full consideration of this interesting class of causes would lead me into a wide field of discussion of rather a medical than a surgical character. Some of them, such as the venereal and hydrophobic poisons, will come under our notice in their proper place. Specific causes are divided into direct, when communicated immediately from a diseased to a healthy person; indirect, when conveyed through the medium of clothing or bedding. Some infectious diseases require contact, others may be transmitted in the indirect manner.

It is necessary for me to say a few words to you on the meaning of a term in daily and hourly use among medical practitioners—the word *symptom*. You cannot possess too precise an idea of what is meant by this term. The word symptom is used to designate any perceptible change in an organ or function which is *really* connected with the disease under which the patient is labouring. It is important to bear in mind that any alteration which does not depend on the disease is merely an accidental circumstance, and not a symptom.

A proper distinction has been drawn between *symptoms* and *signs* of disease. Symptoms are manifest to the senses, while signs are deductions drawn from a careful consideration of the causes, progress, complications, and the results of treatment. Symptoms have been frequently divided by pathologists into those which are *common* to many diseases, such as pain and difficulty of motion, which are common to fractures, dislocations, contusions, rheumatism, and other diseases; and into *proper* or *essential*, which invariably accompany particular lesions, as the grating noise or crepitus in fractures, the change in length or shape of a limb in dislocations. Pathognomonic signs are those peculiar to some one disease, which therefore show themselves in no other, and afford a certain indication that the particular disease is present to which they belong. As an example of a pathognomonic sign, I may bring forward the collision of the sound with a stone or other extraneous body in the bladder.

It is by a careful inquiry into the symptoms and signs of diseases that we are enabled to distinguish them. The term *diagnosis* is applied to the art of distinguishing diseases. Of all things connected with the removal of disease, the diagnosis may be said to be among the most important. If you have accurately diagnosed a disease, you will be enabled to predict its future progress and termination; to which predictions the term *prognosis* is applied. You can only acquire proficiency in this important department of pathology by a most careful examination of all the circumstances connected with the disease, and accurate inquiry into its causes and symptoms; which you must compare with the causes and symptoms of other diseases which approach it in character. As diagnosis is the most important, so is it the most difficult, part of our profession: by it we learn the nature of each form of disease, and what should be aimed at in treatment, or the *curative* indications on which our treatment must be founded. It might be expected that, in so difficult a branch of inquiry, mistakes frequently occur, attended in some cases by the most deplorable consequences to the health or even the life of the patient, and the injury or ruin of the reputation of the practitioner. One mistake frequently gives rise to another, so that, if you commit an error in diagnosis, the probability is that your prognosis and treatment will be equally incorrect.

Most of these mistakes may be avoided—first, by careful attention to your studies in this institution and in the hospital; and, afterwards when in practice, by a sedulous attention to the sypmptoms of disease. All may err in diagnosis, however competent they may be to the practice of their profession; because obscure cases frequently present themselves in which the symptoms are of so indefinite a character as to lead the most experienced into error.

How frequently do we see mistakes made in the diagnosis of pregnancy and affections of the uterus; how often are limbs amputated which might have been saved; how frequently are hydroceles mistaken for sarcoceles; hernia confounded with glandular enlargements; dislocations with fractures, and contusions of the hip with fractures of neck of the femur!

Cases have not unfrequently occurred where patients have been cut for the stone, and none found; amputations of the penis for supposed carcinoma, where only the prepuce was affected!

Beclard relates a case where a man who had a fistulous ulcer in the cheek was attended by a surgeon who, having dressed it for three months, was surprised to find the dressings tinged with a fine green colour when taken off. On probing the fistula, Beclard detected a foreign body in it, which turned out to be the copper head of a walking-cane. It was removed, and the wound healed.

I have now said sufficient to induce you to turn your most careful attention to the diagnosis of disease; but I may add another argument, that, although the public will frequently tolerate the most fatal mistakes of an impostor or quack, they will never shield the legal practitioner from the disgrace that attaches to an important error in diagnosis.

Prognosis is the judgment or opinion given on the changes which may occur in the progress of a disease, the benefits to be expected from treatment, and the final termination of the case. The delivery of the prognosis of a case is, therefore, of great importance to the reputation of the practitioner, and becoming caution must be used in giving it.

The prognosis is in all cases founded on a proper consideration of the causes, seat, intensity, and nature of the disease; on the sex, age, and profession of the patient; his vital powers; the complications, if any, of his disease; the effects of previous treatment, and on the degree or severity of any operation that may be requisite for the removal of the disease.

It is necessary to be generally reserved on the subject of diagnosis, and not to give too confident an opinion where any degree of uncertainty exists, unless with considerable qualification. It is a frequent error with young practitioners to speak with too great confidence on the prognosis of a case; further experience shows them the uncertainty of the progress of disease, and teaches them to avoid too great confidence. The foretelling the event of a disease correctly raises a surgeon in public estimation; but it must be remembered, on the other hand, that, if his opinion be contradicted by the result, he loses more reputation than he would have gained had his prediction corresponded with the result.

Neither must we be too confident in foretelling the death of patients who are apparently verging on death: for patients sometimes recover under the most apparently hopeless circumstances; while others die from the most trivial injuries. In the Museum at Leyden a large bombshell is preserved which entered the perineum of a soldier, and escaped through the walls of the abdomen, and yet this man re-

covered. A French soldier was struck with a grapeshot, at the battle of Talaveira, which fractured the pubis, entered the bladder, and made its exit through the sacrum. He soon recovered from these injuries, but a stone in the bladder was afterwards discovered, for the removal of which lithotomy was performed. The calculi extracted by this operation had fragments of the pubis for their nuclei.

Another man, in Paris, allowed the blade of a sword, about twenty inches in length, to slip down his throat; an abscess formed in the groin, from which the sword blade was extracted, and the man recovered. These are a few out of the many instances which might be brought forward of men recovering under the most unexpected circumstances.

Again, trivial injuries may be followed by most fatal consequences. Erysipelas is by no means a rare consequence of operations, even of the most trivial character. I have met with several instances where severe and fatal erysipelas of the head and face has resulted from some slight operation. A lady consulted me, some years since for a little tumour on the nose, not larger than a pea. I advised its removal; which was afterwards done by Sir A. Cooper. Within a week after this operation she died of erysipelas of the head and face. Death has resulted from the removal of an incurved toenail, from dividing the prepuce, from the insertion of a seton, and even from the passing of a bougie or cathater.

Disease may terminate in several ways:—1st, in a *perfect cure*, or complete restoration of health; 2nd, in an *imperfect cure*, where the disease is much mitigated, although not entirely removed—as in fractures, when united with much shortening or deformity of the limb, or in the operation for cataract, which always leaves the sight more or less defective; 3rd, in a *cure*, with the loss of certain organs, as in amputations, extirpation of the eye, the testicle, breast, or other parts; 4th, acute diseases may terminate in becoming chronic, or by changing into others—retention of urine, for example, sometimes terminates in a urinary abscess, followed by fistula in perineo, and artificial anus may be a result of sphacelated hernia.

I must now draw your attention, gentlemen, to the classification of those diseases which belong to the department of surgery, and lay before you the plan of the present course of lectures. That the adoption of some arrangement facilitates the labour of instruction, both to the professor and the student, cannot be doubted: for the diseases reputed surgical include a large number of accidental injuries, as well as diseases spontaneously arising in the human body. The number being so great, and the nature of these accidents and diseases being so diverse, confusion would occur were we not to adopt some form of arrangement.

The classification of diseases is attended with extreme difficulty, so that, although nosology has occupied some of the greatest minds that have adorned our profession, none of their endeavours have been attended with perfect success. The difficulty becomes much greater when we endeavour to draw a line of demarcation between medical and surgical diseases, as I have already explained in my introductory lecture, because they do not admit of a precise separation, and the science on which the comprehension and treatment of them is founded is absolutely one and indivisible.

A complete nosological arrangement or nomenclature and classification for diseases should properly include the whole of them; but when an attempt is made to divide such an arrangement into two portions, physic and surgery, the difficulty is materially increased. Under such circumstances the classification would be mutilated and unnatural.

Classifications in natural history, in botany, zoology, and mineralogy are of the highest importance, and made with greater facility, because the objects which are classified in these sciences present much more definite and certain characters than those usually presented by disease. In disease, the peculiar features or differences are far more vague and uncertain in their nature, and at the same time of a deceptive character. The The distinguishing marks of plants, animals, and minerals are permanent; those of diseases transient and variable. The divisions of animals into those which have red blood, and those whose vascular system contains a colourless limpid fluid into warm and cold blooded animals, or vertebrate and invertebrate, is founded on anatomical and physiological characteristics which are immutable in their nature. No system of arrangement in natural history which is based on definite structure, function, or habits of animals and plants, can ever fail to be permanent. The division of animals into herbivorous and carnivorous, and the subdivision o the former into those that ruminate or chew the cud, will stand as long as Nature herself exists The classifications of the botanists are founded on similar rational principles. The presence number, or absence of the cotyledons, in the seed the mutual positions and number of the parts o the flower, constitute permanent distinctive marks on which a natural arrangement can be based. But in the formation of a nosology, o system of arrangement and nomenclature, of dis- you will observe that these are not always so readily distinguished from each other tl their essential differences can be ascertained with any degree of certainty. No abrupt line can be drawn between a healthy and diseased condition of the body, the one melting, as it were, into the other; and this approximation of different diseases, by insensible degrees, is one of the chief obstacles to nosological arrangements. It must be borne in mind, that animals and plants are distinct beings, while diseases are purely modifications of the same textures, organs, or functions. However imperfect nosological classification must ever be, you must not despise the attempts which have been made to arrange diseases, and you will find much that is valuable in systematic nosological works.

The ordinary mistake into which nosological writers have hitherto fallen is that of taking what are really symptoms for diseases. Thus, paralysis, dropsy, convulsions, dyspepsia, many varieties of ulcer, as well as numerous other affections, are merely symptoms of other and more serious lesions. You will discover, on looking over any of our nosologies, those of Cullen or Sauvages, for example, that a very considerable proportion of the affections there set down as diseases are truly symptoms or consequences of other diseases.

We cannot then be astonished, after what I have said, that the systems of nosology propounded by successive authors have presented imperfections which have caused them successively to fall into oblivion. In investigating the nature of the elementary tissues, Bichat, the greatest physiologist of France, conferred an immense benefit on science; and, although the subsequent progress of microscopical investigation has thrown some portions of his immortal work into the shade, we cannot but feel grateful for what he accomplished. Although the organs and textures of the human body are numerous, the tissues which enter into their formation are few. They were divided by Bichat into cellular, osseous, mucous, serous, glandular, muscular, dermoid; but still more recent investigations have reduced these to a much smaller number, by showing that a considerable proportion of them are truly made up of modifications of cellular tissue. We might, taking the tissues as the basis of our classification, describe separately the diseases or changes to which each of these tissues are liable, and thus construct an anatomical system of classification, were we always certain of the tissue in which the disease commences; but we are often uncertain on this point, and we very well know that diseases in their progress often involve several of these tissues. Phlegmonous inflammation and abscess are not confined to the cellular membrane, but commonly implicate other textures, and may, perhaps, commence in them. An arrangement of surgical diseases based on the classification of the tissues must, therefore, be necessarily imperfect, as it obliges us to state in what particular tissue a disease has commenced, or in its course has involved. Another great disadvantage attendant on such a system of classification is, that it would bring together a number of diseases between the characters of which no analogy can be discovered.

Whatever arrangement may be adopted must bring together the different diseases of the same organ or part of the body; and, therefore, instead of a classification of diseases founded on the particular tissue affected, or supposed to be affected, I shall prefer the classification which gives a separate view of the diseases of each organ, or system of organs, which are concerned in each particular function.

In your attendance on the practice of our hospital you will discover that the greater portion of those diseases that come under the care of the surgeon are attended with inflammation, suppuration, ulceration, erysipelas, wounds, fractures, hemorrhages, or other mechanical or chemical injuries of the body.

It is the usual practice of writers and lecturers on surgery, to commence with inflammation and its consequences. The utility of this plan is manifest, because inflammation is either a cause, a concomitant, or a consequence of most surgical affections; and I shall, therefore, follow this arrangement in the present course of lectures.

I shall first bring under your notice, inflammation with its common effects and occasional consequences, suppuration, ulceration, and mortification. Wounds, hemorrhage, and some other general matters, will follow in succession, as constituting the rudimental surgical subjects. These will be followed by the remaining mechanical injuries; diseases of the bones, arteries, veins, and other organs; then tumours and specific diseases.

The first part of the lectures will, therefore, contain general surgical subjects, or those injuries and diseases which are common to the whole or several parts of the body, but not confined to one particular part.

In the second part I shall place before you particular surgical matters, or the injuries and diseases of individual organs and regions.

A COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the Theatre of Queen's College, Birmingham.

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Influenza of 1846; *circumstances of its occurrence; probable causes of it; comments; what is influenza; transmission of it from one county to another; difference of atmospheric states the cause of its epidemic spread; other causes of its isolated occurrence; comments thereon; is influenza a communicable disease; proofs against it from the author's experience; nervous debility of influenza attempted to be localized; pneumogastric nerves assumed to be chiefly at fault; objections to this theory; the nervous depression general, and particular manifestations arising out of this; characteristics of the influenza of* 1846, *and treatment of it.*

GENTLEMEN,—Most of you will remember my saying at the hospital, one morning in the autumn of last year, that, if the weather were suddenly to become cold, the typhoid fever would be stopped, and we should be likely to have something resembling influenza in its stead. Strangely enough, within a week, as I afterwards remarked to you, this very atmospheric change occurred, and catarrh took the place of the low fever.

I do not mention this as any proof of my aptness at prediction: few men are less inclined

to it, or less skilled in it, than I am, for I am rather habituated to specific than to speculative data; but I remind you of the fact, first, because the coincidence was somewhat curious; and secondly, because it serves as an introduction to the subject-matter of this discourse.

The ailment that was successive of the typhoid fever of last year had all the characteristics, special and general, as you know, of influenza. I believe it to have been this, though in a milder form than I have aforetime met with it. In pronouncing it influenza, then, you must not suppose that I impute its advent to the cold. The history of this disease tells us that variations of temperature have little or no influence over its rise, progress, or termination. The influenza of 1762, one of the severest ever known, occurred during the prevalence of very warm weather; that of 1767, on the contrary, also very severe, happened when the weather was remarkable for its coldness; that of 1833 was when the weather was particularly mild. The seasons, again, have no control over it: in spring and in autumn, in summer and in winter, it has prevailed epidemically, and been equally fatal. I do not say, therefore, that the cold produced the influenza I speak of, but I cannot help thinking it contributed somewhat thereto. At least I think it was the cause of the irritation in, and discharge from, the air-passages. One of the most common causes of ordinary catarrh is a chilly state of the atmosphere suddenly supervening upon a mild or a fervid one. This was what occurred last year at the period I refer to, and nasal and tracheo-bronchial defluxion was the immediate consequence. The catarrh came, to all appearance, as a result of the sudden accession of cold weather: it attacked people indiscriminately; the healthy and robust suffered from catarrhal symptoms merely; those who were debilitated by previous fever, who were recovering from it, or were still slightly under its influence, exhibited all the features of influenza when catarrhal symptoms became added to those of extreme nervous debility. It was a suspicion that such would be the case that led me to surmise the advent of something similar to influenza, should a sudden chill come upon the moist warm atmosphere. At the time I spoke of this, lesion of innervation was the prevailing pathological characteristic in most of the acute ailments then existing: to this condition of the nervous system, let catarrh be superadded, and then, what have we but influenza? This, in fact, is nothing more than catarrh, with great nervous depression. At least this is the pathological light in which I view it. You may ask me, do I not regard influenza as a specific form of complaint? I am not prepared to say that there is any evidence of any radical pathological state belonging to it, further than that which is manifested in the two leading features I have adverted to. It generally prevails epidemically, sweeps over vast tracts of country at once, and, like cholera, has usually extended from the south, northwards, and from the east, westwards. But this proves nothing more than that the disease may, and probably does, as an epidemic, arise from a particular state or states of the atmosphere. I say *states*, because it is not improbable that several of these may give rise to epidemic visitations of influenza, at one time or another, yet each preserving the distinctive peculiarities of the ailment. An unknown and unaccountable atmospheric condition will give rise to typhus; so will living in a low damp situation; so will exposure to noxious effluvia; so will eating putrescent food. Yet the typhus is the same disease, from whichsoever of these several causes it may have sprung. So with influenza. If at one time it seems to arise from some *temperies aeris occulta*, it is not the less influenza at another time, if the probability of its origin be more apparent. If, owing to some atmospheric singularity, there be a general tendency to vital depression amongst living beings, and to this succeeds defluxion from the air-passages, what ought the disease to be called but influenza, in the absence of pathological proofs of its meriting any other denomination?

Some will have it that influenza only appears epidemically, attacking multitudes of people at once, and giving plain proofs of whence it has come and whither it is tending. That this has often happened there is no doubt: the revisitation of the malady in London, in 1833, after an absence of thirty years, is a good example; but my own experience inclines me to think that it often enough appears in isolated cases, called, variously, bronchitis, cold, fever, &c., but which would unhesitatingly be regarded as influenza if any one of such cases were found associated with many others like it. I have often heard it remarked, of as plain a specimen of the ailment in question as I ever saw, "how uncommonly like influenza this is." "If influenza were prevalent just now, I should decidedly say this was a case of it." Of cholera the same was said after it had ceased to attack numbers of people at once. It was regarded as real cholera, when hundreds were its victims daily; it was only very much like itself when these victims were "few and far between." Yet it was the same cholera, in type and in the severity thereof. There is nothing, however, like experience, to dissipate prejudices such as these, and awaken men's minds to the truth of passing events. It was not until the devastation by the influenza of 1837, when three hundred and sixty-four persons died of it in London, between the middle of January and the middle of march, that the nosological term was admitted into the bills of mortality of the metropolis. Now, as you are aware, it figures conspicuously as one of the ills that flesh is heir to.

Whilst some believe that influenza can only appear as an epidemic, others believe that the desease can only be worthy of its name when it comes like a very pestilence, seizing and making victims by wholesale, and giving undeniable proofs of being both infectious and contagious. It is probable that, in the cases given in proof, the mistake has been made between *communication* and *common cause*. A number of people having been attacked simultaneously, or successively, has led to the belief that each has had something to do with infecting every other; whilst the fact has likely been, that all have suffered exposure to the same general morbid agent, and that those most susceptible of its influence have shown their susceptibility in being partakers of the common malady. I have never, myself, met with the smallest proof of influenza being either infectious or contagious. It made its appearance in the town of Nottingham about twelve months after the subsidence of the cholera that I spoke of in a previous lecture. It occurred in a very severe form, and was the occasion of a greater mortality, though less suddenly, than its dreadful predecessor. I had many painful opportunities of witnessing its ravages, but without once detecting its direct or indirect communicability. The earnest advocates of its contagious nature, that is, of the capability of extending the disease from one individual to another, through contact with the mucous defluxion, have endeavoured to liken it to the distemper in dogs, or to the glanders in horses. I can only say for myself, that I have never seen the least approach to such pathological similitude. I believe a famous author, Weber, once fancied that influenza was occasioned solely by the atmosphere being in a state of negative electricity; but I am not aware that his remedial suggestion of nonconducting garments had any prophylactic or curative influence.

It has, further, been attempted to *localize* the nervous debility which is one of the pathognomonic features of influenza; and the pneumogastrics have been fixed upon as best calculated to bear the burden of the speculation. This had seemingly arisen from the fact that the function of respiration is often feeble, or hurried, or irregular, as the case may be, in influenza. Examples of this kind certainly do often occur in the disease in question, but they are quite as often absent, and I can therefore see no pathognomonic value whatever in the symptom. The function of alimentation is often imperfect in influenza, as well as certain other functions with which the great sympathetic has something to do, but we must not thence say that this nerve in a morbid state is the chief source of the mischief. My own experience inclines me to think that in the cases (by no means constant) in which there is irregular respiration in influenza, this is due to an irregular action of the heart consequent upon the general nervous debility. Nothing is more common than difficulty of breathing from mere weakness; we see it every day, and can easily account for it, in the absence of organic lesion, without having to refer to any occult defect of this nerve or the other ministering to the respiratory or circulatory functions. Influenza has a general and a particular character,—nervous depression and catarrh; this is all that we know of it from observation during life, or from examination after death. True, a variety of *post-mortem* appearances are sometimes found, such as congestion of the bronchial membrane, pus or mucus in the bronchi, spumously with congestion of the lungs, congestion of the brain, &c.; but it is easy enough to see that all these are *effects*; that they are secondary pathological items, and not leading ones. Again, there have been no morbid appearances whatever! I do not believe that the ailment is anything more than its usual manifestations indicate it to be; I think that many of what have been supposed to be leading pathognomonic features are only sequences of the nervous depression; and I disbelieve utterly in the communicability, directly or indirectly, of the disease.

To consider, now, the influenza that appeared in this town towards the close of last year. As I told you, it came immediately upon the accession of the cold weather: the typhoid fever subsided almost as suddenly: I did not see half a dozen cases of fever, and those were very mild, after the sudden change in the atmospheric temperature. Like this fever, and like the bowel complaint that preceded it, the influenza seemed to have no choice of locality, but to visit promiscuously the houses of the rich and the poor; those situated in airy, elevated spots, and those in low ill-ventilated ones. It has often been remarked of epidemic influenza, that it has a tendency rather to attack the strong and robust of middle age, than elderly people or children. It was not so with the one I speak of: age, sex, or temperament, seemed little to direct or regulate it. It exhibited, however, two varieties, according to the previous health of the individuals attacked. Those who were tolerably well at the period of seizure, suffered simply from catarrh; those who had been debilitated by fever, or other causes, furnished all the ordinary evidences of influenza.

The catarrh came, as it generally does, with a slight antecedent fever, listlessness, drowsiness, and oppressive headache. The pulse rose in force and frequency; the tongue became covered with a pale fur; there was thirst, loss of appetite, and a diminution or depravity of the secretions. Shortly, that is, in from a few hours to a day or upwards, a slight hoarseness and cough succeeded; the latter increased, and the former gave place to a copious thin mucous expectoration. In other cases there was no cough or hoarseness, but excessive pain across the forehead, chiefly in the situation of the frontal sinuses; congestion and itching or soreness of the schneiderian membrane, lasting several hours, and then followed by frequent sneezing, and a profuse discharge from the nostrils; generally the eyes became injected and swam with tears.

In the milder of these cases, little treatment was necessary. Their duration varied from a few days to a week, and they often recovered without the aid of medicine. In some, the morbid symptoms subsided, as they had begun, spontaneously; in others, a critical sweat appeared to prove curative; and in others, diarrhœa seemed to be so.

The severer cases required more management; and that was most serviceable which was prompt and decisive. A brisk calomel purge at the commencement did more and better remedial execution than anything else. In many instances it rendered further treatment unnecessary. Several cases I saw, of considerable severity, and threatening to be of some duration, completely arrested by the operation of a single dose of calomel. Copious bilious stools were first produced, and upon their evacuation came an almost immediate cessation of the more unpleasant symptoms. The pulse fell to its proper standard, or a little below it; the headache and oppression vanished; the thirst and feverishness subsided quickly; the secretions became restored; and the skin especially acquired a softness and a moisture. Beyond a further aperient, it was seldom, in these cases, that anything was needed after the action of the calomel. In many instances, however, it was not advisable to give a mercurial purge to the extent I have stated, for fear of inducing too great a degree of debility. A moderate dose of grey powder, followed by a mild aperient (and these repeated if necessary), was then of good service. Here, though, it was seldom that the attack was suddenly cut short, as in the preceding cases. The secretions were slowly, not quickly, restored; and they required to be further aided by saline diaphoretics. This form of treatment generally sufficed to mitigate the more troublesome symptoms in the course of a few days, and by the end of a week the patients were usually convalescent. When the return to health was tardy, it was hastened by the administration of vegetable bitters, with an alkali. When expectorants were indicated, they were best given in conjunction with the tonic; but it seldom happened that the cough and expectoration were not relieved directly with the improvement of the digestive organs.

The influenza, as I have said, was manifested when catarrhal symptoms supervened upon those of general debility. Very few were the exceptions to this rule. I met with two or three cases in which it was not very clear what amount of general ailment had preceded the cough and coryza; but the sources of information were not sufficiently intelligent to justify me in forming an opinion contrary to what I have stated to have been the usual rule.

The leading feature and source of complaint in this form of the catarrhal epidemic was nervous prostration. It was variously shown. Some were perpetually shedding tears, and saying they could not help it; others sighed and groaned, and gave themselves up to despair; others lay listlessly, and could scarcely be induced to speak a word; others complained of weakness of their limbs, and aching of them, a sense of sinking at the epigastrium, faintness, &c. The pulse, as a rule, was very quick and feeble, and in some rare instances, irregularly intermittent. The respiration was also very often irregular, sometimes hurried, at other times slow, and again laboured, with interruption, constituting a troublesome form of dyspnœa. As I have said, this state of the respiratory function, in the majority of cases, appeared to me to be secondary of an altered action of the heart; and this, again, of general nervous debility. The exceptions were, when there was an obvious condition of the respiratory apparatus to account for the altered action of it. Turgescence of the laryngeal membrane, or of the bronchial membrane, with consequent constriction of aperture and canal, was not an unfrequent cause of difficult or interrupted respiration; profuse accumulation of mucus in the bronchi was another; so was serous extravasation into the air-cells of the lungs; so was pulmonary congestion. Correspondently with these states were various physical signs indicating them, with which you are sufficiently familiar not to render it necessary for me to give them in detail.

In the influenza the fever and oppressive headache were less remarkable than in the simple catarrh. Frequently, indeed, there were no feverish symptoms at all, or, at most, only slightly, and in an evening. The tongue was very pale and trembling; there was little thirst; usually the skin was moist, and often abundantly bedewed with perspiration: the defluxion, nasal or tracheo-bronchial, was excessive, and generally very thin. The bowels were seldom costive, but the biliary secretion was insufficient; the kidneys acted sparingly, and the urine was either loaded with lithates or turbid and milky-looking with mucus: rarely did it contain albumen.

These cases, for the most part, were successfully treated on the sustaining plan. There was no fever, as I have told you, worth considering: the two great troubles to be met were the debility on the one hand, and the defluxion on the other. Of these, the former was by far the most important: the patients might not only sink through it, but its persistence might lead to a secondary train of evils fatal in their consequence. The discharge, whether nasal or bronchial, was a sort of pathological effort at cure, or at any rate at relief: by the former the brain was saved congestion; by the latter the lungs. Had either been stopped the probability is that its corresponding organ would have suffered immediately, and that sympathetic fever would have soon followed. Leaving the defluxion alone, then, as a sort of sanatory outlet, our attention was directed, as you know, to sustaining and invigorating the nervous system, and improving the secretions. The first object was chiefly answered by the exhibition of vegetable tonics, such as gentian, calumba, or cusparia, with ammonia. When the urine was scanty, and lithates abundant in it, nitric ether and bicarbonate of potass were useful adjuncts. In the majority of cases, this form of treatment was singularly successful: the debility gradually disappeared, and as gradually were the appetite and secretions restored. In a few cases in which the ammonia could not be borne, a stimulating bitter tincture advantageously supplied its place. Some of you remember how soon, and how satisfactorily, even severe forms of dyspnœa, with loud mucous râle all over the chest, subsided under these measures. Occasionally, however, the pectoral symptoms were sufficiently urgent to call for more direct treatment. When the bronchi were loaded with mucus, difficult of expectoration from its tenacity and thickness, a preparatory emetic was of great efficacy. The addition of ipecacuanha wine, or of squills (according to circumstances) often increased the value of the tonic mixture. When the bronchial accumulation was very great, or there were evidences of pulmonary congestion, blistering or counter-irritation of the chest did great service. I never advised, or saw tried, local bleeding in these cases, nor can I think it could have proved other than mischievous. Mercury was indifferently borne in this influenza. More than once, I saw even a small dose of calomel produce alarming symptoms, even though it had acted not energetically upon the bowels. Blue pill, with soap and opium; or grey powder, either alone or with Dover's powder, answered best when the torpidity of the liver indicated special treatment. But, as I have said, and as yourselves saw, most of the minor symptoms subsided as the nervous vigour became restored; to improve this, was the great indication; what was then left unremedied was easily afterwards corrected.

DUMAS ON ORGANIC CHEMISTRY. No. XVIII.

ON THE URINE.

(Continued from page 130.)

GUANO.—Upon the islands and rocks bordering on the coast of South America, between the 13° and 21° of latitude, we meet with very abundant deposits of an animal matter formed of the excrements of innumerable birds which inhabit these solitary regions. This matter is known under the name of *guano*, and is found in strata frequently upwards of twenty mètres in depth. The Peruvians have, for centuries past, been in the habit of using this as a manure to the sterile soil which forms the coast of their country.

At the present day, guano has become an object of very active commerce between Europe and America. This substance is, from the great quantity of nitrogen which it contains, a manure of very great value. We may distinguish several varieties of guano, which differ in colour. The white guano is the most valued; when of a red or brown colour, it constitutes an inferior quality. We owe to Fourcroy and Vauquelin the first analyses which have been made of this matter; the following are the constituents they found:—Uric acid, acetate of ammonia, hydrochlorate of ammonia, acetate of potass, phosphates of potass and lime, chloride of potassium, fatty matter, sand.

Klaproth has, in like manner, published an analysis of guano. He found in it:—

Urate of ammonia	16·00
Oxalate of lime	12·75
Chloride of sodium	0·50
Phosphate of lime	10·00
Argillaceous earth and sand	32·00
Undetermined matters	28·75
	100·00

More recently, M. Vœlkel has analysed the same matter. A moist sample, of a yellowish-brown colour, and which gave out a urinous odour, yielded:—

Urate of ammonia	9·0
Oxalate of ammonia	10·6
Oxalate of lime	7·0
Phosphate of ammonia	6·0
Ammoniaco-magnesian phosphate	2·6
Sulphate of potass	5·5
Sulphate of soda	3·8
Sal ammoniac	4·2
Phosphate of lime	14·3
Argillaceous earth and sand	4·7
Water, traces of iron, salt, and undetermined matters	32·3
	100·0

REPTILES.—The urine of serpents is found as a very thick white matter, which quickly solidifies in the air, and which is essentially formed of uric acid and the urates of potass, soda, and ammonia. We find in it, moreover, a small quantity of phosphate of lime. It does not appear to contain urea. The larger species of serpents void considerable masses of this substance, during most months of the year. Chemists often have recourse to this medium for procuring uric acid for the purpose of their experiments.

Lizards furnish a similar product.

With frogs, it is quite different. In the urine of the common frog I have found urea accompanied with albumen; we may indeed say, that albuminuria constitutes the normal state of these animals.

According to Davy, the urine of the bull-frog (*rana taurina*) is a liquid having a specific gravity of 1·003, and which contains chloride of sodium, urea, and a little phosphate of lime. That of the brown frog (*bufo fuscus*) differs from the preceding only by its containing a rather larger proportion of urea.

The tortoise, in like manner, furnishes urine containing urea.

In the mollusca, the production of uric acid has been demonstrated. So also with some insects, as the cantharides, the chrysalis of the silkworm, &c. When this chrysalis quits its shell, we see it give out a brown liquor, which consists essentially of uric acid.

PURREA (?) AND PURREIC ACID (?).—During the last few years, we have become acquainted with a peculiar substance, known under the name of *purrea*. This matter was originally found in India and China, whence it was imported into England, to serve in the preparation of the *yellow prints*. It is presented under the form of rounded lumps, the weight of which rarely exceeds 100 to 120 grammes. They are brown externally; but their fracture offers a tint of a very rich orange

colour. Opinions are divided as to the origin of this matter. Some think that it constitutes a true bezoard, whilst others affirm that it is deposited, at certain periods of the year, from the urine of camels, elephants, buffalos, and other large animals, and that its formation is dependent on a peculiar alteration, which the long-continued rains effect on the food of these animals. This latter opinion is confirmed by the urinous odour which this matter exhales.

Very recently, M. Erdmann has attributed to *purrea* a totally different origin. This chemist considers this product as the mere juice of a tree neutralized by magnesia, and rendered consistent by evaporation.

Purrea is slightly soluble in water and in alcohol; its solutions have a neutral reaction; ether dissolves it sparingly: on evaporating the ethereal solution, we obtain a shining, crystalline, yellow matter, which possesses an alkaline reaction. The caustic alkalis partially dissolve it. These solutions have a very rich yellow colour. This substance leaves a considerable quantity of ashes, principally formed of magnesia, with a little potass and lime, but no phosphates.

If *purrea* be diluted with water, and a little hydrochloric acid added to the paste, there is separated from it a yellow matter which assumes a crystalline aspect. This is *purreic acid*, which previously existed with the magnesia, in the form of a salt. This acid may be dissolved in the alkalis, from which it is again precipitated by acids; it is also soluble in boiling water and alcohol, and crystallizes from these liquors on cooling, thus affording a ready means for effecting its purification. *Purreic acid* often retains some traces of magnesia. To purify it, M. Erdmann dissolves it with carbonate of soda, and super-saturates the filtered liquor by an excess of hydrochloric acid. The *purreic acid* is deposited in crystals, which are to be redissolved in water. This solution is treated by acetate of lead; the precipitate, decomposed by sulphuretted hydrogen, is taken up again by boiling water. The crystals which are now deposited offer a slightly yellow tint. To purify them, they are to be five or six times crystallized in alcohol. After these operations, they will be found to contain but a mere trace of magnesia, which it is impossible to remove from them.

Purreic acid contains:—

C^{20}	..	..	1500	55·3
H^{9}	..	..	112	4·2
O^{11}	..	..	1100	10·5
			2712	100·0

Purreic acid, though but slightly soluble in cold water, is more readily dissolved by boiling water, and, on cooling, deposits itself in needle-shaped crystals of a pale yellow colour, which have a silky appearance. The alkalis, but especially ammonia, possess the property of colouring its solution of a deep yellow. The best solvent for *purreic acid* is alcohol; ether also dissolves it with great readiness. It possesses a sweetish taste, leaving a slight bitterness behind. Its external aspect greatly resembles that of *berberine*, which is, however, less deeply coloured.

The *purrea* of commerce contains about fifty per cent. of acid. The salts of silver, lime, baryta, strontia, and magnesia, are not precipitated by *purreic acid*; it, however, produces a deep yellow precipitate in a solution of acetate of lead. But a solution of this acid, when neutralized by an alkali, gives deposits with all the above salts. These precipitates are flaky, and are slightly soluble, but they do not, in general, present a uniform composition. The salt of lead, prepared by precipitating the alcoholic solution of acetate of lead by a similar solution of *purreic acid*, contains:—C^{20} H^{9} O^{11} Pb O.

This acid, heated above 100° C., melts and partially sublimes. To effect this distillation, we may employ the method suggested by Mohr in the preparation of benzoic acid, and which consists in passing the vapour through a sheet of brown paper, pasted over the vessel in which the sublimation is carried on. The crystals, thus obtained, are neutral, and slightly soluble in water, alcohol, and ether. Their alcoholic solution is precipitated by the subacetate of lead. They contain:—

C^{13}	...	..	975	68·4
H^{4}	...	...	50	3·6
O^{4}	...	...	400	28·0

They differ, consequently, by their composition and by their properties, from *purreic acid*, whence they are derived.

BILE.

The bile offers especial interest, whether it be considered merely as a product of secretion, or further regarded as intervening in the act of digestion. The ancients compared the bile to soap. The researches made by MM. Berzélius and Thénard, and especially those instituted by MM. Gmelin and Tiedemann, by displaying a numerous series of products derived from the bile, had gradually effaced the simple idea which had been formed of the nature of this liquid, when M. Demarçay, a few years back, was led to revert once more to the opinions announced by the ancient chemists.

M. Berzélius, more recently, published a long work on the bile, in which he called the attention of chemists to several acids and new bodies furnished by this liquid on analysis, whether it be that they pre-exist in the bile, or that they result from the various and ready metamorphoses of the essential principles of this secretion.

We shall, in our observations, follow up the views of M. Demarçay, which have since been confirmed by M. Liebig, and also, to a certain extent, by the still more recent experiments of MM. Theyer and Schlosser.

The bile is a viscous, ropy liquid, usually of a deep green colour; it taste is at first bitter, leaving an insipid, sweetish flavour behind. It is dissolved by water and forms a kind of lather, as does soap. It is often rendered thick by mucus, which becomes partly precipitated, whilst another portion remains in solution; hydrochloric and most other acids, if added in but very small quantity to the bile, will completely precipitate this matter; it is in fact foreign to its constitution, and is only found there accidentally. Bile does not coagulate by ebullition.

If we except some few principles which may be regarded as merely accessary, the bile is essentially formed by the combination of a peculiar azotized acid with soda: that is to say, of a *choleate* of soda. It owes its coloration to a green matter, mixed with a yellow principle which, probably, is only a modification of the former. If this colouring matter be treated by nitric acid, it produces a characteristic reaction. The liquor, at first green, becomes of a violet-blue, then red, and this change is accomplished in the space of a few seconds. The red colour, in its turn, shortly disappears to give place to a yellow tint. This reaction is so marked that it serves not only to characterize the bile, but also to discover the presence of this liquid in the urine or in other products of excretion. The coloured solutions of bile may be perfectly decolorized by means of purified animal charcoal, or else by carefully adding baryta water, which precipitates the colouring matter from them.

The bile contains the saponified and the non-saponified fatty matters which are met with in the animal economy; cholesterine also exists in it in small quantity. To extract this principle, we have merely to agitate the decolorized bile with twice its volume of ether, which takes up the cholesterine; we may now obtain it from this menstruum by evaporation under the form of white and shining scales.

The bile also contains some salts: if it be incinerated after dissolving it in alcohol, the greater part of the saline residue is found to be composed of carbonate of soda. It also contains some phosphate of soda and a slight quantity of chloride of sodium, with traces of salts of potass and iron. The following is the composition of the bile in the ox, reduced to its most simple expression:—

Water	875·0
Choleate of soda	110·0
Colouring matters, different fatty matters, mucus, &c.	5·0
Diverse salts	10·0
	1000·0

All the phenomena which the bile presents on contact with different reagents, are due to the choleate of soda which constitutes its base. On evaporating it to dryness, and acting on the residue by alcohol, we shall find this menstruum dissolve the choleate of soda with the fatty and colouring matters, whilst it leaves the albuminoid matters and some salts behind. The alcoholic solution becomes decolorized when treated by animal charcoal. If this solution be evaporated to dryness and reacted on by ether, this agent will remove the cholesterine and the fatty matters. When deprived of its fatty and colouring matters, the bile furnishes by desiccation a solid, friable mass similar to gum arabic. It is completely redissolved by water and by alcohol, communicating to them a very feeble alkaline reaction. The bile, when dried and pulverized, quickly attracts moisture from the air. Incinerated on a platinum plate, it leaves a residue composed essentially of carbonate of soda mixed with a little chloride of sodium.

The aqueous solution of bile is not clouded by oxalic or acetic acids. Hydrochloric acid throws down a resinous precipitate, and robs it of its soda. The nitrate of silver forms with it a plastic deposit, white at first, but which quickly turns brown. The neutral acetate of lead produces a flaky white precipitate: the supernatant liquid assumes an acid reaction; if this liquor be poured off from the precipitate, we may obtain a second deposit by the basic acetate of lead. The subacetate of lead precipitates the bile completely, the liquor retaining in solution but a small quantity of organic matter; an excess of the salt of lead redissolves a portion of this precipitate. The salts of baryta occasion no cloudiness in it; the same may be said of lime-water and of the chloride of mercury. The perchloride of iron forms with it an unctuous precipitate of a brown colour. The chloride of tin throws down the whole of the organic matter in white flakes.

The alcoholic solution of bile undergoes very analogous reactions to those experienced by the aqueous solution; only, as the lead precipitates are more soluble in alcohol than in water, the neutral acetate of lead forms no deposit with it.

Bile, in its pure state, contains—

	Kemp.		Enderlin.		Theyer and Schlosser.		
Carbon	58·16	58·16	59·9	58·28	58·00	58·49	59·47
Hydrogen	8·30	8·81	8·9	9·20	8·89	8·48	8·48
Nitrogen	3·70	25·76			3·62		
Oxygen	22·61				20·65		
Soda	6·53	6·53			6·08		
Chloride of sodium	0·37	0·54			3·56		

Choleic Acid.—Several processes have been proposed for obtaining this body in a state of purity. According to M. Demarçay, the alcoholic extract of bile should be dissolved in 100 parts of water, and to this should be added two parts of sulphuric acid, diluted with ten parts of water. The whole is then to be heated in a water-bath. When some oily drops appear upon the surface, the pan is to be withdrawn from the fire. In about eight or ten hours, the choleic acid will be found to have separated under the form of a green magma. The liquor is to be decanted, filtered, and evaporated, so as to obtain a further quantity of choleic acid; this operation should be repeated until the solution is reduced to a fourth of its volume. The deposits, after being washed, are dissolved in alcohol, and treated by a few drops of baryta water, which separates from them the sulphuric acid. The filtered solution, being evaporated to a syrupy consistence, is agitated with ether, which removes the fatty matters. The residue is evaporated in a water-bath, and placed, while hot

in vacuô. Thus prepared, it still retains the whole of the colouring 'matter, and a small quantity of soda and baryta.

The second process consists in decomposing the precipitate formed by the bile with the salts of lead, taking the precaution to put the salt of lead in excess, and then to add ammonia to it. The precipitate is to be heated to melting, washed, and then acted on by boiling alcohol, which dissolves an acid salt, but leaves behind a basic salt as well as a combination of oxide of lead with the colouring principle. The alcoholic solution, being treated by sulphuretted hydrogen, gives, after filtration and evaporation, a brown magma. This mass is to be dissolved in the least possible quantity of alcohol, and then agitated with ether, which removes the fatty matters. The residue is acted on by cold weak alcohol, after which it is evaporated, and the residue dried as before.

M. Liebig has given the following process:—In an alcoholic solution of eight parts of dried and purified bile, dissolve one part of oxalic acid; the mixture is then heated to ebullition; after which it is to be set aside for ten or twelve hours. During the solution of the acid, there is immediately separated a mass of fine white crystals of oxalate of soda. As soon as this deposit has ceased to take place, the liquid is to be filtered, diluted with a little water, and digested upon carbonate of lead. The filtered liquor is now treated by sulphuretted hydrogen, and the solution evaporated to dryness in a water-bath.

MM. Theyer and Schlosser precipitate the bile freed from mucus and fatty matters by subacetate of lead. The deposit is heated with water to the boiling point, and treated by sulphuric acid until it has lost its adhesive consistence. The liquid is then filtered, and the lead, remaining in solution, separated by sulphuretted hydrogen.

Dry choleic acid is a solid body, of a slightly yellowish colour, friable and pulverulent, and which quickly absorbs atmospheric moisture, so as to form an agglomerated mass. Its taste is bitter, and its dust strongly irritating to the mucous membrane of the nares and the throat. It is readily dissolved in alcohol, but very sparingly in ether. When recently prepared, it is with considerable readiness taken up by water; but, after a short time, this solution thickens, and deposits the greater part of the acid; it still, however, retains sufficient to preserve its acid reaction, and that bitter taste which is so characteristic of choleic acid (Demarçay).

According to Liebig, the aqueous solution of pure choleic acid remains limpid for several days. It decomposes the carbonates. Acetic acid does not precipitate it; dilute hydrochloric and sulphuric acids render it milky, and give rise to the formation of oleaginous drops, which adhere to the sides of the vessel. An excess of acid removes this cloudiness (Liebig). Heated on a platinum plate, choleic acid melts, puffs up, burns with a fuliginous flame, and produces a slight carbonaceous residue, which is eventually wholly consumed. By analysis, it yields the following results:—

	Demarçay			Dumas	Theyer and Schlosser.		
Carbon	63·82	63·71	64·57	63·5	63·70	63·76	63·98
Hydrogen ..	9·05	8·82	8·85	9·5	8·84	8·50	8·58
Nitrogen	3·31	3·26	..	3·3	3·97	3·45	
Oxygen and Sulphur (a)	23·78	24·22	..	23·9	23·49	24·29	

(a) Sulphur has not hitherto been pointed out in choleic acid; but the recent experiments of M. Redtenbacher on the composition of taurine—a substance derived from choleic acid—place beyond all doubt the existence of sulphur in this acid. In the liquid bile, which contains no traces of sulphates, I have found 0·19 per cent. of sulphur, whence it would result that choleic acid must contain about 2 per cent. of this element.

They calculate that in France from twenty to thirty are annually interred alive, computing from the number of those who, after supposed death, come to life before the funeral is completed.

ORIGINAL CONTRIBUTIONS.

ON THE PHYSIOLOGICAL AND PATHOLOGICAL CAUSES OF SUDDEN DEATH IN CONNECTION WITH THE VASCULAR OR CIRCULATORY SYSTEM.

By MALCOLM W. HILLES, Esq.

(Continued from p. 113.)

SECTION II.

We now come to the consideration of cases of sudden death produced by derangement of some portion of the circulatory apparatus.

It may be supposed that we are principally indebted to modern observation for our present knowledge of the phenomena, both physiological and pathological, attendant on these cases. Until the discovery of our countryman, the immortal Harvey, who first pointed out the true course of the circulation of the blood, and the uses of the several parts engaged in the transmission of this fluid to and from the various parts of the body, no satisfactory conclusions could possibly have been arrived at upon the subject; observation, it is true, might have recorded the facts daily brought to light, but these were rendered comparatively useless by the false theories that were raised upon them, and thus tended to distract rather than to direct the judgment; all was comparatively a chaotic mass of observations, conjectures, and conclusions; the first alone being correct, but serving only to expose the darkness and the folly of the others. And yet Harvey was not believed—was ridiculed and slighted when he first propounded his great discovery; for many years this great man laboured against the prejudices of the learned of the day, and encountered the most irrational opposition before he succeeded in establishing the truth of his doctrine; he had at last, however, the proud satisfaction of enjoying a triumph, the labours to attain which had wellnigh consigned him to his grave in poverty and contempt. And yet his cause was that of TRUTH against ERROR.

The study of the circulatory system in man is one of the most interesting that can be pursued, and would well repay the labour of many years spent in the investigation of the structures and functions connected therewith.

To the *physiologist* it enfolds the material origin of our being—the source from whence, in youth, we increase in size and strength; in adult age, derive the maintenance of the organs of human life, and the integrity of the human functions; and in age, the elements of disease, which, sooner or later, bring the fabric it has raised and nourished once more to the elements from which it sprung.

To the *pathologist* and *medical practitioner* it reveals the causes of many of the most important and interesting diseases to which mankind is subject, and exhibits a general influence in almost all the affections of human nature.

To the *natural philosopher* it discloses the only perfect hydrodynamic structure that has ever been formed, and holds out to the diligent mechanic a model from which to derive the most useful knowledge regarding the laws which regulate the circulation of fluids. Strange as it may appear, it cannot be questioned that the heart blood-vessels contain the groundwork of many of the improvements that have recently taken place in hydraulic machinery, and in more than one instance still presents a perfection of structure that has not been realized, and might well be imitated, by modern art.

It is unnecessary for me to enter here upon a description of the circulatory apparatus; it will be sufficient to state that it consists of a central organ or engine, the heart, and two sets of conduit pipes or vessels, the arteries and veins. The office of the heart is to propel alternately the blood, to receive it from all parts of the body, including the lungs; that of the arteries is to conduct the pure or arterial blood to such parts; whilst the office of the veins is simply to carry back the blood from those parts to the heart. These duties of arteries and veins are transposed in one instance in the adult—namely, in the pulmonic circulation, where the pulmonic artery carries the impure blood from the heart to the lungs, and the pulmonic veins convey the oxygenated or pure blood back again from the lungs to the heart.

The universal presence of circulatory vessels in organized beings shows the necessity of their existence; indeed, the growth and maintenance of bodies without such sources of nutrition can hardly be conceived.

The presence of circulatory vessels is as necessary to *functional* as to *organic* existence, no organ being capable of performing its function without a due supply of the circulating fluid. This fact is well illustrated by the effect produced on the brain by the loss or sudden abstraction of blood: fainting immediately results, which is an instantaneous suspension of the functions of this organ from want of its proper supply of blood.

Numerous facts prove that it is almost of equal importance to other organs. When the arteries leading to a limb or other part are tied, partial or complete paralysis results; and, although this is not so well marked as in the case of the cerebral organ, it is sufficiently so to sustain our position, especially when we reflect that the ligature of one artery only partially arrests the flow of blood to the part. Who can doubt what would be the result if all the arteries leading to an organ were tied? Certainly, arrest of function first, then of organic existence, and finally mortification and death.

But *organic* existence may be maintained with an arrest of function; the stomach, liver, kidneys, &c., afford numerous instances of such; this observation, however, has but little connection with the influence of the blood on the functional and structural integrity of the various organs of the body.

This evident and universal influence of the blood on the life or integrity of the individual parts, or whole, was so well known to the ancients as to induce many of their first philosophers to regard it as the seat of the living principle; hence the term "sanguis" was used to designate both the blood and the life, as in the following passage:—

"Ne judicio iniquo exsorbeatur sanguis tuus."—"Cicero de Orat.," i., 52.

Modern physiologists, however, regard the blood solely as the vivifying material which maintains and supports life, in the widest acceptation of this term, and leave the question of the centre of life in the human body, where it will most probably ever remain, to conjecture. I must observe here, although I do not desire to enter upon a metaphysical inquiry, that much more appears in modern works on this subject on the attempt to establish the identity of the living principle with the spiritual existence of man: of the latter we can form but a most imperfect idea; the former is evident to us, and may be studied, *per se*, with advantage.

The undisputed influence of the vital fluid on the functions of the brain is of the first importance in our inquiry, as it serves to explain the extremely sudden death which invariably results in all cases where, from some defect in, or disease of, the organs of circulation, a large quantity of this fluid is rapidly lost.

In treating of the subject of sudden death, connected with the respiratory organs, we shall divide our present inquiry into—

1. *Cases of sudden death produced by, or the consequence of, disease of some portion of the circulatory system;*

2. *Cases of sudden death occurring from derangement of some portion of the circulatory system, where disease is either absent, or has not contributed to the result.*

Of the different structures which are engaged in the circulation of the blood, it might be reasonably supposed that the *heart* would be most frequently diseased, and its diseases the most productive of sudden death.

The constant action of this organ—so remarkable from the first to the last moment of exist-

ence, pulsating without rest even for a small portion of a minute, and the force which it is known to exert in order to overcome the obstacles of the circulation, in even the healthy state—would lead to such an inference.

This, however, is not the case; although diseases of the heart are frequently met with, and are usually productive of sudden death, this organ is much less subject to disease than the arterial system, which is comparatively passive in the circulation of the blood. That portion of the heart, namely, its muscular structures, which are exclusively occupied as the active agents in the circulation, is indeed seldom diseased, unless, as the consequence of disease, in some other portion of the circulatory system.

On this point M. Bertin goes so far as to contend that dilatation, which is the form of disease most frequently found in the muscular structure of the heart, is never a *primitive* malady, but always the result of some obstruction to the circulation.

Although M. Bertin's opinion is not correct, there can be no question that disease of the muscular structure of the heart, *à priori*, is of extremely rare occurrence. Rheumatism, perhaps, affords the best example of independent disease of the muscular fibres of the heart.

The valves of the heart and the large arteries connected with this organ, especially those on the left side, are usually the seat of the primary disease. This, once established, soon leads to an increased development or hypertrophy of the muscular tissue of the heart itself, which, although usually regarded as a morbid result, is really a sanatory provision of Nature, and intended to overcome the resistance or obstacle caused to the circulation of the blood by the irregular action of the diseased valves. But this attempt to remedy the effects of the diseased valves upon the circulation leads to its further derangement, as the enlarged heart produces, both by its unusual power and size, a series of symptoms not previously present. The valvular disease continuing also to increase, a morbid condition of the heart and general circulation results, which is inconsistent with the maintenance of health and life, and leads to a fatal result.

Confining our observations, for the present, to diseases of the heart, it is not surprising that almost all these affections have a tendency to a *suddenly fatal termination*; as it requires only a more than usually disturbed action of the parts, or a greater interval in the pulsation of this organ than generally occurs, to cause a failure of the proper supply of blood to the vital organs of the body, especially the brain and nervous system; the result of which is the cessation of their functions, the loss of sensibility, fainting, and death.

At first, these attacks are not alarming; the patient, perhaps, is subject to fainting fits, but recovers from these in a little time. Here, the energy of the heart is tolerably perfect, and the nervous system is not seriously impaired; both, therefore, aid in restoring the heart's action, re-establishing the circulation, and resuscitating the patient; but, in the more advanced forms of the disease, the innate irritability of the heart, and the nervous energy, become so enfeebled that, on the accession of a fainting fit, they fail to set the machinery in motion, and sudden death is the consequence. In these cases death is produced in the following order:—1, irregular action of heart; 2, impaired and suspended nervous energy; 3, paralysis of heart; 4, death. But enlargement or hypertrophy of the heart is frequently productive of sudden death in other modes. Thus, for example, the *vital organs*, or *great centres of life*, may become so congested with blood as to be incapable of performing their functions; death, is, therefore, the result: its degree of suddenness being in proportion to the rapidity and extent of the congestion, and the parts more immediately affected. In the brain this congestion produces an apoplectic attack; in the lungs, pulmonary congestion: affections, as we have already seen, frequently productive of sudden death.

Other organs—indeed the whole vascular system of every part of the body is liable to the same congestion; but here the symptoms are less severe, and seldom produce a sudden termination.

It may be well to observe, that these congestions are too frequently regarded as the immediate consequence of the increased action of the heart, which propels the blood with unusual violence to the capillary vessels; and a mode of treatment is based thereon which is certainly inconsistent with the true pathology of congestion.

The cause of the congestion is, I consider, not an *increased* but a *diminished* flow of blood through the capillary system, the result of the influence of the heart's action being cut off from these vessels by the mechanical obstacles existing in the valves, or elsewhere, and of the obstruction to the return of the blood to the heart, effected by the over distended state of this organ.

In these cases, therefore, we have the apparent anomaly of violent action of the heart, and a diminished circulation. That the circulation is diminished in such cases is evident from the feeble action of the arteries, the congested state of the capillary vessels, the coldness of the superficial parts, the tendency to œdema, &c.

I feel that this view of the state of the general circulation, in cases of hypertrophied heart, is not sufficiently impressed on the attention of the profession, although I consider that it is the correct one, and that in very few instances, indeed, of hypertrophy of the heart—that is, the left ventricle—have we an *increased* energy of the circulation. Some will state that such must be the case where the left ventricle is hypertrophied, and there is no disease of the aortic valves or other apparent obstruction to the cirulation; but I think I shall be able to show that, even in these instances, there is often hypertrophied heart conjoined with a diminished general circulation.

That the profession generally consider the circulation to be active in these cases is apparent from the following extracts.—

"But M. Bertin is not, in our opinion, supported by sound observation when he says, that serous infiltration, and the whole class of symptoms bespeaking an obstructed circulation, are totally foreign and repugnant to hypertrophy. The truth we believe to be that the very same energy of the circulation which gives rise to active hemorrhages, apoplexy, &c., causes, as its next effect, engorgement of the arterial capillary system; the necessary consequence of which is serous infiltration, and more or less of all the other symptoms indicative of obstructed circulation."—"Cyclopædia of Medicine," art. "Hypertrophy of Heart," p. 540, by J. Hope. And again (same page—"which impediment co-operates with the increased energy of the arterial circulation," &c.

How far does our treatment of such affections, by blood-letting, digitalis, and other means, by which the heart's action is lessened, consist with this view of the physiological and pathological causes which produce the congestion of the capillary vessels? If we moderate or lessen the heart's action, shall we not thereby induce further congestion?

Notwithstanding these observations, I believe that such treatment is the most appropriate that can be devised at present, as it relieves the patient of the most distressing of his symptoms—the violent action of the heart, and, by lessening the quantity of the circulating fluid, tends further to the relief of the capillary congestion.

At the same time, our attention should be directed to this view of the cause of the congested state of the capillary vessels, and such remedies I resorted to as may promote the circulation in these, independently of the heart's action.

There is one condition of the arterial system which, occasionally, leads to an increased action, and hypertrophy of the heart, but which is rarely noticed by the profession. I allude to a deficiency in the elasticity of the aorta and large blood-vessels, somewhat analogous to a paralysis of he muscular tissue.

When we reflect on the important influence which the elasticity of the arterial system exerts on the circulation of the blood, we must expect that any deficiency of this elastic power will throw an additional duty on the heart, and thus lead to hypertrophy.

The principal uses of the elasticity of the larger arteries are—1. To receive, and thus moderate, the impulse of the left ventricle, which would be highly injurious to the vital organs, were it propagated to their vessels by means of rigid tubes. 2. To react on the blood propelled into the aorta and other large arteries, so as to empty these partially, and keep the blood itself in motion; when, therefore, the left ventricle of the heart again contracts, it meets with the arteries in a fit condition to receive the blood, and its force is not expended in overcoming the inertia of this fluid that would attach to it if in a state of rest, the elasticity of the arteries having maintained it in a state of motion during the intervals between the contractions of the heart.

If we suppose the elasticity to be impaired, lost, or destroyed, from organic changes in the coats of the vessel, as occurs in more advanced life, or from congenital malformation, or other cause, we may trace the results that must ensue.

If the arterial tissue be more yielding than in its normal state, the force of the left ventricle is lost by the distention of the aorta, and is not propagated to the distant or capillary arteries; and again, when the period arrives when the aorta should react on the blood, the elastic power is wanting, and this fluid is not propelled from the interior of this vessel as it should be: this consequence is, that the left ventricle, when it contracts, meets with a large column of blood in the principal arteries in a comparative state of rest; it is obliged, therefore, to contract more violently, and, therefore, irregularly, to overcome the inertia of this column, and propel it to the more distant parts of the body. This violent action soon leads to hypertrophy of the heart, and such an increased action of this organ as to further render the impaired elasticity of the arteries less able to resist its impulse, and thus aggravates all the original evils and their attendant symptoms. In this we may have hypertrophied heart without apparent disease, and yet a deficient general circulation.

The rigid state of the vessels, in advanced life, tends to similar results, although, from an opposite condition of the arteries, the state of the column of blood in the aorta is precisely similar.

To this circumstance may be occasionally attributed ruptures and diseases of the semilunar valves, which are so frequently met with, these having to sustain a much larger column of blood than natural.

To it also may be ascribed much of that irregularity of the general circulation, and of the heart especially, which is so frequently met with in advanced life, and which is often treated as a local affection dependent on the cerebral circulation, and as having no connection with any abnormal condition of the larger arteries.

My attention was first directed to this subject, many years since, from observing enlargement of the left ventricle in a youth in whom there existed no apparent organic disease in the valves or arteries, or indeed any other manifest abnormal structure. It occurred to me, then, that a deficiency in the elasticity of the arteries would satisfactorily account for the enlargement of the heart; and it appeared to me, from examination, that the aorta was less elastic than usual. To ascertain this correctly, however, would require more numerous experiments and extensive observation than I have been able to apply myself to. At that time I considered this disease of the arterial system to have been unnoticed by medical writers, but I have found that Mr. Hodgson, in

his excellent work "On the Arteries," has anticipated me in the following passage(a):—

"May it not, in some cases, be owing to a state of the fibrous or middle coat, not unlike paralysis, for I have seen the vessel morbidly dilated, without disease in its structure? Having, from whatever cause, lost its elasticity, the force of the circulation will increase the dilatation and establish the disease."

It is somewhat remarkable that rupture of the larger vessels, when these are not diseased, is seldom the cause of *sudden death* in cases of hypertrophy of the heart: effusion from the smaller vessels much more frequently induces a fatal termination. These facts fully accord with the observations already made, as to the true cause of the capillary congestion in many of these affections.

The cause of death (and it is usually sudden) in cases of hypertrophied heart is very frequently effusion into the cerebral or pulmonary tissue, constituting *cerebral and pulmonary apoplexy*. On this head Dr. Hope observes:—

"Since the researches of the present day have demonstrated that even a slight thickening of the walls of the heart constitutes a morbid state, and have unfolded to view the connection subsisting between that state and a train of symptoms formerly either wholly overlooked or attributed to other causes, instances of apoplexy supervening upon hypertrophy have been so frequently noticed that the relation of the two, as cause and effect, is one of the best established doctrines of modern pathology.

"But the total number of cases of apoplexy from hypertrophy is much greater than that we have witnessed during the same period of apoplexy from causes independent of hypertrophy; whence we are led to believe both MM Richeraud and Bertin, that hypertrophy forms a stronger predisposition to apoplexy than the apoplectic constitution itself."—"Cyclopædia of Medicine," art. "Hypertrophy of Heart," p. 510.

What erroneous opinions then have been, and still are, entertained regarding the causes of sudden death—how much in error are those who are in the habit of regarding apoplexy of the head as the commonly fatal affection! We have elsewhere shown that this is much less frequently fatal than pulmonary congestion, and now adduce some of the first of modern authorities in support of the opinion, that hypertrophied heart causes death more frequently than independent cerebral apoplexy. What errors in practice may not such mistakes have led to?

Hypertrophied heart may prove suddenly fatal by inducing—

1. Cessation or irregularity in the heart's action, in consequence of which the brain does not receive its required supply of blood; fainting results, and is rapidly followed by death.

2. Congestion of the capillary vessels of the brain or lungs, producing cerebral or pulmonary apoplexy.

3. Effusion of blood into these organs or other parts of the body, either with or without rupture of the vessels, causing death from apoplexy or internal hemorrhage.

Enlarged heart produces death more gradually, by causing an effusion of serum into the cellular tissue of the body generally, and locally into that of the lungs and cavities of the body.

Rupture of the heart, when hypertrophied, seldom occurs; but this, with rupture of the arteries and veins, we shall consider in our next.

(a) "A Treatise on the Diseases of Arteries and Veins." By Joseph Hodgson. London: 1815, p. 51.

NAVAL MEDICAL APPOINTMENTS.—Surgeons: J. H. S[illegible], to [illegible] the Avenger; A. B. B[illegible], to the [illegible]; Tarn; G. A. Munn, to the [illegible]; T. H. Keown, to the C[illegible]. Assistant Surgeon: B. Del[illegible], to the Avenger.—Surgeon: David Geddes to the Victory.—Assistant Surgeon: Dr. John Macleod (1838), to the rank of Surgeon.

A FEW REMARKS ON PHTHISIS, AND ON ITS PHYSIOLOGICAL TREATMENT.

By M. BOUCHARDAT.

Translated for the MEDICAL TIMES by ALFRED MARKWICK, Esq., Surgeon to the Western German Dispensary, and formerly Externe to the Venereal Hospital, Paris, &c.

The anatomical doctrine which prevails at the present day has, in more than one instance, **substituted facts for errors; it has, in more than one disease, replaced bad therapeutics by a rational and efficacious mode of treatment,** and has more than once, by pointing out to us the fallacy of science being already perfected, contributed to delay the period of useful and fruitful research. In pulmonary phthisis, in particular, the true nature of the disease consists, in the opinion of all our anatomico-pathological writers, in the specific alteration of the lungs; and it may be observed from its commencement, and followed throughout all its stages. This opinion being adopted, the origin of the disease is considered to be a specific irritation of the organ; and upon this supposition, medical men direct their treatment against the local affection, and torment their patients by the local application of leeches, cauteries, and moxas!

This opinion on the nature of pulmonary consumption is one of the worst that can be formed; the reality is not sought for, but a vain fancy followed, and the disease itself allowed to increase daily in severity, and at length to become incurable, without any useful means being resorted to to oppose it.

I am about to defend an opinion which is to lead to quite a different mode of treatment, but which will often present, in its application, numerous difficulties, and require special researches to be made.

According to a careful microscopical examination, and a complete chemical analysis, the results of which I intend to publish elsewhere, it appears that tubercule is formed by the reunion of *particular globules* which have no existence in the animal economy in the healthy state. These particular globules become developed spontaneously in the bodies of animals that are placed under certain circumstances which will presently be more particularly alluded to. These globules unite and coalesce, and become destroyed by giving rise to secondary products, and to fresh organized globules; they invade every organ, but more particularly the more susceptible ones—those, in fact, of the most *delicate* structure, such, for instance, as the lungs.

If this opinion be admitted *à priori*, and its value is proved by subsequent experience, we are then naturally led to inquire after the cause or causes which place the animal economy in such a condition that the tubercular globule becomes spontaneously developed. If we are fortunate enough to discover the cause or causes, then all doubt as to the treatment ceases; it becomes then truly physiological.

The majority of those physicians who at the present day adopt an opinion analogous to the one I have just expressed on the nature of the tubercular affection will reply without hesitation. But the true cause of the disease is a particular *diathesis*; and to them, this word diathesis is something mysterious—something inaccessible to our researches. This habit of being contented with words is but too common in pathology, and is almost as dangerous as being in error.

If we apply this method to the study of phthisis, we at once find that the tubercular globule becomes developed in individuals that are reduced either by bad nourishment, or by the excessive, continued, and unrepaired loss of some fluid essential to the animal economy, such as the lymph and the serum, from too abundant suppurations, or the spermatic fluid from venereal excesses, &c.

It will be perceived that the causes of debility which may bring about the spontaneous evolution of the tubercular globule are both complex and numerous. I shall not now attempt to touch upon all parts of this problem, which, indeed, is beyond my capabilities; but shall merely take a case that has fallen under my own observation, and follow, with regard to it, the plan I have described; the case in question is one of tubercular affection occurring in a diabetic patient.

ON THE CONNECTION WHICH EXISTS BETWEEN DIABETES AND THE TUBERCULAR DISEASE.

In all my writings on diabetes I have alluded to the tubercular complication which has been very justly insisted on by several authors. **In all the diabetic patients comprised in the first series of cases, on whom a *post-mortem* examination was made, and who did not die from any intercurrent accident, tubercles were found in the lungs.**

I am convinced that many tubercular affections have originated in a slight attack of diabetes which has been overlooked, and I cannot too strongly recommend medical men to carefully examine the urine of patients threatened with phthisis. By adhering to the rules I laid down when speaking of "the means of detecting the presence of starch sugar in urine, and of measuring its quantity", it is possible in many cases to ward off or arrest an affection which is so difficult to be overcome when once it has manifested itself. I will not quit this interesting subject, of the affinity between diabetes and the tubercular disease, without making a few remarks, the truth of which must eventually be proved in practice.

In the majority of cases, the truly positive ætiology of pulmonary phthisis is still enveloped in great obscurity. Of late years some very exact researches have been made which have been the means of proving, with great certainty, the existence of tubercles when they are present in the lungs. The Parisian school has brought the methods of percussion and auscultation to the utmost perfection. One may almost foretel the alterations that will be found on *post-mortem* examination. This part of the science, the results of which act on the minds of students, has been cultivated with so much spirit that *physiological ætiology*, which alone can lead to a rational and really effectual mode of treatment, has, in consequence, been perhaps a little too much neglected. It is, no doubt, useful to be able to detect, either by the aid of instruments or by our own improved senses, those lesions which would escape a less practised ear; still it is of far greater importance to prevent them, and to stop, if possible, their progress.

The excellent understanding of a great number of celebrated physicians of our time has led them to abandon the uncertain doctrines of our predecessors, and to introduce into medicine the positive methods of the other sciences of observation. Great perseverance has been employed, not only to determine the physical alterations of the diseased organs or tissues, but also to find out the nature of these hidden alterations by means of a strict diagnosis; but, being unable to introduce into the research after the *true* causes this precision, the study of the nature of diseases has been repeatedly declared of but little importance, and those investigations which, in my opinion, can alone lead to a satisfactory mode of treatment have been neglected. I am aware that these investigations are difficult, and that more than one false step has been made in this direction; but within the last fifty years sufficient progress has been made in both physics and chemistry to enable us to foresee the time when we shall be able to unravel the mysteries of many of the organic phenomena which have hitherto been considered as unfathomable. Medicine will never assume a truly scientific and exact character until, aided by physics and chemistry, it possesses positive data respecting the nature of diseases.

We will now attempt to handle the very difficult question of the physiological ætiology of the tubercular affection, and will proceed, as in the exact sciences, from the known to the unknown. We commence with the following principle, which may be considered as a law of pathology, viz.:—

"When a patient labouring under diabetes dies slowly from the constant progress of the

disease, without the occurrence of any other accident, tubercles are invariably found in the lungs after death."

Here, then, are individuals with sound lungs, in whom the development of tubercles may be foretold. Therefore, as we now know the nature of diabetes, we may, for this particular case, arrive at a positive ætiology of the tubercular affection.

In what does a diabetic patient chiefly differ from a man in health? More particularly in this, that in the healthy person, the feculent food dissolved in the digestive apparatus, and carried slowly into the circulation, is there completely consumed, no trace of it being afterwards found either in the fæces or in the urine; whereas, in the diabetic, the feculents, rapidly converted into glucose in the stomach, are immediately absorbed; and this glucose, being in too large a proportion in the circulating apparatus to be normally destroyed, becomes eliminated by the kidneys. Hence there are three important circumstances which distinguish the diabetic from the healthy individual, viz.:—1, the perversion of the functions of the stomach, causing a rapid solution of the feculents; 2, the existence of a large quantity of glucose in the blood; 3, great activity of the secreting organs of the urine to get rid of the glucose. Important consequences proceed from these differences.

The active powers of the digestive organs, and the secreting apparatus of the urine, are uselessly employed for the support and repair of the animal economy. The nature of the transformations which the nutritive fluid is continually undergoing is modified by the presence of a considerable proportion of glucose in the blood. The food dissolved in the digestive apparatus being no longer usefully employed, the patient is supported at the expense of himself; hence the emaciation and wasting, with all its results. Now, the necessary effect of this anomalous condition is the spontaneous production, and the localization the lungs, of tubercular globules, which eventually, by their successive agglomeration, invade this organ and prevent its important functions.

The causes of the spontaneous evolution of tubercles for this particular condition are thus clearly established:—

1. Perversion in the digestion of feculents.
2. Presence in the blood of a variable proportion of glucose.
3. Elimination of the glucose by the kidneys.
4. Replacing the glucose eliminated, by the slow destruction of the fundamental principles of the blood, the muscles, and the other organs.

May not analogous circumstances be met with in the different conditions under which tubercles become developed in the lungs or in other organs?

Apart from these cases, in which tubercles are developed as the result of the perversion in the digestion of feculents, can we not easily understand that other perversions in the important function of nutrition may cause the development of the tubercular affection? I hope, when our great work on digestion is completed, to be able to return to the nature of these perversions, which may be suspected after what we have published. I think, therefore, it would be of the greatest importance to make some careful and accurate investigations into the manner in which the digestion and the assimilation of the different aliments takes place in persons in whom phthisis has just commenced, or who are threatened with this disease. We should then establish an equation, as I have done with respect to diabetes; the food and drink would form its first term, and the principles contained in the fæces, the urine, and the other products of secretion or otherwise, the nature and quantity of which could be appreciated, the second. These investigations would lead to results equally precise with those I have obtained in diabetes. We may resume the contents of this paper in the following propositions:—

1. The cause of the development of tubercles in the lungs of diabetes is a defect in nutrition and assimilation.
2 The tubercular affection has its origin, much more frequently than is imagined, in a defect in nutrition and assimilation, which cannot be known, and which can only be remedied by establishing an exact balance between the *ingesta* and the *excreta*.
3. It likewise originates in the excessive, continued, and unrestrained losses of fluids that are essential to the economy.
4. When a patient becomes emaciated it is important to ascertain as soon as possible the cause of the emaciation, and to remedy it; we should thus alter the conditions which give rise to the spontaneous evolution of the tubercular globules.

19, Langham-place.

A COMPARATIVE VIEW OF THE HEART AND OTHER ORGANS.

By W. H. BROWN, M.D., F.L.S., &c.

(Continued from p. 87, vol. 15.)

PAPER II.—THE LUNGS.

Although in my previous paper on the Heart, the whole of the present subject is foreshadowed it is nevertheless an equally interesting and instructive matter, with that of my former communication, to take a comparative view of the respiratory apparatus, and trace its double perfecting in the denizen of the land and of the water.

SUB-KINGDOM RADIATA.

Porifera.—As in the sponge there is no circulating fluid, but its growth is altogether of a low vegetable or fungus order, so is there in it no respiratory system; but whatever influence the air may exercise on its tissues, it obtains general access to them in the constant currents of water that pass into its substance.

Polypifera.—No distinct organ is as yet evolved for, or part appropriated to, the carrying on of the respiratory function. If the air, therefore act in any way upon the nutrient fluid, it must do so generally through the superficial tissues of the body, both external and internal.

Acalephæ.—It was stated, when speaking of the circulatory system of this class, that in the medusa the digested food was conveyed from the globular stomach through several vessels to the margin, where these vessels ramified and exposed their contents to the action of the air contained in the water. This, then, is, as we may say, the first localization of the function in the animal kingdom. From their progressing by collapsing and distending this branchial margin the medusa family of the class acalephæ have been distinguished by the term *pulmonigrada*.

Echinodermata.—In the whole of this tribe respiration is a purely peritoneal function—that is to say, the vessels ramifying on the lining membrane of the shell are those in which it is carried on, a constant current of water being kept up through a series of short tubes opening on the exterior of the animal.

SUB-KINGDOM ARTICULATA.

Annelida.—In this class we have both water and (if the term be allowable) amphibious breathers. In the latter, the function is carried on principally in two ways—one, by means of ten or twelve sacculi opening by short ducts on either side of the animal; the other, by the whole cuticular surface. The activity of the function in the latter part seems to be in the ratio of its performance in the former; that is to say, when the air-cell or proper respiratory cavity is not imparting a sufficient amount of the purifying principle to the blood, it is sent in greater quantity to the surface of the body, where it undergoes the necessary change. The leech and earthworm belong to this division of the class. In the first division, or water-respirers, short feathery tufts are given off with the locomotive organs at every ring on both sides of the body, or in those inhabiting a shell a large tuft is developed round the head of the animal. We have then presented to us in this class both rudimentary lungs and gills—the first in the induplicature of the external surface or air-cell; the latter, in the cuticular prolongation or tuft.

Insecta.—The beautiful mechanism of the respiratory function in these ever-active little denizens of the air is as follows:—On either side of the body, in the membrane which connects the hard segments that incase it, are ten minute pores or apertures, termed spiracles; these are the entrances to slender tubes (*tracheæ*) which ramify—here and there dilating into air-cells or cavities—through the entire body. The first thing in this arrangement worthy of notice is the situation of the spiracle; had it been on the hard integument, its closing, so necessary at times for the preservation of the animal, would have been impossible; but where it is its sphincter is of course well capable of acting. (In those species which pass their lives upon the ground or in the earth, the spiracle is fringed with hair, which filters the air from the fine particles of dust which otherwise would gain access with it.) Then, with regard to the tracheæ, one cannot but be struck with the brilliant adaptation we find to admit of variation in their calibre: for it need hardly be remarked that these tubes, passing through the whole organism of the body, could not maintain a uniform volume without occasioning derangement; the necessary change in this then is effected by means of a spiral thread, which is closely coiled up between the exterior and interior membranes of the tube, and may be traced even into the most minute of them. We readily perceive how much is gained in the great purpose of lightening the body by this description of respiratory mechanism—the air flowing so entirely through the body necessarily decreases its specific gravity considerably—a system of vessels, too, for the circulation of the blood, is entirely dispensed with. The general aëration of the blood, moreover, endows the insect with its characteristic strength and activity. The abdomen contracts and expands regularly from twenty to sixty times in a minute, in different species, for the admission and expulsion of the air.

Arachnida.—In the lower members of this class respiration is carried on by a similar apparatus to what we met with in the preceding class. In the higher members, however, the spiracles—six or eight in number, and opening on the ventral surface of the body—admit the air into sacculi, ranged along their respective sides. These are not simple cavities, as in all our previous instances, but cavities presenting many induplications (which, indeed give them an appearance not very dissimilar from that of the interior of a poppy), so that a greater quantity of blood may be presented to the atmosphere than would otherwise be the case. This gill-like development of the organ has caused it to be denominated a pulmonary branchia; and when we consider that the habitat of the animal is, generally speaking, in a very damp atmosphere, the term will not seem so far-fetched.

Crustacea.—The respiratory function is very variously performed in this class. In the lowest species it is carried on by the entire surface of the body. In a tribe above this, the last joint of the legs (fimbriated for the purpose) performs the function. Higher still in the class, the tail performs the duty of progression, and the legs are entirely devoted to the office of respiration. In the crab and lobster tribe, at the head of the class, regular branchial tufts are evolved on each side of the chest (consisting of laminæ covered with horizontal filaments), which are incased in the hard envelope of the body, leaving an aperture above and below them for the admission and expulsion of the water; for the maintaining of a constant current of which a curious contrivance had recourse to, in the development of a flagellum, or flap, attached to some part of considerable motion, the action of which forces the water through the gill-apertures.

SUB-KINGDOM MOLLUSCA.

Tunicata.—The respiratory function in this half-animated race is carried on entirely in the peritoneal lining of the capacious pouch which contains their viscera. The entrance to this chamber (a perforation at the top of the animal) is carefully guarded by a fringe of tentacula, which effectually prevents the entrance of any

improper substances. The renewal of the water is amply provided for by cilia; and in some species the admission and expulsion of the water from the peritoneal cavity is their only means of progression.

Conchifera.—The branchiæ of these bivalves consist of four frill-like bodies given off, between lips of the mantle, at the anterior circumference of the body, composed of cellular tissue traversed by innumerable parallel capillaries, which expose a large amount of blood to the renovating influence of the water; a constant current of which is maintained—and this, in the direction of the mouth of the animal for its nutriment—by the incessant action of countless vibrâtile cilia which cover the branchiæ. The action of these is so strong, that, when a piece of the gill is snipped from the living animal and thrown into water, it rows itself in a definite direction for a short time.

Gasteropoda.—The snails and other air-breathers of this class have an air-chamber of somewhat triangular form in the back, into which there is an opening for the admission of air, on the right side of the animal. The mechanism of this cavity is as follows:—The delicate membrane lining the roof receives the blood for aëration, whilst the floor consists of a muscle that separates this cavity from the other viscera, and keeps up a constant movement, like that of our diaphragm, for the admission and expulsion of the air. The apparatus of the water-respirers of this class is variable, both as to shape and position: in one tribe, the gills have a beautiful flower-like appearance, and are arranged round the anal orifice; in another tribe, they are delicate pinnated frills situated on both sides of the animal; in a third, a similar organ is confined to one side, and is covered by a process of the mantle; and in a fourth, a perfect chamber is made for them in the anterior part of the animal, from the roof of which they hang suspended in from one to four rows, due provision being made for the admission of the water. As in many other classes the air-breathers are not confined entirely to terrestrial life, but, on the other hand, pass much of their time in the water, in these there is necessarily an ability to close the pulmonary orifice, and they are obliged to come to the top of the water frequently, to replenish the air contained in the respiratory cavity.

Pteropoda.—The respiratory function of this little-examined class was pretty positively asserted by Cuvier to be carried on by the fins given off from the neck, with which they row themselves through the water. This statement, however, has been as positively denied by Eshricht. If the function be not confined to this spot, it doubtless participates in its performance with the whole surface of the body.

Cephalopoda.—The branchiæ of this class, one on each side (two in the nautilus), consist of long, tapering, leaf-like bodies, attached by the stem, which is composed of the branchial artery and vein, whilst the lamellæ, given off at right angles with the stem, are formed of the reticulated capillaries—in which the blood undergoes its change—ramifying through cellular tissue. These organs are separated from the other viscera by a membranous septum. The muscular action of the walls of their apartment draws in a current of water through a valvular process of the mantle, and expels it, along with the fæces—the rectum opening within the septum—through the funnel—a cylindriform process of the mantle. The expulsion of the respired water is a means of progression with some genera of th class.

SUB-KINGDOM VERTEBRATA.

Pisces.—On each side of the cavity of the mouth in fishes stretch several (most commonly four) bony arches, termed branchial arches each consisting of several pieces of bone, and presenting the concave surface to the mouth From the convex surfaces a double row of leaf-like membranous processes (consisting of the aërating capillaries, ramifying through cellular tissue), edge to edge, are given off. The branchial artery and vein lie in a groove on the convexity of the arch, the former superior to the latter. The arches are toothed on their concave surfaces to prevent the passage of the food into the gill-cavities. By the action of the muscles of the mouth a constant current of water is maintained over the gills; which, of course, enters at the mouth, and makes its exit in osseous fishes at the operculum or gill-covers, in cartilaginous fishes (where the gills are more perfectly enveloped), through several small apertures in the neck, termed branchial openings. What part the air-bladder of fishes plays in their respiration is by no means satisfactorily demonstrated; it would certainly seem that where it has a ductus pneumaticus, particularly opening in the throat, as it does in some species, it exerts some influence over the respiratory process; but when it is a perfectly closed cavity, without any channel of communication between it and any other organ, it is impossible that it can act in any other way in the economy than as an increaser of specific gravity on compression, or diminisher of it on distention.

Reptilia.—The lungs of reptiles consist of one or two membranous bags, lying loose among the general viscera of the body. The aërating surfaces of these cavities are much increased by numerous septa that divide the upper portion of the lung into many compartments. The trachea, which consists as in higher classes of animals of cartilaginous rings, enters the lung immediately, without previously subdividing into bronchial ramifications. Having no diaphragm, and altogether a very imperfect inspiratory and expiratory system, the majority of these creatures are obliged to take in air by a swallowing process; that is to say, the mouth being full of air and closed, and the posterior nares so valved as to prevent its return through the nostrils, the muscles of the mouth and neck force it through the larynx into the lungs, whence, when it is deteriorated (which necessarily is a much longer process than in other animals), it is expelled by means of muscular action. Its expulsion in the serpent tribe produces the hissing sound peculiar to them. Some reptiles, as is well known, commence existence as fishes (the tadpole, which afterwards becomes the frog, for instance); we have in these, of course, a metamorphosis of the respiratory apparatus, inasmuch as the branchial tufts at the side of the neck get gradually covered in like the gills of the fish, until the operculum ceases to be such, and the tufts are entirely absorbed; during which changes the membranous lung has been developing in the ratio of the former's withdrawal, and the pulmonary arteries have gradually increased in calibre as those of the branchiæ have become obliterated. A third variety in the breathing apparatus of reptiles is found in the perennibranchia, or true amphibious tribe, which are provided with both branchial tufts (uncovered) and proper reptile lungs, either of which aërate the blood, as the animal may be on the land or in the water.

Aves.—The lungs of birds better deserve to be so designated than those of any other creature hitherto considered, consisting as they do of two highly vascular, well-formed, spongy masses The trachea, opening at the root of the tongue, consists of perfect cartilaginous rings, and possesses both an upper and a lower larynx: it is in the latter, situated at the bifurcation of the bronchi, that the brilliant modulations of sound peculiar to the race are effected. Several of the subdivisions of the bronchus open into the lung, but the principal one passes through its substance (for it is not in it alone that the aëration of the blood takes place), and opens among the viscera, the whole serous lining of which, and continuation into the interior of the bones and numerous saccular developments under the integument, are concerned in the respiratory function. Not that this is the sole purpose gained by this wonderful extension of surface, for, of course, it eminently contributes to lessen the specific gravity of the bird—a most important matter in its economy. It likewise affords an excellent leverage for its muscles; and it is to this circumstance (the extent of pulmonary surface) that the bird is enabled to prolong its note to the extent it does. The lungs being bound down to the ribs and intercostal spaces, have to be inflated and emptied by a sort of bellows process, performed by the sternum and abdominal muscles.

Mammalia.—It is unnecessary to do more, to make this account complete, than to give a bare outline of the respiratory apparatus in this class, since that of every member of it is pretty nearly identical with what is found in us. At the base of the tongue is the glottis, or opening into the larynx, protected by a valve, the epiglottis: the larynx, or broad cartilages of the trachea, is succeeded by the narrow cartilaginous rings of the trachea proper; this tube eventually bifurcates into the right and left bronchus, which ultimately split into numberless ramifications, and, loosing their cartilaginous rings, terminate in membranous air-cells. Now, all the ramuli of the principal rami, being bound up together by cellular tissue (the parenchymatous substance of the lung), divide the lung into lobes, whilst the ultimate subdivisions of the ramuli—the air-cells, being similarly bound up together, divide the lobe into lobules. The lungs are, moreover, lodged in a distinct cavity with the heart, formed by the development, in this class, of a muscular septum, the diaphragm. They are enveloped in a serous membrane, the pleura, which is reflected upon the walls, roof, and floor of their compartment, the utility of which is obvious. The muscular arrangements (considerably advanced by the addition of the diaphragm), for the accomplishment of inspiration and expiration, are likewise most complete.

The following table will perhaps convey some idea of the order of progression in the development of the important organ we have been considering:—

Classes.	Respiratory Organs.
	RADIATA.
Porifera ..	.. General surface, external and internal.
Polypifera	.. General surface, external and internal.
Acalephæ ..	.. Edge of mantle.
Echinodermata	.. Peritoneum.
	ARTICULATA.
Annelida ..	.. Surface, air-cells, cuticular branchial tufts.
Insecta ..	.. General tracheæ.
Arachnida ..	.. Pulmo-branchiæ.
Crustacea ..	.. Branchial tufts, enclosed.
	MOLLUSCA.
Tunicata ..	.. Peritoneum.
Conchifera ..	.. Branchial frill, enclosed.
Gasteropoda	.. Pulmonary chamber, branchial frill, enclosed.
Pteropoda ..	.. Surface of body.
Cephalopoda	.. Branchial tufts, enclosed.
	VERTEBRATA.
Pisces	.. Gills.
Reptilia ..	.. Air-sacs.
Aves	.. Subdivided lungs, respiratory cavity prolonged.
Mammalia ..	.. Minutely subdivided perfect lung.

For the length of time which has elapsed between the appearance of the first and second of these papers, I have illness to plead in apology. They shall, however, now continue, at short intervals, in an uninterrupted series. I would repeat the statement with which I concluded my former paper, namely, that, as this is an altogether elementary compilation, a very simple classification is adopted.

(To be continued.)

A STATISTIC AND CRITICAL REPORT OF THE EFFECTS OF ETHERIC INHALATION, FROM CASES RECORDED IN THE HOSPITALS OF PARIS.

Translated from the Original of Dr. BURGUIERES.

The action of ether on the lungs, by inhalation, esablishes, beyond doubt, one of the most important events which the science of medicine has discovered for a long period. It is manifest that, by its nature as well as application, this event has attracted, and still attracts, the anxious attention of the public. After perusing the discussion which took place in the Académie des Sciences—after witnessing the most contradictory opinions maintained by men of eminence—

our readers should recollect, in the spirit of doubt, that the recitals of certain experiments made on dogs and rabbits, or the results of immersing in ether portions of nerves separated from the body, are matters not for present consideration. It is only by observations made on the human body that we can determine the questions which have been raised. The reader will do well, from the great interest of our subject, to conquer his natural aversion to look on human misery, and follow us through our hospitals, where we call upon him to assist at those terrible operations, at those wonderful mutilations, which surgery is daily called upon to perform. He will now witness the wretched spectacle greatly divested of its horrors, for in most cases the patient, instead of relieving his anguish by heartrending cries, will remain calm and insensible, or, as occurs in some instances, will seem absorbed by some delicious ecstasy, at the very moment he would have suffered the most horrible tortures.

The question of suppressing pain during surgical operations is not of recent origin: several essays on this subject have appeared at different times; and the language used by surgeons previous to discovering the stupifying properties of ether is an object of curious consideration. Some idea may be formed from the following passage, extracted from the "Traité des Pathologie Externe," du M. Vidal (du Cassis):—

"*Suspension of Sensibility.*—It would be rendering a double service to the patient to suspend sensibility in that part which is to be operated on, in the same manner that we suspend the current of the blood, for pain is often one of the causes which makes us dread the operation. On the other hand, pain, when prolonged, causes to our organization a nervous loss (*perte nerveux*) which is equivalent to a loss of blood. We may safely declare there are nervous losses as well as losses of blood."

Let us, however, abandon these theoretical pursuits and seek the field of observation. We shall here confine ourselves to facts which have been accomplished in our hospitals under the incontestable and valuable guarantees which publicity and science give to every transaction. Although the practice of etheric inhalation has been known in France for the brief period of two months, the number of trials is already sufficiently considerable to enable us to draw some important conclusions. We shall not advance these conclusions as definitive, but they may be considered, according to the expression of Bacon, as the first vintage (*primières vendanges*).

We shall divide into three classes the matters we are going to discuss in their order of relation:—1, as to surgical operations; 2, accouchements; 3, the employment of etheric inhalation as a therapeutic method of treating some diseases.

SURGICAL OPERATIONS PERFORMED UNDER THE INFLUENCE OF ETHER.

The number of operations performed under the influence of ether is already very considerable—a fact more attributable to the free will of the patients than a desire for experiment in the physicians and surgeons of our hospitals, who in this respect, whatever opinions may have spread elsewhere, have shown themselves very reserved. It is impossible to form a correct idea of the persevering determination with which patients in our hospitals beg to be etherized so soon as they perceive a surgeon refer to his instrument-case; and this is often done to escape the slight pain which might result from the simplest operation. Of two hundred and eleven operations, we are in possession of details sufficiently circumstantial to constitute the basis of an analytical investigation. The following list indicates the hospitals where these operations took place, and the surgeons by whom they were performed:—

Hotel Dieu.		
M. Roux.		
Amputation of the leg	1	
Amputation of the thigh	1	
Amputation of the fingers	3	
Brought forward		5
Tumour of the breast	1	
Tumour of the face	1	
Extraction d'or nurosis (qy. J. E. W.)	1	
Fistula lachrymalis	1	
Fistula in ano	2	
Phimosis	1	
Incisions, excisions, &c.	30	— 42
M. Blandin.		
Amputation of bone of the foot ..	1	
Amputation of bone of the breast ..	3	
Fistula in ano	1	
Actual cautery	5	— 10
M. Boyer.		
Amputation of the limb	1	
Amputation of the finger	1	
Extraction of the nail	1	
Moxas	1	— 4
Hôpital de la Charité.		
M. Velpeau.		
Amputation of the leg	1	
Amputation of the breast	1	
Sarcocele	1	
Partial amputation of the foot ..	1	
Removal of cancerous tumour from the thigh	1	
Removal of cancerous tumour from the parotid	1	
Removal of cancerous tumour from the eye	1	
Partial amputation of the hand ..	1	
Fistula in ano	2	
Excision of the glands of the throat ..	1	
Abscess of the breast	2	
Removal of the nail	1	
Reducing a luxation of the hip ..	1	
Reducing a luxation of the elbow ..	1	
Reducing a fracture of the thigh ..	1	
Iodine injection into the articulation of the knee	1	— 18
M. Gerdy.		
Cataract	1	
Amputation of forearm	1	
Removing polypus from the nose ..	1	
Seton	1	
Reducing hernia	1	
Incisions, excisions, &c.	4	— 9
Hôpital de St. Louis.		
M. Jobert (de Lamballe).		
Amputation of the thigh	1	
Amputation of the leg	1	
Amputation of the arm	2	
Tumour of the breast	2	
Tumours various	3	
Fistula and fissure in ano	2	
Actual cautery	2	
Luxation of shoulder	1	
Hydrocele	1	
Incisions, excisions, &c.	20	— 35
M. Malgaigne.		
Amputation of leg	4	
Removal of tumours	2	
Amputations of fingers and toes ..	4	
Incisions, excisions, &c.	10	— 20
Hôpital Beaujon.		
M. Langier.		
Amputation of thigh	3	
Amputation of leg	1	
Excision of tumours	1	
Strangulated hernia	1	
Moxas	1	— 7
M. Robert		
Amputation of leg	1	
Section of tendo Achilles	1	
Reducing dislocated elbow	1	— 3
M. Bouvier.		
Section of tendo Achilles	1	
Strabismus	1	— 2
Hôpital de la Pitié.		
M. Giraldes.		
Amputation of thigh	1	
Amputation of large toe	2	
Removal of tumour	1	
Hydrocele	1	
Ongles incarné (qy. J.E.W.) ...	1	
Incisions	2	
Actual cautery	1	— 9
		159
Brought forward		195
Maison Royale de Santé.		
M. Monod.		
Amputation of finger	1	
Amputation of breast	1	
Circumcision	1	— 3
Hôpital du Bon Secours.		
M. Denonvilliers.		
Amputation of fingers	2	
Incisions, excisions, &c.	18	— 20
Hôpital des Cliniques.		
M. Voilemier.		
Amputation of the leg	1	
Amputation of the arm	1	
Removal of lipornes volumineux (qy. superabundant fat, J. E. W.) ..	2	
Removal of tumour encystous ..	1	
Removal of a needle	1	
Removal of polypus of the nose ..	2	
Division multiple d'un varte enthrax (qy., J. E. W.)	1	
Removal of nail	1	— 10
Hôpital Cochin.		
M. Michen.		
Lithotrity	1	
Amputation of toe	1	— 2
Hôpital des Enfans Malades.		
M. Paul Guersant.		
Operation of the taille (qy., J. E. W.)	1	
Amputation of thigh	1	
Amputation of arm	1	
Amputation of fingers and toes ..	5	
Fistula in ano	1	
Actual cautery	1	— 10
Hôpital du Midi.		
M. Vidal (de Cassis).		
Varicocele	2	
Phimosis	1	
Strabismus	1	— 4
		208

Before we enter upon a detail of particular facts, it will be necessary to establish certain generalities, emanating from experience acquired in relation to the construction of apparatus, to the choice of ether, to the preparation of the patients, and to the effect of etheric inhalation.

Construction of the Apparatus.—It is highly important to the success of etheric inhalations to use good apparatus; and we must, without doubt, attribute to the imperfect construction of those hitherto employed certain negative results which obtained on the first attempts. The apparatus which is now used in our hospitals, and for which we are indebted to Messrs. Luer and Charrière, furnishes, to a degree approaching to perfection, every essential requisite.

The ether is to be secured in a pint bottle (litre), because at each inspiration there enters naturally to the lungs from half a pint to a pint of air. The conducting tube ought to be, at least, equal in its diameter to the tracheal artery. The etheric vapour should be conveyed to the respiratory organs only by degrees; this is to be accomplished by an ingenious arrangement of the cyphon which closes the bottle, so that, according to the turn or position of the cyphon, the proportion of etheric vapour is augmented, until, the valve being completely opened, the patient inhales exclusively the air which is saturated with ether.

The patient is brought in contact with the apparatus by means of an *embouchoir*, which, by its construction, adapts itself precisely to the form of the mouth. The nostrils ought in this case to be kept closed, either by the fingers, or by springs prepared for the purpose. M. Cloquet has a contrivance which adapts itself to the nasal orifices: in this case the mouth should be kept shut. In conclusion, a valve situated near the mouthpiece prevents the breath given out from returning into the apparatus.

Choice of Ether.—Although many preparations of ether possess the power of stupefaction, the hydric called sulphuric ether is that which is to be preferred. It should be as pure as possible—the more it is pure the more it is volatile, and

produces its effects with promptitude and success. It is also very essential to separate from it completely all sulphuric acid, of which it sometimes retains certain particles—a consequence resulting from the method by which it is prepared (distillation of a mixture of alcohol and sulphuric acid). According to certain discoveries made in England, the irritation which has attacked the respiratory organs, in certain cases of etheric inhalation, is attributed to this mixture of sulphuric acid. Ether perfectly pure will not produce these accidents: indeed, we should be careful to renew the ether upon every experiment, for by its evaporation it loses its most volatile and active particles. We have more than once seen the effects delayed for a long time, or entirely fail, because this precaution had been neglected.

Preparation of the Patients.—Many surgeons, particularly Professors Roux and Velpeau, subject those patients which are to undergo important operations to a preparatory process of etherization. We shall presently see the advantages, in some cases, of knowing beforehand the susceptibility of the patient, and the peculiar influence of the ether on his constitutional character. It is almost always necessary to the success of etheric inhalation that the patient should be taught to breathe through the inhaling apparatus. There are some who readily adapt themselves to its uses on the first trial. When, therefore, the patient is accustomed to breathe the pure air through the mouthpiece, the cyphon should be gradually turned so as to mix the etheric vapours by a gradual increase with the air which he inspires. It will also be found useful, as regards the compression of the nasal orifices, to follow the example of M. Jobert: this surgeon abstains, with reason, from employing the pincers which are manufactured for this purpose; he allows the nostrils to remain open during the first period of the etheric inspiration, and then closes and relaxes them alternately several hours in succession, to avoid definitively collapsing them until the inhalations have acquired a regular character.

Effects of the Ether.—Although the application of ether to the lungs is a recent discovery, we may assert that physiology might have foreseen it. A substance eminently volatile is brought in contact with a very extended surface of the mucous membrane, endowed with a very positive absorbent faculty, and situated close to the fountain of circulation. The ether, therefore, is immediately carried into the blood and produces a specific action on the nervous system (*centres nerveux* J. E. W.). We shall divide, in conformity with the doctrines of MM. Jobert and Blandin, the successive phenomena of etherization into three periods:—

First Period.—In the first instance the ether produces on the mucous membrane of the bronchia an irritation which is accompanied by a sense of pricking and heat; this is shortly succeeded by a very agreeable and refreshing sensation. The cough, which is provoked in most cases by the first etheric inspirations, soon subsides, but the breathing remains quick and irregular for some time; the circulation quickens, and the pulse increases from 100 to 120 per minute. On the nervous system the phenomena produced by the first effects of the vapour are those of excitement: the patient is agitated, his voice short, and his ideas, in most instances, wander; he exhibits signs, sometimes of gaiety, then of ill humour, and not unfrequently of rage; sensation is also sometimes rendered very keen at this period, and the slightest touch becomes painful.

Second Period.—To the phenomena of excitement shortly succeed the effects of stupefaction. The disordered movements subside into calm, and the muscles become relaxed; nothing is now perceptible but a slight tremulous action of the eyelids, entirely characteristic. The mind is weakened, perception ceases, the senses become obtuse, the patient abandons all communication with the external world, he is motionless, and appears plunged into profound sleep. If we appeal to his sensitive faculties he feels, but he is no longer conscious of what is done to him. According to the experiments of MM. Flourens and Longet this period corresponds with that of the etherization of the lobes of the brain, and the "*cervelet*": those organs which preside over the phenomena of intellect and the co-ordination of motion. The respiration is now calm, and the pulse restored to its normal character.

Third Period.—The third period is essentially characterized by a diminution or total suspension of sensibility: this faculty is extinguished by degrees, when at length we may pinch, prick, and even burn the skin of the patient without his manifesting the slightest consciousness. This is the time usually chosen to perform the operation—the moment which is termed the "*surgical period*." There exists at this time, according to physiological theory, etherization of that portion of the principal nerves which has received the name of the auricular protuberance.

If the etheric inhalation is now prolonged for any time the etherization is carried to the *bulbe rachidien*, the principal seat of respiratory motion—the source even of life itself. The breathing is rendered embarrassed—it becomes slow and *stertoreuse*, the circulation is fettered; the pulse becomes slow, small, and irregular; the extremities chill and turn purple; asphyxia is imminent. It is in this state that animals die on whom the etheric inhalation has been practised, and we may readily comprehend the valuable caution which the surgeon ought to acquire by these experiments. He should never forget that the ether which extinguishes pain may arrest life.

Such are, in most cases, the successive and progressive phenomena attendant on the inhalation of ether. The general account we have given carries with it more than one objection; and thus it is correctly observed by M. Malgaigne—"It is with ether as with wine—the intoxication it produces is of endless variety. Cheerful or sad, loquacious or taciturn, gentle or furious, &c., according to the individual."

Amidst these varieties there are some which, however great their physiological interest or their rational importance, deserve our most special consideration, in consequence of the operation to which the patient is submitted. We shall now proceed to direct our particular study to some of them, and thus we shall be enabled by the facts which we possess to determine, by means of observation, many of the disputed questions which relate to the employment of etheric inhalations in the practice of surgical operations.

(Signed) LE DR. BURGUIERES.

(To be continued.)

FURTHER REMARKS ON DISSECTION WOUNDS.

By J. E. PATTISON, Esq., M.R.C.S., Islington, London.

(Continued from p. 116.)

In my last paper I endeavoured to prove the similarity of symptoms arising occasionally from simple wounds to those observable in dissection wounds. In my present communication of cases it will be seen that the fatal termination of one of them, and the dangerous array of symptoms of others, cannot be explained on what Mr. Lawrence terms being "out of health" at the time of receiving the wound or infection; inasmuch as the subjects of these cases were, at the period of making the *post-mortem*, in the full tide of health and enjoyment. In proving by these cases the influence of a septic agent, I ought, perhaps, to do so with some deference to those high authorities who attribute the malignity of the symptoms to the bad state of health of the recipient of the dissecting wound; yet, on reading over their reasoning or argument, it appears to me that they have very little confidence in their own judgment. Take for instance Mr. Lawrence's notice of Dissection Wounds, as published in the *Medical Gazette*. In the first part of the lecture he speaks thus:—"It appears to me very doubtful in this case (speaking of dissection wound) whether anything that can be called virulent or poisonous is introduced into the human frame by these occurrences, or whether the effects are to be explained as resulting from such injuries considered mechanically;" and then, after a weak attempt to prove his case, in a subsequent part of the lecture, he, as though conscious of the weakness of his argument, confesses, "it is perhaps rather a question of curiosity than one of direct practical consequence, whether these effects arise from a poisonous matter communicated to the part, or whether they owe their origin to the particular state of the individual at the time the wound is inflicted."

On looking more minutely into the subject, the question resolves itself into the probability or possibility of animal substances in certain states of decomposition becoming active poisons when applied to the living structures of even healthy subjects; and I think few who dispassionately examine the record of melancholy cases handed down to us in the journals, as seen to occur from dissecting in the public dissection-rooms amongst our students, whose health, perhaps, from study and half-and-half, may likely, especially towards the fagend of a session, be below *par*—as is seen also in too many mournful cases amongst the worthy class of general practitioners who minister to the sick in our rural districts—few, I expect, are there, who will examine the question fairly, but must own the influence of a septic agent in a certain proportion of the cases as yet recorded. The two instances I have to notice are cases that occurred in country practice, and tend clearly, in my own mind, to prove the agency of a morbific poison, as the subjects of them were, in every sense of the word, in robust health, living in pure air, taking plenty of exercise, were free from any specific hereditary disease; were both young, strong, and active, and had no anxieties or fretful cares to interfere with the healthful tone of their existence.

I shall first describe the symptoms in my own case.

I, when a pupil, had been attending a poor young woman, the wife of a manganese miner, for gastritis; the symptoms were severe pain and heat in the region of the stomach, violent and painful vomiting, great prostration of strength, small and rapid pulse, pain increased by pressure, the fauces were peculiarly red, and the tongue glazed and parched. From the urgency and severity of the symptoms it was manifest from the first that not only all the coats of the stomach were affected, but that the peritoneum also partook of the disease. The patient, who was far gone in her gestation, died rather suddenly, and, it having been observed by the neighbours that her husband and herself at times quarrelled, a very meddlesome magistrate, extremely ignorant of everything about the case, and without even consulting the medical practitioners in attendance, peremptorily ordered a *post-mortem* examination and coroner's inquest. So, notwithstanding her death was clearly owing to natural disease, yet it was required of us to institute a searching inquiry, to make a minute *post-mortem* examination, to analyse the contents of the stomach, &c.

It was winter when these occurrences took place, and early in the morning the junior partner of the firm, Mr. Patch, a truly worthy member of the profession—young, generous, and enthusiastic in all that relates to medical and surgical science, and in private life, honoured and respected by all who knew him—accompanied by Mr. Alfred Collinson, now in practice at New Cross, Dr. John Scoffern, now in London, and myself, to the room where the dead lay for our inspection, ere it was placed in the coffin. Mr. Patch, a young enthusiast in his profession as he was, said he was glad of the occurrence for one thing, namely, that the subject would afford an excellent demonstration to us of the *fœtus in utero*. So, as soon as he had tied each opening of the stomach, in order to secure the contents for analysis, and had separated it for taking home, he began his demonstration of the gravid uterus, and in doing so, naturally handled much the intestines and peritoneum, and by some means,

slightly, very slightly, scratched his finger, which he had no sooner done than he sucked the part, and continued his demonstration as though nothing had happened. Before sewing up the body, I handled the intestines in learning the divisional boundaries of each section of the canal; and, having an abraded spot on one of my fingers, was liable also to imbibe the infection." Mr. Collinson also had either an abraded finger, or pricked himself, I know not which, hence he was exposed to the infection as well, and suffered severely. Dr. Scoffern escaped, he having handled the parts but little, merely to the extent of putting the contents of the stomach into a flask for analysis.

On returning home we felt nothing immediately, but in a short time all who were engaged in the *post-mortem* became more or less affected with peculiar states of feeling, and symptoms ushering in an abnormal condition of the body. The first decided symptoms I experienced were a peculiar depressment of my wonted energy or activity. I felt low and melancholy, experienced a disposition to scream, was shivered, and had nausea; after a little while, in the course of the afternoon, my head ached severely, and I vomited freely; my pulse was sharp, quick, and weak; tongue dry. The local symptoms were scarcely observable at first; the nail-spring looked a little red, and the corresponding shoulder-joint was painful; in a few hours it became more so, and the axilla was puffed. The skin over the pectoral muscle assumed at first a pale tinge, and shortly afterwards an erysipelatous peach-blossom hue characterized its surface. In this stage of the symptoms the difficulty of breathing set in, which was peculiarly distressing; the tongue became tremulous, and had a brown or incipient typhoid character, as the case progressed; the lowness of spirits increased, and the mental distress (so generally seen in dissection-wound cases) was very apparent; the expression of the countenance was haggard in the extreme, and the complexion yellow and cadaverous-looking. In a short time all these symptoms increased in severity, others also of an alarming nature followed: delirium set in, the prostration of strength became extreme, the sphincter lost its power, and the feeling of suffocation threatened speedy destruction.

It was at this period of the attack, when everything seemed to point to a fatal termination, that, on a particular examination of the chest being instituted, Dr. Anderson—called in for consultation—proposed incision through the pectoral muscle, to free any matter that might have formed, for as yet no distinct fluctuation could be felt. On making a free incision, a very large quantity of pus and blood was discharged, which instantly, to some extent, relieved the feeling of suffocation that threatened to destroy life a few minutes before; the discharge continued so profuse that it became necessary for me to take large quantities of wine and nutritious diet, to support the system; subsequently to this, the constitutional symptoms slowly abated, and in a few weeks, after a visit to Rensana for change of air, I was perfectly recovered.

The treatment adopted was general bleeding from the arm at the onset of the disease, followed by mercurials till the mouth was slightly affected. Morphia was given at night to procure sleep, and the local affection of the pectoral muscle constantly fomented to encourage the formation of matter.

In the other case that I have to notice, that of Mr. Patch, which terminated fatally, it will be unnecessary to detail the whole of the symptoms, as they, in almost every particular, resembled those that occurred to me; the treatment was, however, opposite to that which it was thought proper to put me under. Mr. Patch prescribed for himself; I, being a junior, and but a tyro in the profession, did not presume to do so. I was bled, mercurialized, and incised, after the old fashion of *medicina ars conjecturalis*, whilst my fellow-sufferer would neither allow himself to be bled, mercurialized, nor have his pectoral muscle meddled with till too late, so that nature, in the powers of his constitution, which was remarkably vigorous and active, had fair play to combat the disease. For some days he had the advantage over me in respect to the severity of the symptoms, and every one thought he had a better chance of recovery; still this hope was but illusory, as his symptoms took a sudden change for the worse, and he rather unexpectedly died, adding another to the melancholy list of deaths from dissection wound.

Remarks.—These two cases, though but imperfectly reported, cannot fail of proving the antiphlogistic plan of treatment to be the correct one in the ordinary management of wounds received in *post-mortem* examinations. On comparing the symptoms, as developed in Mr. Patch's case, with my own, the comparison would, if anything, be in his favour; and as regards our general health and habits of body, I must notice that his temperament was well-marked lymphatic, whilst mine was sanguineous; and that therefore, those who argue, as some do, for the distinctive type of this disease to consist of inflammation of the lymphatics, will likely trace the cause of his death to have been dependent on his temperament. However this may be we know not, yet I truly believe that had he suffered himself to have been freely bled at the onset of the attack, and had there been a free incision made into his pectoral muscle, and had he undergone a course of mercurial medicines, his life would have been preserved: for the disease is essentially one of inflammation, though of a peculiar type, attacking in some instances the cellular structures, in others the lymphatics and glandular.

As regards the doctrine of introduction of a morbid poison, I think the evidence goes very far to prove the correctness of that view, as the other parties who attended at the *post-mortem*, but who received no direct inoculation, were affected either through the skin or lungs, and suffered, though in a comparatively mild form, many of the symptoms of the same disease.

With respect to the fact of anatomists, many of them having been free from the disease all their lives, though in the habit of constantly dissecting and making *post-mortems*, it may be explained first of all on the well-known fact that the subjects for the dissecting-rooms are very far from being recent subjects, and that putrefaction or decomposition tends, every day after death, to neutralize even the poison of the worst cases of peritoneal inflammation; and secondly, their immunity may in many cases be explained on the principles or laws of predisposition, which, however mysterious to us, are known to free certain constitutions from the ill effects of malaria, and other poisons equally as baneful as the septic of the recently dead.

Some have disputed the agency of a septic agent on account of the variety of effects to which it gives rise; thus, in the *post-mortem* that was the cause of Mr. Patch's death, of the surgeon and pupils engaged, it caused death in one, serious and dangerous disease in another, great disturbance in the general health of the third, whilst the fourth experienced but slight effects from it. It is possible that these different effects may have been the result of different poisons absorbed even from the same subject, or of different portions or doses of the virus introduced, or they may be the result of the same morbific agent, modified by the different constitutions or temperaments of the several individuals; yet I think, whatever explanation we adopt, we must attribute the symptoms in each case to septic absorption.

A NEW MODE OF TREATING UTERINE HEMORRHAGE.

By T. R. TORBOCK, M.D.

(Continued from p. 175.)

CASE VI.—This case was reported by my friend Mr. H. H. Taylor, surgeon, of Sunderland, and at first supposed to be one of hemorrhagia on account of age, more especially the female not having conceived for several years. However, it was subsequently discovered that an ovum had been thrown off. Mary Reed, aged forty-six years, mother of a large family, leuco-phlegmatic temperament, with a redundancy of fat, tissues loose and flabby, was seized on the 30th of September, 1846, with considerable discharge of blood from vagina, but for several days did not consult her medical attendant. The discharge continuing unabated, created great alarm, when Mr. Taylor was sent for, who, on his arrival, inquired strictly into the symptoms, and moreover found a considerable quantity of coagula had been thrown off. The patient at this moment being free from pain, he was not led to institute an examination *per vaginam*, but prescribed tannin, acetate of lead combined with opium, secale, cold appliances, support in the form of external compression to the uterus, &c.; notwithstanding, the hemorrhage continued unabated, when I was requested by my friend in consultation. On examination it was found an ovum had been thrown off, the mouth of the uterus scarcely admitting the finger; we at once decided on injecting the uterus, notwithstanding there was considerable difficulty in introducing the uterine tube; this being accomplished, four ounces of brandy were injected, when the hemorrhage ceased; no untoward symptom followed, and the patient gradually recovered.

CASE VII.—The following cases are also reported by Mr. Taylor:—Mrs. N., aged twenty-six years, of a spare delicate habit, the mother of one child, was seized with labour on the 30th of October, 1846. Nothing of importance occurred until after the birth of the child, when it would appear she became suddenly faint, which was discovered by her medical attendant to arise from loss of blood. The placenta had not then been expelled, neither was there a disposition to to uterine contraction. In the interim the several remedies were employed, notwithstanding the hemorrhage continued unabated. Manual efforts were now had recourse too, so as to remove the placenta, when the uterus was found to resemble a distended bladder filled with coagula. This was removed, and a sponge perfectly saturated with brandy-and-water conveyed into the uterus, when contraction immediately took place. A second attempt was made by my friend to introduce the sponge, who found the contraction so complete as to oblige him to desist. This patient recovered rapidly, without the least untoward symptom following.

CASE VIII.—Margaret Emmerson, between the age of twenty and thirty years, was taken with labour September 20, 1846. On examination, was found to be progressing favourably; during the absence of the medical attendant for a few minutes, in an adjoining apartment, she was suddenly seized with violent bearing-down efforts, which caused the expulsion of the child upon the floor; the umbilical cord ruptured—(this arose from the patient rising from her bed, notwithstanding the remonstrances of her medical attendant)—she was at once conveyed to her bed, when, after the lapse of from fifteen to twenty minutes she exclaimed, she was dying. On examination it was found that a great loss of blood had been sustained in the meantime, there now existing a passive state of the uterus. Pressure, cold appliances, secale, stimulants, &c. Three doses of secale had now been given, amounting to two drachms, still no contraction of the uterus. Rum, with water one-third, was now injected into the uterus, when speedily the uterus contracted and the placenta was discharged, and the hemorrhage arrested completely. This case bears a strict analogy to the one recorded by Dr. Clancy, which proves more particularly in this case the necessity, when the uterus is in an atonic state, of throwing stimulants into its cavity, so as to induce contraction, rather than resorting to manual efforts to remove the placenta.

Kirkby Stephen, April 17.

OBITUARY.—On the 18th inst., at his residence in Harley-street, William Maclure, Esq., surgeon, aged 56.

PARALYSIS IN THE BRANCHES OF THE FIFTH PAIR OF NERVES ON THE RIGHT SIDE OF THE FACE.

By J. F. MARTIN, Esq., Highworth, Wilts.

HISTORY.—T. W., thirty-four years of age, of good health and sound constitution till the present time, attributes his ailment to a pugilistic encounter, wherein he received a blow on the crown of his head, about thirteen months since, subsequently to which, headache and difficulty of lowering the brow was experienced, particularly on the right side. In a fortnight a singular sensation came on in the right ear, which he compared to the sound of bellows blowing softly; the same phenomenon had appeared for the first time, a few days after the injury, but now it was constant; he had never suffered in his power of hearing. On the 14th of January last he perceived his right cheek swollen, his mouth drawn aside, speech much affected—ailments which increased for a few days. On the 20th he could scarcely close his right eye, the sight of which was impaired; he had no sense of taste remaining on the right side of his tongue, and he heard less perfectly with his right ear.

PRESENT SYMPTOMS.—On the 15th of February I was requested to visit him, and found, upon examination, his mouth drawn on the left side; his right brow cannot be lowered, or his left eye closed, the orbicularis palpebrarum being paralysed; the right side of his mouth is void of sensation, excepting near the junction of the lips; over the right side of the tongue, taste is lost throughout that side; he can move his tongue in all directions with freedom; he cannot distinguish acids on the right side of his tongue, which was tried to ascertain its sensibility; a probe introduced into the external passage of the right ear was not felt, though very disagreeable when introduced into the left ear; the same differences were observed between the left and right nostril; the sense of smell is quite gone from the right side. A feather drawn along the left side of the mouth was disagreebly felt, but not on the right. The conjunctive membrane was equally sensitive in both eyes, and he could swallow easily. For the last few days he felt pain over the left parietal protuberance, and over the left eyebrow, whenever he coughed; in everything else he was in perfect health; sensation was lost all over the right side of the neck.

TREATMENT.—A dozen leeches applied over each mastoid process, and cataplasms of mustard to the lower extremities. ℥iss. infusion of senna with manna every six hours, and low diet. On the 16th the disfigurement of the mouth was less, and his headache better; slight sensation on the right side of the tongue at its base, and over the right side of the face and mouth: to continue the infusion of senna, &c., three times a day, and apply the compound camphor liniment by way of friction behind the ears. On the 17th the right eye could be closed, but taste had not returned to the right side of the tongue or palate; the pupils were in a normal condition, and he could read easily, though previously he had seen but imperfectly on closing the left eye; can hear better, but the bellows sound continues. By the 23rd, sensibility was wholly restored; the right eye can be readily closed, and the brow can be moved with little difficulty; the mouth is still a little aside; but from this time the case rapidly improved, and he is now quite well.

PROGRESS OF MEDICAL SCIENCE.

France.

ACADEMY OF MEDICINE.

Meeting of April 20; M. BEGIN in the Chair.

TYPHOID FEVER.

A communication was read from Dr. Leurat, of Lyons, on the efficacy of the "sirop de codéine," in the treatment of the ataxic form of typhoid fever.

M. Louis supposed that it was of narcotics in general that the author intended to speak: and the advantages which followed their exhibition in fever were now well known, and admitted on all hands.

M. Dubois remarked that M. Leurat precisely established a distinction between preparations of opium and codéine; to the latter substance he attributed particular virtues.

M. Martin Solon observed that five years since a commission had been named by the Academy for the purpose of examining the various theories adopted on the subject of typhoid fever, and also the various treatments recommended by different practitioners. Illness had prevented the reporter of that commission from presenting to the Academy the result of its researches, but he hoped in a few weeks to be enabled to do so.

M. Ferrus had lately witnessed in a prison of one of the northern provinces of France an epidemic of typhoid fever, which raged more particularly upon male subjects, affecting at first a mild form, but afterwards assuming more serious characters, and presenting symptoms of an epileptiform appearance. In several patients absorption of the fluids of the eye was noticed, and vision was abolished. The epidemic was attribributed to the crowded state of the establishment. *Post-mortem* examinations did not invariably show the presence of ulceration of Peyer's glands, and opium had been the most successful of the remedies resorted to.

M. Louis was of opinion that it would be wrong to conclude from M. Ferrus's statements that the ulceration of Peyer's glands was not intimately connected with typhoid fever. For his part, M. Louis had always noticed the coincidence. In Gibraltar M. Louis had seen cases of yellow fever which might have been confounded with instances of typhus; but, whenever he had found after death the anatomical characters of yellow fever, the symptoms of that malady had invariably existed during life.

The meeting adjourned at an early hour.

The meetings of the Academy of Sciences have offered of late but little interest in a medical point of view. At the meeting of April 19, however, a person with whom we were in hopes to have done—M. Ducros, who, it may be recollected claimed, "for the honour of France," the credit of the Jacksonian discovery—again put in his claims but to another and more ancient invention: it is the reflex action of the spinal chord which M. Ducros's researches now give to the world; in fact, in making the discovery fifteen years too early, Marshall Hall has done M. Ducros an injury of a serious nature. A short debate ensued after this communication, in which we were somewhat surprised to hear M. Magendie state that reflex action of the spinal chord depended solely upon cerebral influence. We must acknowledge we had hitherto been under the impression that it had been demonstrated to exist in decapitated animals, and in extremities paralysed in consequence of cerebral hemorrhage. M. Baudilocque reported a case of cure of deafness in an infant, by perforation of the tympanum with a special catheter of his own invention.

THERAPEUTIC AGENCY OF NITRATE OF POTASS.—The exhibition of this salt in large doses is a practice of no very recent date: in hemorrhage, Stoll, Dickson, and Gibbons have recommended its use; and in hemoptysis, Laennec has employed it with advantage; in rheumatism and inflammatory fever, M'Bride, Robt. White, Brocklesby, and, more recently, Gendrin and Martin Solon have proved its efficacy. Dr. Mazade, encouraged by their success, has exhibited this medicine in large doses, in that form of dropsy occasioned by or attended with febrile excitement, and records the results of his researches in the *Bulletin de Thérapeutique;* four cases of dropsy are published in the article referred to. The first was one of ascites, consequent upon intermittent fever and enlargement of the spleen. Each day the patient took from ʒiij. to ℥ss. of nitrate of potass in a quart of fluid; and the effusion was dispelled in a few days. The second case refers to a woman who became affected with anasarca and ascites, in consequence of the sudden suppression of the catamenial secretion. The same doses were exhibited, and on the eighteenth day the dropsy had disappeared. A stonemason, after prolonged exposure, was seized with fever, during which anasarca and dropsy manifested themselves; they had lasted twelve days, when the treatment with nitrate of potass was instituted, the dose was carried from twelve to twenty grammes, and in the space of ten days health was restored. The fourth case refers to an aged lady, who was labouring under symptoms of organic disease of the heart; the infiltration and and ascites had become so abundant as to cause much distress, and even feverishness. Nitrate of potass was exhibited in doses, gradually increasing from ʒij. to ℥ss., and in one fortnight the serous effusions were absorbed. The same result was again obtained twelve months later in the same patient, who finally died from the progress of the disease of the heart. In these cases, the first effect of the medicine appears to have been a considerable increase of the renal secretion; and the second, a diminution of the frequency of the pulse. There remains little doubt but that in all these cases a similar result might have followed the adoption of other antiphlogistic remedies, but still this method may, in our opinion, be often called upon to render most valuable assistance.

HOOPING-COUGH.—Professor Trousseau recommends the following solution of nitrate of silver in cases of hooping-cough:—℞. Aq. distil., ℥j.; syrup. simplicis, ℥ss.; argenti nitratis, gr. one-fifth: to be taken daily.—*Bulletin de Thérapeutique.*

HÔPITAL SAINT LOUIS.

Spontaneous Gangrene.—A painter, aged thirty-nine, was admitted for this malady into the wards of M. Jobert. Since seven years, pains had appeared in the left leg and foot; their character was erratic at first, but their intensity gradually increased, and now since three years they had become continuous. Six weeks ago the foot had grown black, and numerous phlyctenæ had made their appearance. The skin of the toes was dark and corrugated; on the back of the foot the gangrene seemed to be more of a humid nature; a broad greyish eschar occupied the front of the tibio-tarsal articulation; and at a very short distance higher up, a well-limited redness, which had remained stationary for some days, seemed to indicate that the local damage had ceased to progress. The patient was therefore brought to the operating-theatre and placed under the influence of ether; in the space of four minutes unconsciousness was produced. The limb was amputated at its lower third, and union by suture attempted. During the first days which followed the operation fever was continuous, delirium appeared, great prostration, and finally gangrene of the sacrum and of the soft parts of the stump. Twelve days after amputation the patient died. On dissection of the foot the tibial arteries were found obliterated.

PROCEEDINGS AT NICE.

The political papers (the *Presse* and *La Patrie*, April 24) furnish a garbled and partially false account of the following transactions, which we think it our duty to place in their true light before the British public:—

On the 16th of January, Dr. Gurney, of Nice, was for the first time called upon to attend Miss S., aged twenty-four, of a sanguine temperament, and who, three years previously, had laboured under symptoms of a doubtful nature, which Dr. Gurney did not hesitate to attribute to trismus. When that gentleman first saw his patient she appeared to him to be suffering from torpor of the liver. A gentle mercurial and saline draught were recommended, and amendment ensued. A relapse having occurred, the same medicines were exhibited, but the same improvement was

not obtained. On the 20th continual vomiting appeared; the tongue was coated, the abdome tender in the right hypochondrium, and th pulse at 80. Effervescing draughts were pre scribed, and at the same time the following mix ture:—℞. Sodæ sesquicarb, ʒj.; acid. hydrocyan gutt., viij.; muriatis morphiæ, gr. j.; syrup amant., ʒviij.; aquæ puræ, q.s.; ut fiat mist. ℥vj. — ℞. Pulv. acid. citrici, gr. xl.; f. pulv. vj Poultices were applied to the abdomen; no re lief whatever was obtained; a bilious evacuation took place from the bowels. The pulse rose to 112; eighteen leeches were applied to the ab domen; an enema, containing ninety-five drops of laudanum was thrown up into the intestine, and the patient placed in a bath, which seemed to afford some relief. The spasms continued, collapse showed itself, and the patient expire at half-past two P.M., on the 22d of January.

In all, the patient had taken twenty drops o the hydrocyanic acid of the French codex, an two grains and a half of muriate of morphia. Th stomach constantly rejected each dose imme diately upon ingestion, with the exception of one Six bottles of soda-water were exhibited, anc when the patient died the pupils were in a stat of dilatation—a circumstance carefully to be noted, inasmuch as it was asserted that death had been the result of poisoning by morphia.

Dissection of the Body six hours after Death.—Countenance natural; skin healthy; pleura free from adhesions; air-cells of central parts of lung unusually distended; heart of physiological size but more flaccid than ordinary. The stomach con tained about two ounces of bilious fluid, that viscu being free from all appearance of inflammation or disease of any kind; the liver large, especially the right lobe; gall-bladder distended with inspissated bile—its duct, at four lines from the bladder, contained a small, fatty, highly vascular morbid growth; the intestinal mucous membrane natural; the peritoneum healthy, with the exception of a portion over the small intestines, where the vessels were much injected, but without thickening or adhesion; no intussusception or strangulation of intestines; the bladder healthy. The minutes of the *post-mortem* examination were signed by Mr. Farr and Henry C. Gurney, M.D. and dated Nizza, January 22.

Nice being a gossipping place, many idle rumours were circulated. It was stated by some that Miss S. had died in a cold bath; by others, that she had been the victim of guilty negligence; by a third set, that a Russian lady had caused her, by jealousy, to be poisoned, and that Dr. Gurney had received 30,000 francs for the purpose. It was even said that Miss S.'s body had been opened before life was extinct. In consequence of these rumours Dr. Gurney was, on the 26th of January, arrested, and retained three days in the company of common felons. A surgeon was at the same time appointed by the civil powers to examine the body; he did so, and stated to her British Majesty's Consul at Nice that he had detected no signs whatever of poison.

Dr. Gurney having complained to the English Minister at the Court of Turin of his treatment, the following letter was received from Lord Palmerston in explanation:—

"Foreign-office, February 24, 1847. (Copy.) Sir,—I am directed by Viscount Palmerston to inform you that a despatch has been received from her British Majesty's Minister at the Court of Turin, enclosing the correspondence between himself and the Sardinian Minister for Foreign Affairs, on the subject of the arrest of Dr. Gurney at Nice. From these documents it appears that the arrest of Dr. Gurney was the consequence of an infraction, unintentional, indeed, on his part, of the existing laws of Sardinia, he having proceeded without proper authority to make a *post-mortem* examination of the body of Miss S. six hours after death; that there was nothing in the subsequent proceedings tending to show any desire on the part of the Sardinian authorities to press harshly on Dr. Gurney; and that those authorities, having convinced themselves that there was no ground for the suspicion of improper treatment, or for attributing to the gentleman any wilful intention to violate the laws by the hasty and unauthorized examination he had made, had acquitted him free of all costs Viscount Palmerston entertains no doubt tha these circumstances will dispel from the mind of the public at Nice all impressions which coul in any way be prejudicial to Dr. Gurney's personal or professional character; and he, therefore, trusts that the above explanations will prove satisfactory to you.—I am, Sir, &c.,

(Signed) "E. G. STANLEY.

"To Rev. T. Gurney."

Examining these transactions in a scientific point of view, we may first inquire, what did Miss S. die of? The diagnosis of Dr. Gurney was "a gallstone impacted in the duct," and the presence of the small fatty tumour in that position seems to support the correctness of this diagnosis. The absence of real icterus leads us, however, to doubt that this was the true and only cause of the symptoms, and of their fatal termination. With regard to the treatment, we may say that Miss S. did not die with the symptoms of narcotism, and, therefore, not from the muriate of morphia; as to the hydrocyanic acid, that is a more delicate question. The hydrocyanic acid of the London Pharmacopœia contains, we believe, two per cent. of the anhydrous acid; the hydrocyanic acid of the French codex contains, we are certain, 15 per cent. of the same anhydrous acid; twenty drops of the latter, the dose exhibited in eighteen hours, was, therefore, a quantity more considerable than Dr. Gurney had any intention of exhibiting. The effects of prussic acid on the system are, however, of a sudden, not a cumulative, nature; its evaporation is extremely rapid, and prevents a second dose, given a few hours after a first, from increasing the effects of the latter: all the draughts, with one exception, were vomited instantly. We, therefore, think it proved that the medicine exhibited did not exercise an injurious action on the unfortunate patient. At the same time, sympathizing deeply with the sufferings undergone by Dr. Gurney—who is, we understand, a talented physician, and a graduate of the University of Pisa—we cannot but regret that the body was opened at so early a period after death, and that a chemical examination of the contents of the stomach was not entered into. The calumnies which this unfortunate event has given rise to having found their way into the public press, we have considered the publication of the entire transaction, and the refutation of these calumnies, as a duty we owe to the readers of the *Medical Times*, to the profession generally, and to Dr. Gurney himself, with whom we are totally unacquainted, but whom we should wish to screen from further annoyance.

D. M'CARTHY, D.M.P.

Scrofulous Ophthalmia.—Dr. Morand, of Tours, views this disease as coincident with inflammation of the pituitary membrane. He has always found the interior of the nasal fossæ red and swollen, sometimes even to the upper part of the lip. The mode of treatment consisted in applying caustic to the interior of the nostril on the side corresponding to the affected eye, for the first week, twice a day—after this, once a day, and then every second or third day. The nitrate of silver can be used, either in the solid form, in solution, or as an ointment. He says that when the swelling of the upper lip assumes an eczematous character, the nitrate of silver cures when all other means have failed.

Lithotomy Superseded.—A surgeon, named Cervelleir, is said to have succeeded in dissolving calculi in the bladder by the use of electricity.

The Use of Digitalis.—The heart and kidneys are the two organs which this drug principally affects. Dr. Munk states, that the tincture affects the heart—the infusion, the kidneys. The tincture must be given alone, to lower the action of the heart—in combination with antispasmodics, to relieve palpitations and dyspnœa. As a diuretic, the infusion should be given in doses from half an ounce to an ounce every six or eight hours, with moderate exercise [illegible] to the loins, avoiding diaphoresis.

Burns treated with Ammonia.—[illegible] recommends a concentrated solution of caustic ammonia to be applied to the injured part by a compress wetted with it. The application speedily relieves pain, and must be continued for half an hour. After this, no other dressing is required.

Hemorrhage from Leech Bites.—In order to arrest this, an ointment composed of six parts olive oil and two or three parts of yellow wax has been used, spread thinly on linen and applied to the orifices.

Sheep's Brains a powerful Styptic.—M. Dupuy has found that the cerebral matter of the sheep possesses in a high degree the property of coagulating blood, and of immediately arresting hemorrhage. He states further, that the brain of the sheep kills animals more rapidly than corrosive sublimate.

Diaphtheritis.—Dr. Morand recommends a lotion composed of one part of nitrate of silver and three parts water, to be applied three times a day to the seat of the disease, and thinks, if this should fail, there is no resource left but the operation of tracheotomy.

The Reduction of a Dislocated Shoulder facilitated by the Employment of Ether.—At the Hôpital d'Aix a stout muscular man was admitted with a dislocated shoulder, whose reduction had been attempted the day before without success. In the hospital the house-surgeon was unable by the ordinary methods to reduce the dislocation. M. Bourquet administered the vapour of ether, and at the moment when intoxication manifested itself, began extension and counter-extension, when the head of the humerus immediately slipped into its place without any sudden jerk, and without the knowledge of the patient.

Injection of Ether into Arteries.—Baron Flourens, having made some experiments on the injection of ether into arteries, has discovered that the motor power disappears before the sensitive, while in inhalation the order is reversed.

REVIEWS.

Curabilité de la Phthisie et des Scrofules, appuyée sur des Preuves Authentiques. Par A. M. BUREAUD RIOFREY, Docteur en Médecine de la Faculté de Paris. Paris: Germer Baillière. London, Baillière. 8vo., pp. 216. 1847.

The question as to the curability or incurability of phthisis is one in which the profession has long been at issue with itself. By some practitioners, who would grumble mightily were their pathology doubted, any tubercular degenerescence of the lungs is considered as fatal as hydrophobia; by others, on the contrary, also tenacious of their pathology, consumption in any of its states is a comparative trifle, and they advertise, and testify to, its curability with as much confidence as a man will speak of the quality of a hat, and the probable wear of it. We are very much inclined to the opinion that, of the vast numbers of men who profess to be adepts at detecting phthisical lesion, not a few are really novices at the task; and of those who may be thus far competent, how many are there who know what phthisis actually is, in the cases that variously betray its evidence? Every man must use a stethoscope—in how many hands is it better than a penny trumpet? Every man can talk of tuberculescence—how many are there who know the pathological meaning of the word? It is the absence of definite information, diagnostic and pathological, concerning phthisis, that constitutes the utter worthlessness of the majority of writings upon the subject. The late researches of morbid anatomy, microscopic and chemical, have constituted an era in the science of medicine, and in no department of it more so than in that which relates to the prevention and cure of phthisis. That the phthisical lesion can be prevented developing itself, even amongst those who have a constitutional predisposition to it;

and that, after having commenced, its ravages can be retarded for a time, or for ever, are facts well-known in the experience of the enlightened members of our profession. But these good results are obtained by no single set of means—by wearing iron collars; by flaying the skin from off the chest; by breathing medicated vapours; by blowing wind instruments; by swallowing homœopathic doses of physic; by drenching with cold water; nor of feeding upon Morison's pills. Yet there are certain hygienic rules, and certain processes of treatment, local and general, which exert a marked influence upon the phthisical tendency and taint. Many of these are excellently set forth in the volume before us; they are very lucidly and scientifically given; and clearly indicate that their author is no stranger to the difficult subject he has chosen for his reflections. The work abounds with valuable practical comments, and is, moreover, enriched with a great number of cases that have a very orthodox bearing about them. Our author inclines, as do we, to the belief that tuberculescence of the lungs, commencing or commenced, is not necessarily the fatal affair many practitioners would make it; and he gives many valuable examples, from various sources, in proof. At the same time, he has no specific for consumption—his treatment is ancillary to that of nature. So much do we like the work, that it is not improbable its translation, wholly or in part, with annotations, may hereafter have a place in the columns of the *Medical Times*.

An Essay on the Tongue in Functional Derangement of the Stomach and Bowels, and on the Appropriate Treatment. By Edward Williams, M.D., Senior Physician to the Essex and Colchester Hospital. 2nd edition. 8vo. London: 1846. Simpkin and Marshall. Pp. 236.

In the preface to this work, in other respects well written, Dr. Williams has fallen into the strange blunder, we fear catching, of speaking of himself in the first person plural. This freak of literary absurdity seems to be having a run, as newspapers say of popular exhibitions, for Dr. Williams is not singular in it. We are, however, not inclined to let him pass unreprimanded, seeing that, in the generality of his volume, he has given plenty of scholastic proof of being superior to the weakness we speak of. According to the title-page, this work was written by Dr. Williams, singly. We believe it. In the preface, therefore, as no other name is mentioned, we conclude the same single authorship is at work—that is, that Dr. Williams, *per se*, has written the preface. Then why talk of *we* this, and *we* the other? The conventional advantage of speaking thus is accorded to editors and reviewers, who for the most part are nameless and unknown; but for a man to talk of himself as *we* is a sin against common sense and common truth which we cannot let pass without censure.

The work itself reflects great credit on the author's industry and ingenuity. He has evidently spared no pains to execute a task towards which he has long bent his inclinations. He is clearly an enthusiast on the subject of the pathological manifestations of the tongue, but still what he says is the result of a series of investigations which are placed before us with all the importance of numerical testimony. He furnishes a great number of tables, certifying to the morbid relations of the tongue to disease in general, and in particular, and from these deductions are drawn for the facilitating of diagnosis and treatment. That the state of the tongue is a most valuable guide in the detection of disease there can be no doubt. Generally speaking its importance is either underrated, or its indications are not understood. Still, all this granted, there can be no doubt that very different states of tongue are occasionally met with in the same disease, and the same state of tongue in different diseases. For this reason, as every experienced practitioner knows, it is not possible that the condition of this organ can be an unerring guide in diagnosis. Often enough the tongue has been clean through the entire of the fatal course of scirrhus of the pylorus; and it is not uncommon to find a furred tongue amongst men who have never known stomach or intestinal ailment in their lives. We state these facts, not at all in opposition to the leading principles attempted to be established in the work of Dr. Williams, which in the main is excellent, but as showing the fallacy of trusting too utterly to certain indications, and believing their evidence constant.

We cannot conclude without saying that the volume before us does great credit to the ingenuity and industry of the author, and that we wish him a continuance of opportunity to further investigate his subject.

Seventh Annual Report of the Registrar-General of Births, Deaths, and Marriages in England. Abstracts of the Two Years 1843, 1844. 8vo., Lond., 1846.

Like its predecessors, a valuable mass of statistical evidence, both professional and general. We are happy to find from the present volume, that the object of the Registrar-General is being seconded, in the almost unanimous readiness of the profession to communicate whatever they know concerning the causes of death. This accumulated information cannot fail to be of great practical value, in determining the relative ratio of disease in this country at large, and in the chief districts of it. Not more than fifty of the profession have forgotten its proverbial liberality, in refusing to subscribe to the forms and ceremonies of registration. At the most the task is not a serious one for each individual, yet the evidence of the whole must prove of immense value. We trust that those who have hitherto objected to second the working of this excellent scheme will see the desirableness of giving it their cooperation ungrudgingly for the future.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct from the Office of the Medical Times *to Annual Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.*

A Handsome Portfolio *for holding the* "Medical Times" *—very desirable to those who would keep the numbers clean for binding, and easy of reference—may be had, by order of any Bookseller, or at the Office, price 5s. An allowance is made to the trade.*

Juvenis.—1. *There is no authorized formula in the London Pharmacopœia for solution of morphia.* 2. *Acidum hydrocianicum dilutum P.L. contains two per cent. of anhydrous acid.* 3. *Dose at first should not exceed* m. v. 4. *The ear ought to be accustomed both to* immediate *and* mediate *auscultation.*

A Subscriber.—*Yes—when a poor person is known to be unable to pay.*

X. Y. Z.—*The General Medical Annuity Fund, Mr. Daniell, Secretary, Newport Pagnell.*

Alpha, Pontefract.—*We know of no act of Parliament on the matter. The judge will order a bill to be made of the medicines, &c., if an action should be instituted.*

Mr. Henry Smith's *paper on mercury last week contained an erratum: fifth line from the bottom, fourth column, for* ʒij., *read* ℈ij.

Dr. Hilbers, Norwich, *says, in a note to us—"My eye has just alighted on an inquiry, in one of the back numbers of the* Medical Times, *from a correspondent, and repeated by yourself, wishing to be informed of the source from whence I derived my information that the African fever had been successfully treated by the homœopathic medicines? You shall receive, in a few days, all particulars."*

Mr. Wm. Brown, Ion-square, Hackney.—*We cannot give the address.*

Alpha.—*Not that we know of. Dr. Wright's lecture may be obtained of any bookseller if properly described.*

Fusbos.—*There are many good points in the letter, but without a little alteration it would hardly suit our pages.*

A Surgeon.—*The pupil cannot be forced to serve the remainder of his apprenticeship after the age of twenty-one.*

First-Session Man.—*Apply to the Secretary of the Society of Apothecaries.*

Mr. J. F. I'Anson.—*Attention will be paid to the letter.*

Boothia Felix.—*Vessels engaged in the Greenland whale fishery invariably take a medical officer. London or St. Katharine's Docks, places of departure. Appointments in the hands of agents or brokers.*

A Physician.—*It would be premature, with only the outline of the bill before us, to state exactly the nature of the appointments.*

We have received communications and letters from Mr. Wm. Edward Coyte Bishop; Mr. Wm. Smith, Belper; Mr. Hughes Fraser Hake, Mornington-house, Chiswick; Mr. Thomas Hunt, St. Day, Cornwall; Mr. Edwards, Sidney-place, Brompton; Mr. Smith, Burmar, Wisbeach; Mr. R. Poulter, Cambridge; A Constant Reader; Mr. H. Hardwicke, Hempnall, Norfolk; A Dispensing Chemist, in the neighbourhood of the West-end; A Friend.

THE MEDICAL TIMES.

SATURDAY, MAY 1, 1847.

THE MEDICAL PROFESSION AND THE WITNESS-BOX.

It was the complaint of Pliny to Trajan, that whereas crimes were wont to be the burden of the age, now laws were so; and that he feared the commonwealth established by laws would in turn be subverted by them. Doubtless, good enactments are necessary to the diminution of crime, consequently to the security of the subject. In civilized society, natural liberty is resigned, in order that nothing may be done inconsistently with the interests of the community to which we belong. We give up our liberty that other men's may not be unduly curtailed, and that the whole body politic may enjoy such a freedom as is consistent with the safety and happiness of each. Laws enacted with any other object in view than these cannot be called *good*, but must be oppressive to true liberty, and dangerous to the stability of a government.

Equally necessary is it to the prosperity of a people that the laws be not only good, but that the manner in which they are administered be in accordance with the dictates of humanity and justice. The mere punishment of an offender because he is such is not what is required—this would be vindictiveness; but it is to apply the law with such an even hand as shall, so far as it is possible, prevent the repitition of that which renders a man obnoxious to punishment.

There are very few who break the laws of their country but do so with the hope of avoiding detection, or, if caught, with the hope of escaping retribution. Certain justice is what is desirable, because it would do more for the suppression of crime than punishment carried even to the destruction of life. A prisoner knows there are contingencies in his case. The law has its meshes, and the ingenuity of counsel is oftentimes sufficiently great to open them wide enough for an assassin to get through. Trial by jury has most important advantages, but, like all human institutions, it is not without defects. It is a popular

assembly, and a man, when he enters the box, *cannot* entirely divest himself of those passions and prejudices which he has acquired in his daily engagements in the world. The gentlemen of the bar know this, and act upon it in their examination of witnesses, and in their addresses to the jury. According to a common maxim the prisoner must always have the benefit of a doubt, and there are some men put into the jury-box who, by the exercise of forensic eloquence, may be made to doubt almost everything—even their own existence.

This seems to be especially the case when a prisoner is arraigned on the charge of murder. If found guilty he must die. And what so sacred as human life? Nothing short of the clearest evidence can warrant a jury to utter the solemn word guilty, or the judge to put on the black cap indicative of the prisoner's fate. And every kind of stratagem is employed by his counsel to avert the terrible catastrophe. Facts are dissected so finely that they appear to lose the very semblance of truth. Witnesses are handled so severely in order that their testimony may be considered as scarcely worth a straw; and proof the most palpable must be rejected from the uncertainty of all human things, and lest the mark of innocent blood should be enstamped upon the mind with a stain so indelible that nothing can ever efface.

We have made these remarks in consequence of what has recently taken place in trials of individuals charged with the crime of murder. With any other evidence than the medical, which of course includes the chemical, we have not now to do. There are very few instances of violence to the person, whether it result in death or not, that a surgeon is not summoned to attend; and, if the matter be brought before a judicial tribunal, then upon the evidence which he gives does the fate of the prisoner greatly depend. In the witness-box the medical practitioner has to support the dignity of his character, as well as to promote the ends of justice; to appear, in the view of the public as well as in the chambers of the sick, a man of science and experience. He has oftentimes to state facts which could only be elicited by sound professional knowledge; and, having enunciated them, to be well prepared for their defence. It should never be forgotten that medical evidence is exposed to numerous and, apparently, weighty objections; that those skilled in forensic warfare are so keen-sighted as quickly to discover any weak point, and so resolute as to leave no effort untried to carry it, that from this 'vantage-ground the entire testimony may be ruined. The surgeon may be a good practitioner; but, to come out unscathed from the witness-box, he must be a respectable medical jurist. It is from deficiency in this particular department of education that the members of our profession now and then cut such a sorry figure before judge and jury, and that gentlemen of the bar receive with so much suspicion the truths which are deduced from scientific investigation. True it is, as Mr. Justice Maule observed, in the Pontypool poisoning case, "that the evidence of medical witnesses is not like the statement of an eyewitness, who might, for instance, see another person on a road;" but is what his lordship subsequently stated true, that "their evidence was generally a matter of conjecture, of *guess*, which their scientific knowledge enabled them to make"? Real science has little to do with guessing—as little as "inflammation of a few hours' duration in producing scorches or burns of the lip, and corrosions of the mucous membrane of the throat down to the stomach, so that it could be easily removed by being scraped with the nail." Of a truth it is no very pleasant thing to be rebuked by a judge, and browbeaten by counsel, when we stand up to state "the truth, the whole truth, and nothing but the truth."

The opinion which gentlemen of the bar seem to entertain of the progress of medicine and its collateral sciences is one which reflects no credit upon them as individuals of exalted minds and liberal education. Surely they have not closed their eyes against the admission of that light which has dawned upon us, and which is steadily advancing to the brilliance of meridian splendour? We can make some allowance for counsel, in the exercise of their vocation, who make efforts, even at the expense of science, to free their clients from the stern inflictions of justice; but we are struck with amazement when we hear a judge say, in reference to scientific truth, "that it is a matter of opinion, and not a matter of fact"; and still further lessening its importance (though it might have been unintentional) by adding, "that he had heard that medical science had made rapid and wonderful advances during the last twenty years. So, he dare say, it was said twenty years ago, and so it would undoubtedly be said twenty years hence; and probably the science would never arrive at perfection." Very likely; but then it does not follow that it is all uncertainty now, and that the evidence it offers must be received with suspicion. Mr. Cooke thanked goodness he was not brought up to the profession of a country surgeon; and well he might, if he were to be frequently put into the witness-box to be examined by such a scientific gentleman as himself. With such a degree of medical and chemical knowledge which the members of the bar appear to possess, it is no marvel if they imagine wet graves to abound with arsenic, and illegitimate children to be especially subject to fits.

The witness-box should ever be kept in view by the members of our profession; and the transactions which have taken place there should be carefully engraved on the tablet of the memory. Medical jurisprudence is not simply an ornament to professional education, but a something which may prove of sterling benefit in the active engagements of life: it prepares us not only to give our evidence before a legal tribunal in the best manner, but enables us to repel, as we ought, those attacks upon science which are occasionally made to accomplish some particular object.

Many of the scenes which have been exhibited in the trial of individuals charged with capital offences have had their origin in a reluctance to take away life. Public opinion is not without its influence upon the members of the bar; and juries are ready to seize the most trivial circumstance to free their hands from the stain of blood. If the law is at fault, it is the duty of the Legislature to engage in its correction. With the question we have nothing to do; but we must protest against medical men being made scapegoats for culprits, or that science, because it has not yet arrived at perfection, should be treated as a thing of little value.

MEDICAL SERVICE IN THE ARMY AND NAVY.

A few days ago General Sir Howard Douglas, in the House of Commons, called attention to the cases of the medical officers who have not been included in the warrant issued in July, 1846. Officers of a certain standing in the service had conferred upon them, by the warrant of 1840, important advantages—that of full pay on their retirement. The warrant of 1846 increased the retiring allowance to quartermasters and veterinary surgeons, but paymasters and medical officers were still forgotten. Sir Howard very properly urged their claims, upon the principles of justice, and he showed that, from want of proper retiring allowance, medical officers and others were compelled to cling to the service when their physical and mental powers were weakened, and, consequently, when it was injurious to the service not less than to their own comfort to remain. The medical officers, as was stated, differed materially from the others. True, the former do not purchase their commissions, but large sums are expended in their education, and the arduous duties of thirty years cannot be efficiently discharged without subsequent suffering. At the age of twenty-four a surgeon enters the service, and at fifty-four he is certainly entitled to such an allowance as will administer to his ease and enjoyment in the few remaining years of his life. Colonel Lindsay contrasted the situation of surgeons with that of other officers. The latter may receive commissions when only sixteen or eighteen; the former cannot enter upon their duties till twenty-three or twenty-four: making a difference of five or seven years, when they become entitled to their respective pensions. The one, when engaged in foreign service, might return home; the other could not, but must be found constantly at his post. Nor can it be said that the profession of the military surgeon exempts him in the least from the fatigues and dangers of war. His office is no sinecure, but one where (compared with others) he gets few rewards with abundant labour. Mr. F. Maule, or any other Secretary-at-War, may feel it a very unpleasant thing to discuss matters of this description, yet it is but fair that there should be a proper amount of regard paid by the Government to every deserving servant. We admit that the labours of the surgeon are less ostentatious than those of other military officers. He takes the charge of the field after hostile squadrons have measured their strength, and is there installed generalissimo of the whole army of maimed and wounded, and commander in-chief of tourniquets, bandages, and knives. The note which summons him to duty is the wail of human suffering; and the music which accompanies him in his progress is the sighs and groans of those who are ready to perish. And yet there are no gaudy toys, so pleasing to flesh and blood, in reserve for him—no high-sounding titles to inspire the multitude with awe, or brilliant stars to excite their admiration; nor are we aware that, as yet, the Government has been able to spare even a small piece of ribbon to adorn the button-hole. In France they have set us a good example, for there honours and titles and substantial rewards are sometimes bestowed upon eminent medical men; while here, the highest honour to which they can aspire is the title of *eques auratus*, and the greatest reward a pension to the amount of about 15*s*. a day. Our brethren in the army and navy are surely entitled to a little more; and we should rejoice to see the heads of the two departments using their powerful influence to remove many of the evils of which there is just reason to complain, and to procure a further recognition from the Government of the claims which honourable and lengthened services have upon its liberality.

Sir Howard Douglas and Colonel Lindsay have done good in drawing the attention of Parliament to the niggardly rewards which medical men receive when retiring from active duties in the army and navy; and we hope, ere long, to see that their effort has not been lost upon those who are able to lend a helping hand.

MISCELLANEOUS CORRESPONDENCE.

CHEMISTRY AND MEDICINE.

[To the Editor of the Medical Times.]

SIR,—We cannot have a more lamentable proof of the present distracted state of the medical profession, speaking politically, than the fact that a considerable portion of the valuable space of the weekly periodicals is invariably filled with all sorts of intolerance and abuse on the part of some one section of that profession against some other. Your paper of last Saturday contains two letters which are striking examples in point. Allow me a few observations on the subjects which so sorely disturb the peace of mind of your two correspondents.

The existing state of matters among us may be illustrated as follows:—

Jenkins, Tomkins, and Popkins are fellow-students. They have all served precisely the same kind of apprenticeship, they lodge in the same house in town, they go arm in arm together to the same lectures and hospital practice, they assist one another in their studies, they read the same books, &c. &c. After two or three winter seasons thus spent together, Jenkins having more brains than money, and knowing the law, goes *up* to the *Hall*, passes an examination in anatomy, practice of medicine, midwifery, medical jurisprudence, chemistry, materia medica, pharmacy, botany, &c., and is duly licensed to practise. Tomkins having more money than brains, and either disregarding the law or thinking it a "more gentlemanly affair than the jalap-and-rhubarb botheration at the Hall" (that botheration being of some *little* consequence, by-the-by), goes up to the *College*, is asked a few questions in anatomy and surgery *only*, and receives what Mr. Lawrence says is merely a testimonial signed by some hospital surgeons conferring no privileges whatever. Popkins, having brains and money both, passes both institutions. Our three friends now commence practice as general practitioners, and then begins the row. While Tomkins is busy making up pills and corking bottles, he takes occasion to tell his gaping patients that Jenkins does wrong in styling himself "surgeon"—that he is only an *apothecary*, a thing very little better than a grocer, and not gentlemanly at all; and he writes to the journals raking up old-world ditties about 'pothecaries, complaining at the same time that the law does not sanction his practising as the very functionary whom he thus affects to despise. Jenkins is naturally indignant at his old friend who thus shows his ingratitude for the grinding he had often bestowed upon him, and says that Tomkins has no right to practise at all. While Popkins turns up his nose at both the other two, and, forgetting that he is throwing dirt at his own qualifications, asserts that they are neither of them qualified to practise, and loudly proclaims his own exclusive right to be looked upon as the genuine Stilton. Surely two quacks do not make one doctor, any more than two asses make one lion; but perhaps Popkins, mindful for once of Lindley Murray, would maintain that two negatives make an affirmative. Thus, at New York, it is no unusual thing to hear two negroes abuse each other nearly in the following language:—"You dam black nigger you!" For Heaven's sake let us not laugh at Sambo any more.

To your correspondent "Chirurgus" I would venture to observe that he clearly misunderstands the matter. The Apothecaries' certificate is unquestionably the *only legal* qualification in England—meaning by the term "legal" a qualification protected by an act of Parliament. The Council of the National Institute think, with "Chirurgus," that this is not fair to the members of the College, and wish, equally with him, to place them on the same footing in the eye of the law as the licentiates of the Hall; sympathizing with him in his desire to be allowed to practise as that unclean thing, the "'pothecary," and being willing, equally with him, to take the *curriculum* of the College, and not the *examination*, as a test of sufficient acquirements. I would also observe to "Chirurgus," that the less said the better about this same *curriculum*, unless he address his remarks to the *marines*. I know a young *druggist* who passed the College last year after only one year and three weeks' attendance on lectures and hospital practice. It is well known that since 1843 the whole affair, as far as the membership is concerned, is neither more nor less than a *little-go*.

Your anonymous correspondent, at page 164, is such a very slashing reformer that I hardly dare encounter him. Like Popkins, he wont hear of anything less than what is absurdly called the *double* qualification; and he gravely proposes in one breath to prohibit Sir Benjamin Brodie from practising, and to annihilate the continental universities; though he does not hint at the kind of authority he would make use of to effect the latter object.

Surely, Mr. Editor, these unhappy divisions will soon cease from among us. Let the M.R.C.S. consider that the ancient connection between the grocers and the apothecaries has as little to do with the present state of things as the better-remembered alliance between the barbers and the surgeons; and that, if he furnishes medicines to his patients in medical cases, he is himself quite as much a 'pothecary as any one *can* be now-a-days; he ought to remember, too, that if he denies to the L.S.A. the right to style himself "surgeon," he may himself be asked by what right he styles himself a *medical* man. I would also beg the practitioner who rejoices in the possession of two diplomas to reflect that the *same* studies and the *same* certificates, with very trifling exceptions, having enabled him to present himself for examination at both College and Hall, he cannot, without depreciating the value of his own acquirements and qualifications, maintain that his fellow-student who possesses *either* diploma is unfit to practise.

I am, Sir, your obedient servant,

April 15. ——

USE OF ETHER.—MRS. PARKINSONS CASE.

We have received a communication, with a copy of the *Hampshire Independent* containing a letter from Edwin Hearne, Esq., M.B., formerly house-surgeon to University College Hospital, in reference to the influence of the vapour of ether in producing the death of the unfortunate Mrs. Parkinson. After mentioning the constitution of the patient, the malady under which she laboured, the trials of the ether previous to the operation, and then the tedious operation itself while the patient was but partially under the influence of the vapour, he goes on to say:—

"The account of the *post-mortem* examination is very unsatisfactory, since we find that those important secernents, the kidneys, were not even examined. I believe that I am borne out by high authorities in stating that many of those patients who sink rapidly after severe operations do so in consequence of the renal secretions being carried on imperfectly. The only abnormal condition noticed was congestion of the membranes of the upper part of the anterior lobes of the brain, with the exception of the blood being in a fluid state throughout the body. From the report there were no symptoms specially referable to the membranes covering the anterior portion of the upper part of the brain during life. With regard to the fluid state of the blood, I should account for it in the following manner:—A given quantity of blood being lost during the operation, it would have the effect of partially emptying the vessels, to obviate which the absorbents quickly replenish the vessels with a fluid of a diminished consistence; and patients after operations not being able to take any food but thin fluids, this condition would necessarily be kept up for a time, and restored to its natural state in proportion to the rapidity of the patient's recovery. In the case in question, from the description given, the blood would have been naturally poor and thin, and in the disease under which the poor patient laboured, if I remember aright, defective in red particles, according to the analyses of Andral and Gavarret.

'I myself remember a case very similar in many respects to that under consideration, although in this instance, I believe, life was happily preserved. The patient, a strong middle-aged countryman, apparently in excellent health, applied to the Taunton Hospital, to have a tumour weighing about one pound removed from the back part of his thigh. The operation was performed without much loss of blood, but it occupied the greater part of an hour in performing. He was so depressed by the shock, &c., that for many days his life was despaired of, brandy, ammonia, &c., being required to sustain him. I left the neighbourhood whilst he was under treatment. This patient had not the disadvantage of contending with a malignant tumour, and the state of health consequent thereon; his was of the simplest kind, yet he nearly lost his life in consequence of the operation, notwithstanding no ether had been administered.

"Southampton, April 8."

[To the Editor of the Medical Times.]

SIR,—Your correspondent "Chirurgus" informs your readers that the "apothecaries," in the reign of James the First, were associated with the "grocers"; but shortly afterwards the "apothecaries" obtained a charter for themselves, and by degrees got into the habit of prescribing medicines without having recourse to the physicians.

No doubt, Sir, these "apothecaries" not only prescribed medicines, but acted in the capacity of the "general practitioner" of the present day; and, this arrangement being found to suit the convenience of the public, the act of 1815 was passed; and no doubt the gentlemen then in practice were placed on a sound footing as "medical" men, or "apothecaries."

This act of 1815 committed no retrospective injustice—it legalized all then in practice; it made them legal "medical" practitioners, simply because they had committed no breach of the law hitherto: this act being the first step in legislation for "medical" practitioners.

It results from the act of 1815 that all who have commenced "medical" practice since that date, without obtaining the necessary certificate, are illegal "medical" practitioners, as stated by the deputation to Sir George Grey; and they have no right to complain of this fact, for they have placed themselves in this position with their eyes open, and in defiance of an act of Parliament only thirty-two years old.

It is quite true, as stated by your correspondent, that many gentlemen pass the Hall and commence practice as "general practitioners" under the title of "surgeon"; and no doubt, Sir, their reason for doing so is simply because it is not illegal; there is no act of Parliament to prevent it; and they trust that, when the representatives of the nation legislate for "surgical" practitioners, the same course will be pursued as in 1815 with the "medical" practitioners, and no retrospective injustice be committed.

As your correspondent tells us the "apothecaries" were once associated with the "grocers," he might also have added, that the "surgeons" were once in league with the "barbers," and that they (the surgeons) afterwards obtained a charter for themselves, in the same manner as the "apothecaries," or "medical" practitioners did. The "surgical" practitioners have not yet

completed a parallel case with the "medical" practitioners, by obtaining an act of Parliament relating to "surgical" matters equivalent to the act of 1815, which regulated "medical" practice only. It is plain, then, that "Chirurgus" is liable to an indictment for a misdemeanour for illegal "medical" practice, equally as well as Ellis Flitcroft, who was convicted of a similar offence, at Bolton sessions, on the 3rd instant; but it is equally plain that the licentiate of the Hall commits no offence against the laws by engaging in "surgical" practice. Now, Sir, I think the proposition of the "National Institute," for the incorporation of the general practitioners (who possess any British diploma) in a new institution, as the fairest mode of reconciling the various interests in the profession; it will make "Chirurgus," and all the parties mentioned by the deputation to Sir George Grey, legal and and honest individuals, no longer liable to be indicted as criminals; and in return for this boon, and the *legal* competition of a numerous class of well-educated men, the Apothecaries' Company naturally and fairly ask that their licentiates be confirmed in privileges which they at present exercise, without breaking the laws of their country.

Your well-known impartiality induces me, as it did "Chirurgus," to expect your insertion of my remarks.

I remain, Sir, your obedient servant,
L. A. H. (1839),
And Member of the National Institute of Medicine, Surgery, &c.

Durham, April 19.

HOSPITAL NEPOTISM.

[To the Editor of the Medical Times.]

Dear Sir,—The remarks in one of your leading articles in this day's *Medical Times*, directed against the system of nepotism, are worthy of notice, and undoubtedly correct in the main; but they are certainly calculated to give a false impression as to the relative merits of, and the nature of the influence used for, the respective candidates. Whilst one would be greatly assisted by the patronage and support his uncle could command, the other owes his election to a family contingency, he having married a relative of Loyd, of the firm of Jones Loyd and Co., the very influential bankers of this town. The kind of influence likely to be brought to bear upon the merchants of this town may be easily surmised; and that it was to its utmost extent exerted I know.

Though Mr. Smith would have been elected by the prevalency of a system which has often been employed to a baneful result in other places, —a system the sooner exterminated the better; soon may the day arrive when a purer and a better shall prevail,—yet the profession here, I believe, would be nearly unanimous in the opinion that he would not be unworthy of the office. At the Medical School of this town he distinguished himself. Afterwards he held the office of house-surgeon to the Infirmary, and creditably performed its duties. As a demonstrator at the Medical School he performs his part in a manner highly to be commended, so much so as to have secured a tangible testimonial of respect from the pupils in the form of a purse of gold. With the candidates personally I am alike unacquainted, and thus much I have said to put the matter in its true position, being persuaded that your strictly just, gentlemanly, and honourable, but always disinterested and independent, and, when needs be, unflinching, predilections will appreciate the information.

I am, yours truly,
A. W. C.

Grosvenor-street, Manchester, April 17.

P.S.—I was myself requested to become a candidate, and might have come to the goal the third, fourth, or fifth; but not liking the hubbub and bustle, and not thinking the object worth the outlay, and, above all, hating the means obliged to be resorted to, I declined; and, under the impulse of the moment, drew out the following address, which I did not, however, publish, as I remembered the fable of "The Fox and the Grapes," to the application of which I might have been exposed:—

"To the Trustees of the Manchester Royal Infirmary.

"My Lords, Ladies, and Gentlemen,

"Patronage in the form of family influence, or the private friendship of persons of influence, or partisanship, has ever exerted an unfair and sometimes a baneful bias in the appointment of medical officers to the charitable institutions of this country. In illustration of this remark, fix your attention upon the progress and result of the present contest for the vacant surgeonship to your Infirmary.

"A better state of matters (the *concours*) prevails on the Continent.

"Recommendatory certificates, particularly of metropolitan surgeons, are too frequently given without proper consideration—so often indeed as to make it a rule rather than an exception.

"From the rapidly advancing improvement now going on in the development of the public mind, we may hope that the time is near when such influences will be in abeyance. When that period or its dawn arrives, as a candidate for your suffrages, and with the prospect of success, I shall present to you those proofs of industry and eminency in my profession which it is my happiness to possess.

"I am, &c. &c."

GROVE-HALL ASYLUM.

[To the Editor of the Medical Times.]

Sir,—Observing in the *Medical Times* of the 24th inst. a full report of the proceedings at the Thames police court, and some editorial remarks, respecting the death of a pauper patient in this asylum from ill treatment by the attendants, I beg to send you the following copy of a letter on the subject from the Commissioners in Lunacy, which I trust you will do me the favour to insert in your next number, as showing the part taken in the investigation by the proprietor and myself.

I am, Sir, your most obedient servant,
Edward Palmer, M.D.,
Bow, April 28. Medical Superintendent.

"Office of Commissioners in Lunacy,
19, New-street, Spring-gardens,
April 22, 1847.

"Sir,—The Commissioners in Lunacy considering the publicity that has been given to the circumstances attending the death of William Rank, a pauper patient in your asylum, and the committal of two of your attendants for manslaughter, direct me to express to you their satisfaction at the prompt way in which you, in the first instance, brought the subject under their notice, and also to the aid rendered by both Dr. Palmer and yourself throughout the inquiry.

"They direct me further to say, that the fact of both the inquest and the *post-mortem* examination having originated altogether with yourself and Dr. Palmer, is very creditable; and affords the best evidence of your desire to secure humane treatment to the patients in your establishment.

"I am, Sir, your obedient servant,
"R. W. S. Lutwidge, Secretary.

"To Mr. Edward Byas,
Grove-hall Asylum, Bow."

MIDDLESEX HOSPITAL.

The squabble at this institution still continues. On Wednesday there was an adjourned meeting of the court of governors, which lasted for five hours. Sir R. H. Inglis in the chair.

The first resolution was moved by the Hon. Captain Maude, and seconded by his Royal Highness the Duke of Cambridge; it was to the following effect:—"That the office of house-steward and secretary should be divided, the former person to reside in the house; the latter not."

The Duke of Cambridge in his speech observed: —One great fault existed in the hospital which should be remedied. A committee should be appointed to see that the house-steward provided proper diet for the patients, and that the nurses were attentive. He complained of the inefficiency of the matron, the inferiority and even drunkenness of some of the nurses and the neglected state of the room for operations, which had not been properly heated for the last three years.

Mr. Fielder, in the midst of great confusion, endeavoured to set his Royal Highness right, and stated that it was only within the last year and a half that there had been mismanagement, and this was to be attributed to repeated quarrels among the medical officers.

Another resolution, proposed by the Hon. Captain Maude—to the effect that Mr. Tuson should resign his appointment as one of the surgeons—provoked a discussion which was protracted over several hours, and in which a great number of speakers took part.

Mr. W. Hawes, Mr. Labouchere, Dr. Hawkins, and Sir William Stirling, supported the motion; which was warmly opposed by Mr. Brewster, Mr. Bailey, and others. The resolution condemned Mr. Tuson in giving and antedating cards of admission to the lectures, but exonerated him from a corrupt or unworthy feeling. The resolution was carried by a majority of 51 to 33 votes.

WESTERN MEDICAL AND SURGICAL SOCIETY.

The first anniversary meeting of this society was holden at their rooms in Sloane-street on Friday, the 9th instant.

The report of the council was read. It commences by congratulating the members on the success which has hitherto attended the progress of the society. There are upwards of sixty members; the library contains already more than 300 volumes; and the reading-room, which is open daily from ten in the morning till ten in the evening, has been regularly supplied with all the weekly and quarterly medical periodicals. The report proceeds to allude to the valuable communications which have been read at the monthly meetings during the past year, and the interesting discussions which have ensued, and dwells especially on the value of these meetings for promoting friendly feelings among the profession. It concludes with some suggestions, the result of a year's experience, for the future. The most important of these is, that the meetings should be held once a fortnight during the medical session, the monthly meetings being retained during the recess.

The report having been received and adopted, thanks were voted to the president and other officers for their valuable services during the past year, and the officers for the present year were elected.

Sir James Clark was re-elected president; Messrs. Dickenson and Lane, and Dr. Mansell, were re-elected vice-presidents, with Dr. Hardwick, of Kensington, in the room of Mr. Woolley—the laws of the society requiring that one of the vice-presidents should retire annually, and the lot having fallen on that gentleman. Mr. Woolley was elected a member of the council, with Messrs. Gaskell, Godrich, Keene, Mackintosh, Mould, Pettigrew, Pollard, Seaton, Synnot, Warder, and Wilson. Mr. Muller was re-elected treasurer, and Mr. Barnes, secretary.

A. B. Barnes, Hon. Secretary.

KING'S COLLEGE, LONDON.

The Annual General Court of this Institution was held, last week, in the hall of the building. The Bishop of Winchester presided.

The hospital, it was stated, had relieved in the past year 17,823 patients. A "Daniell" scholarship had been established for the encouragement of the science of chemistry.

The distribution of prizes and certificates of honour in the medical department took place on Saturday at three o'clock.

In the absence of his Grace the Archbishop of Canterbury, the chair was taken by the Bishop of London, who distributed rewards of successful industry to the following scholars and prizemen.—

Senior Scholar.—Peter Eade
Second year.—George Robert Cubitt
Juniors.—Henry Hyde Salter, John Wood, George A. Kirsopp Lakes

Anatomy	Prize .. / Certificate	John Cox Lynch. / 1. Dobree Chepmell
Physiology ..	Prize / Certificates	Wm Charles Lake / 1. John Cox Lynch / 2. Geo A Sheppard
Chemistry	Prize / Certificate	James Vaux / John Cox Lynch
Materia Medica	Prize	John Cox Lynch
Surgery	Prize / Certificate	W. Batt rshell Gill / 1. Wm Henry Cook / 2. Norman Bethune
Medicine	Prize / Certificate	Saml J. Augustin / Wm Henry Cook
Midwifery	Prize / Certificates	Saml J. Augustin / 1. Wm Henry Cook / 2. J. Bernard Luck
Botany	Prize .. / Certificate	Peter Eade / Saml Griffith.
Forensic Medicine	Prize / Certificates	Wm Henry Cook / 1. C. Thompson (No. 1) / 2. John T. Arlidge
Comparative Anatomy	Prize	Wright Wray
Medical Clinical	Prizes	1. Peter Eade / 2. Wm. Henry Cook
Surgical Clinical	Prize .	Wm Henry Cook
Warneford	Prizes	1. John T. Arlidge / 2. C. W. D. Williams / 3. Henry B. Johnson
Leathes	Prizes	1. J. Newton Coffin / 2. Duncan Ferguson

Associates.—John Thomas Arlidge, Peter Eade, Walter Battershell Gill

To the above-named gentlemen the chairman addressed a few words of encouragement and compliment.

From the report read by the Dean of the Medical Department, the medical school of the college appears to be in a most efficient and satisfactory condition.

We understand that Sir Robert Peel has consented to take the chair on the ensuing anniversary dinner of King's College Hospital, which is to take place early in June.

JUDICIAL DIFFERENCES.

CORONER WAKLEY.

Coroner Wakley, in his summing up at the inquest on Miss Collier, said, that "He could attach no blame whatever to Mr. Corfield. He thought Mr. Corfield did, under the circumstances, what was perfectly right. . . He thought Mr Corfield's conduct exonerated him from blame. . . He could not see that they (Messrs. Corfield and Bell) had done wrong."—*Pharmaceutical Times*, Feb. 27.

JUSTICE COLERIDGE.

Judge Coleridge, at the trial of Dr Cronin for the manslaughter of Miss Collier, said, "That, to say the least of it, the act of pretending to make up a prescription sent by a physician, without putting in all the ingredients mentioned in it, was most monstrous. Although not a fraud in the ordinary sense of the term, still it was one on the person for whom the medicine was intended. Such a proceeding was very dangerous in any case, and he was not prepared to say what the effect had been in the present instance . . It appeared perfectly clear that a chemist, possessing the ordinary knowledge of his profession, must have known that a weak decoction of bitter almond water was intended to be used for the prescription. Mr. Corfield did not appear to have known anything upon the subject, and he did not give the prescription a fair chance."—*Medical Times*, April 10.

WAKLEY AGAINST THE MEDICAL TIMES.

COURT OF EXCHEQUER, Monday, April 26.
(Sittings in Banco.)

Mr Cockburn moved for a new trial in this case, which was tried before the Chief Baron at the sittings after the last term, when a verdict was passed for the plaintiff for £175, on the ground of misdirection.

This was an action of libel on the plaintiff, who is the member for Finsbury, and it appeared that this was a second action for the like cause between the same parties. On the first occasion the plaintiff obtained a verdict for £150, and the present action was founded on the publication, by the defendant, of the proceedings of that trial, and certain comments on the verdict, and its effect on the plaintiff's character. Among the passages complained of was one in which it was stated that "the plaintiff's character, under the skilful treatment of Mr. Denman, had had to struggle against the direct station of the Hope Assurance-office." This paragraph in the new libel was not brought forward in the declaration either by prefatory averment or by innuendo, so that it was left to convey the construction and sense which the words might bear in their ordinary acceptation. Neither was it alluded to by the Attorney-General in his opening speech, or by him, Mr Cockburn, in his address for the defendant, which proceeded on the principle of showing that the plaintiff had better have let the thing drop. The learned Chief Baron, however, it was now complained, had alluded to the paragraph in his summing up to the jury, observing that "though it had not been alluded to, he did not see any reason why he should be silent on the subject," and adding, that "though it might be difficult to deal with the allusion, yet in his opinion it was hardly decent for the defendant to allude directly after the trial to that which was a matter of history and all men might understand." This mode of pointing attention to that which the plaintiff had passed by in silence in his declaration, and in the speech of the counsel, was very likely to mislead the jury, and had a tendency to induce them to give increased damages for that which formed no part of the plaintiff's complaint, for without any explanation or innuendo applicable to this paragraph it had no libellous meaning whatever. The effect of this might well be to work injustice, for if there had been any innuendo, the defendant might, perhaps, have been able to meet and justify the point so made.

The Lord Chief Baron. You may take your rule *nisi*. I have no recollection now of the manner in which I left the case to the jury, and should like, for my own information, to see the shorthand writer's note, if you have one, of my summing up; but I dare say you will find that the remarks complained of had reference to the argument founded on the alleged harmlessness of your client's remarks.

In the course of the learned gentleman's arguments, Mr. Baron Platt took occasion to remark, that, in his opinion, a libel meant a composition in which a man was illegally defamed, and that no man could say that he was illegally defamed by the fair and *bonâ fide* report of proceedings in a court of justice, which was open to all the world.

Mr. Baron Parke: Yes; a court is open, and it matters not how large it be made, or whether its proceedings are made public by publication to the world, if it be fairly done.

The Lord Chief Baron: I can very well conceive a case in which a fair report of a trial for libel might be made with the express object of republishing the former libel.

Mr. Cockburn. That, my lords, is a question which it does not interest me now to enter into.

Rule *nisi* granted.

GOSSIP OF THE WEEK.

MEDICAL OBITUARY IN THE ARMIES OF INDIA REPORTED SINCE THE DEPARTURE OF THE MAIL OF MARCH 2.—HER MAJESTY'S TROOPS: Assistant-Surgeon W. Bowie, M.D., 78th Highlanders, at Belgaum, on the 4th of March.—MADRAS: Superintending-Surgeon C. Desormeaux, Hyderabad Subsidiary Force, at Secunderabad, on the 15th of February. Assistant-Surgeon A. J. Will, 31st Regiment, at Palamcotta, on the 23rd of February.

OBITUARY.—On the 11th inst., at Worthing, G. P. Byass, Esq., surgeon.—On the 19th inst., at his residence, Finsbury circus, Thomas Bevan, M.D., in the 44th year of his age.—On the 19th inst., aged 29, Mr. John Ellison, surgeon, Great Homer-street, Liverpool.—Same day, aged 46, Mr Richard Shorrocks, of Liverpool, surgeon.—On the 28th inst., Dr. Robert Masters Kerrison, at his residence, 35, Upper Brook-street.

ROYAL COLLEGE OF SURGEONS.—Gentlemen admitted members on Friday, April 23.—G. F. Jones, T. J. T. Williams, W. D. Eddowes, J. W. Hubbard, J. L. Worship, T. Armstrong, A. R. H. Padmore, A. S. Willocks, J. Ferguson, and W. H. Baylis.

CONSEQUENCES OF DEFECTIVE SEWERAGE.—Dr. Lyon Playfair states the loss from unnecessary death and sickness for England and Wales at £11,000,000, and the United Kingdom at £20,000,000. These are the items of expense which Dr. Playfair reckoned are incurred under the present system, or rather want of system—direct attendance on the sick, loss of what they would have earned, premature death of productive contributors to the national wealth, and expense of premature funerals. Dr. Playfair estimates the loss for Manchester at nearly £1,000,000, Mr. Hawksley calculates the loss for Nottingham at £300,000, Mr. Clay estimates the loss for Preston at £990,000, Mr. Coulthart takes the loss for Ashton-under-Lyne at £1[illegible],000, and Dr. Playfair considers the loss of this metropolis to be above £2,500,000, and estimates the total loss to England and Wales at little short of £11,000,000.

MORTALITY TABLE.

For the Week ending Saturday, April 24, 1847.

Causes of Death.	Total.	Average of 5 Winters.
ALL CAUSES........	981	914
SPECIFIED CAUSES .	978	909
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	145	166
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	89	99
Diseases of the Brain, Spinal Marrow, Nerves, and Senses...............	166	158
Diseases of the Lungs, and of the other Organs of Respiration	334	275
Diseases of the Heart and Blood-vessels........	38	29
Diseases of the Stomach, Liver, and other organs of Digestion	84	70
Diseases of the Kidneys, &c.	9	8
Childbirth, Diseases of the Uterus, &c.	16	10
Rheumatism, Diseases of the Bones, Joints, &c. ...	15	8
Diseases of the Skin, Cellular Tissue, &c.	8	2
Old Age..................	57	57
Violence, Privation, Cold, and Intemperance........	17	23

No. 397. SUMMARY. MAY 8.

COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the THEATRE of QUEEN'S COLLEGE, Birmingham.

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Sequelæ of the influenza of last year; nervous debility; various pathological associations of it; treatment; value of change of air, or change of residence; phthisis after influenza; observations upon; bronchitis a sequela of influenza; case of, occurring in a subacute form in an old man; details; post-mortem appearances; comments upon it; nervous depression a prominent symptom in such cases; value of cautious treatment; character of the expectoration a guide; plugging of the bronchi by albuminous or mucous exudations; case of suffocation produced by a pellet of mucus; why asphyxia is more common in bronchitis than in pneumonia; case of acute bronchitis terminating by asphyxia; treatment best to be observed in such cases; value of copious expectoration; illustrative case.

GENTLEMEN,—Let me say a few words concerning the *sequelæ* of the influenza of 1846. In the majority of cases it passed off, aided by remedial means, and left no particular pathological state, or states, deserving of notice. Not unfrequently, however, continued debility was one of its consequences. This was chiefly seen in early adult life, and especially amongst females. Sometimes it was mere weakness, with nothing specially to mark it; again, it was associated with menorrhœa, with leucorrhœa, with menorrhagia, with loss of appetite, with profuse night sweats, or with troublesome cough. Most of these were difficult of management, but were best treated on a direct tonic and sustaining plan, with change of air, when this was obtainable. You will generally find that those of your patients who have suffered from epidemic disease, no matter what, will derive more benefit during their convalescence from judicious change of residence than from anything else. It is always desirable to remove them a convenient distance from the scene of their sickness; but when this is not practicable, a temporary sojourn, even in another part of the town, is not without its advantages. I have known a visitation to a neighbour's house do more good in a few days than all the tonic medicines that had been swallowed during as many previous weeks. In these cases, both moral and physical circumstances operate restoratively; and where the latter are not prominent, in reference to the advantages of good air and exercise, the other may in some measure suffice, by occupying the mind with entertaining and agreeable subjects.

When the cough was the offspring simply of debility, or rather of *irritability arising out of this*, tincture of sesquichloride of iron, alone or with tincture of henbane, was of excellent service: to this was advantageously added counter-irritation of the chest, or sponging it twice a day with cold salt and water. In more than one case which I saw, phthisical signs and symptoms succeeded to influenza: whether the phthisis were a *sequela* proper, I am not able to say. I can easily understand that the nervous depression I have spoken of as a characteristic of the disease, and a consequence of it, might lead to tuberculous cachexia; and it is not improbable that in some cases this was the fact: in others, however, it might happen, and very likely, that the influenza did nothing more than furnish an opportunity for a latent disease to start into activity, or for a tendency thereto to acquire fresh means of development.

Of the several *sequelæ* of influenza, bronchitis was amongst the most common. Perhaps this may be regarded as one of the pathological features of that variety of the disease that is attended with cough. In general the pectoral symptoms of influenza rather correspond with irritation or inflammation of the bronchi than with any other form of local derangement. Should any other present itself, this is almost always secondary of the bronchial disorder.

The bronchitis, usually subacute, that remained after the disappearance of influenza, or occurred as a consequence of it, chiefly showed itself in old people. The case of Quincy will furnish you with a good example. He lay, you will remember, in the accident ward, where we were obliged to place him, because of the other wards being full. He was a singular old creature, this. He had numbered upwards of sixty-three years, of which six-and-thirty had been passed in the monotonous drudgery of stage-door-keeper to the theatre. For this lengthened period he had not only stood sentry regularly at the stage-door, but had as regularly slept in the theatre—going home only once a week, for the sake of changing his shirt, and perhaps giving himself what he would consider a washing. Yet, in all this lengthened intercourse with the theatre and its representatives, he never once saw a play: the history of his whole life did not chronicle one visit in front of the scenes—notwithstanding that he actually lived for thirty-six years behind them. I was first requested to visit the poor follow at his own home, or rather at his wife's, on the 13th of February. I learned that he had suffered from influenza a few weeks previously, and that it had left him with a troublesome cough. He was sitting propped up in an armchair, and was breathing with some difficulty. His surface was colder than natural, and slightly bedewed with perspiration; pulse 106, small and feeble; tongue furred, and brownish in the centre; no pain anywhere, except in the chest when he took a deep inspiration; cough very frequent, and attended with a difficult expectoration of diffluent mucous sputum, of variable colour—here white and opaque, there frothy, elsewhere yellow, and again greyish; but there was no albumen, and very few pus globules; the stroke sound of the chest was normal throughout, except inferiorly, where it was a little less resonant than natural; the respiratory sound was audible everywhere, but constantly marked by a whistling, sonorous, bubbling, or mucous râle, according to the situation in which the stethoscope was placed; he had been the subject of winter cough for years; bowels imperfectly open; renal secretion sufficiently copious and natural. He was ordered the following:—

℞. Infusi calumbæ, ℥vijss.; sodæ bicarb., ʒj.; tinct. hyoscy., tinct camph, comp., aa. ʒij.; M. ft. mist. cujus capiat coch. ampla duo ter die.

℞. Pil. coloc. c., extr. hyoscy., pulv. scillæ, aa. ℈j.; misce et divide in pil. xij. quarum capiat ij. omni nocte.

He was directed to put his feet into hot mustard and water, and go to bed early.

The next day he was very slightly better: his cough was not so frequent, and expectoration less difficult. His domestic accommodations, however, were so indifferent that I advised his removal to the hospital, and he became an in-patient on the 16th.

When we first saw him together, he was in much the same state as that I have described, except that he was weaker. You will remember, also, my mentioning that over one portion of the right lung, where the stroke sound was distinctly sonorous, there was a total absence of respiratory murmur. The fact was new to me in this case, and I told you that I thought the absence of the respiratory sound was due to a large bronchus, or a series of smaller ones, being plugged up with mucus, and thus preventing the transmission of air to the vesicular apparatus to which those channels led. The conjecture was probably right, for at our next examination the respiratory sound was perfectly distinct, where

the day previously it was quite inaudible. He was ordered the same pills as before, and the same mixture, except that, on account of his weakness, the mixture had the addition of three drachms of compound spirit of ammonia. The following further treatment was pursued:—

Adhr. emp. lyttæ sterno. ℞. Syrup. papav. alb., syrup. tolutani, tinct. camph. comp., tinct. scillæ, aa. ℥ss.; misce fiat linctus, cujus cap. coch. unum parvum tusse urgente.

On the following day he was no better: still weaker. The blister had not risen, and another was ordered to be applied immediately: hot water bottles to his feet. Had no sleep last night.

℞. Liq. opii, sedat. m. xij.; sp. ammon. comp., sp. eth. sulph., aa. ʒj.; mist. camph., ℥jss. haustus cap. stat. contr. rem. ut antea.

The succeeding day he was in much the same state; he had slept, but was not refreshed in consequence, which was an ominous sign; the blister had not risen, and this was worse. It was clear we had very little vital power to deal with, and that the chances of salutary reaction were few. These were being lessened by an increased difficulty of breathing, diminution of respiratory sound, and dulness on percussion, over the lower part of each lung. The pulse was becoming more feeble, and expectoration more difficult; the surface was cold, and congestion was apparent in the fingers' ends, lips, &c. The ammonia was increased in his mixture; the strongest liquid ammonia was ordered to be applied to his chest (I personally superintended the application for two hours, without producing the least impression upon the skin); and wine was given at stated intervals; his bowels had not been moved during the day, and were tympanitic, so a turpentine enema was given. Nothing, however, roused the poor fellow, and he died on the 20th of February, seven days from the time of my first seeing him. In the *post-mortem* we discovered some old pleuritic adhesions at the superior portion of each lung; the left lung, inferiorly, was firmly adherent, by old bands, to the diaphragm. The lower half of the left lung was engorged with black blood, but it was not consolidated, and bloody spumosity escaped from it when incised: superiorly, it was less engorged, but excessively spumous when cut. The right lung was similarly, though less severely, affected. The bronchial membrane throughout was of a dusky red colour, and covered with a muco-purulent fluid, not adhesive, and in places completely filling the smaller bronchi. Not a trace of tubercle, or cavity, or consolidation, was found throughout the lungs. The heart was rather larger than natural, the left ventricle being somewhat hypertrophied, and its septum bulging into the cavity of the right. The latter was much thinner than usual, and its auricle was very thin and dilated. The right cavities of the heart were filled with a coagulum, firm, and the greater part of it deprived of colouring matter: the left ventricle was nearly full of black fluid blood. The brain was extensively congested superficially, and its membranes were slightly injected; at its base was a small quantity of fluid. The liver was myristicated, but not uniformly. The spleen was the smallest I ever saw: it weighed only *an ounce and three quarters*. The other viscera were natural.

This case, throughout, presented a pathological feature common to the acute and subacute bronchitis of old people—viz., a tendency to depression. So striking was it in this instance that I did not even dare to venture upon blistering the chest until an increase of the ailment rendered such treatment imperative; so low, however, was the vital condition that the skin was quite unaffected by blisters, or the strongest liquid ammonia. His surface was cold when I first saw him, and it never once recovered a perceptible warmth. This symptom led me to think unfavourably of the case from the beginning; and, added to the weakness of the pulse, the expressed feelings of languor, and the age of the patient, rendered it necessary that remedial measures should be very cautiously pursued. These are are cases in which it is easily possible to do more harm than good. Active purging or bleeding (even local) would, probably, have killed him outright, or have considerably hastened his end. The objects to be obtained were to support the declining strength of the patient, to calm the cough and the irritation causing it, and to promote expectoration. These were attempted to be answered by the remedies prescribed, which were sufficiently active without being too much so; yet they failed to afford more than temporary relief, and the patient continued to sink. The condition of the pulmonary apparatus showed that the morbid action within it had not been very energetic. There was not the least trace of inflammation of the lungs, and even their engorgement was of recent occurrence, as shown by the signs afforded on auscultation and percussion, and by the fact that a slice of the lung rinsed in water quickly lost all its blood, and its texture remained in other respects healthy and entire. The engorgement of the lungs was clearly the stasis of deficient, not of increased, vascular action. The condition of the bronchial membrane itself proved that its inflammation had not been vigorous: there was no lymph effused, nothing but diffluent mucus, intermixed with pus. In active bronchitis, the mucous secretion is at first glairy like white of egg, and of excessive tenacity: as the disease advances, the sputa become more opaque, but retain their tenacity. This is one of the best diagnostic signs I know of for determining the intensity of bronchitis. So long as the matter of expectoration flows easily, you may be sure that the inflammatory action is not urgent: be mindful, under such circumstances, how you employ heroic remedies, and especially amongst old people. They soon sink under bleeding, under profuse purging, under mercury, digitalis, and debilitating expectorants.

The stasis of blood in the lungs, in this case, may in some measure have been facilitated by the condition of the right ventricle of the heart. From the thinness of its walls, its propulsive powers must have been very feeble; so that the least impediment to the flow of blood through the lungs, instead of being overcome by an increased action of the right ventricle, would make more and more difficult the expulsion of its contents, until at last their gradual accumulation would render the contraction of the organ impossible. It was just so in this case, as was proved by the fibrinous mass that filled the right auricle and ventricle. This had evidently collected slowly, and for some time prior to death, for nearly all its colouring matter had been absorbed: the removal of this is never a *post-mortem* process. The patient, however, did not die of asphyxia, for there were no signs of this during life, and the superior portion of each lung was sufficiently permeable both for respiration and circulation. Had the right side of the heart been of natural substance and strength, it is not improbable that the disease might have had a favourable termination.

The size of the spleen was quite a singularity nor have I any opinion to offer upon it.

The plugging up of a large bronchus by a mass of lymph or thickened mucus, as happened once in this case, is not uncommon in bronchitis. But it is chiefly seen in the acute bronchitis of adults, when the secretion or exudation is thicker than in old people. It interrupts the passage of air to a particular portion of the lung, over which, in consequence, there is a natural stroke sound, but a total absence of respiratory murmur. Sometimes, before you leave the patient, a fit of coughing will remove the obstruction and tell you what it was. When the substance is of considerable size and firmness, it is often expectorated with much difficulty; and cases have happened in which the patient has been suffocated by the impaction of the foreign body in the trachea or some contiguous part. The pellet of mucus contained in the bottle I show you was taken from the body of an old woman, in whose *rima glottidis* it was firmly fixed. The case was one of chronic bronchitis that presented only the ordinary features; one day, in a violent fit of coughing, she suddenly threw back her head, clenched her hands, struggled violently, and in a few seconds was dead. She was suffocated by the impaction of this foreign body in the little aperture I have mentioned.

The case of Quiney is a pretty fair type of subacute bronchitis, in the generality of its prevalence amongst old people. When subjects in advanced life suffer fatally from this ailment, they generally sink from the depressing effects of it, without any pathological condition having occurred sufficiently to account for death. In younger people, however, it often happens that, during an attack of bronchitis, death results from asphyxia. This is less frequently observable in pneumonia: the explanation appears to me to be this. In inflammation of the lungs, however these may alter in texture, the bronchi are comparatively little affected: bronchial respiration, you know, is a common sign in the consolidation of pneumonia. In bronchitis, on the contrary, after the first turgescence of the membrane, comes a copious secretion, difficult of discharge, which fills the smaller ramifications of the bronchi: this is the occasion of the laboured respiration, and of the variety of sounds heard on auscultating the chest. If upon this comes congestion of the lungs, the air-cells get closed by pressure from the distended vessels, the expansion of the lungs is prevented, and the passage of air altogether denied through the thickened mucus of the bronchial tubes. Of course, suffocation is the speedy result of such a condition. I saw a case of this kind last year, in a bronchitic attack sequent of influenza. It was in the person of a dispensary patient, a female, about thirty-five years of age. She had been several days ill, and under the care of Mr. Carter, when I first saw her. I learned that her symptoms had been those of acute bronchitis in an urgent form. She had been judiciously bled two or three times; mild doses of mercury had been frequently given, and nauseating medicines at stated intervals. These not answering, a blister had been applied to the chest, and repeated. At the time of my first seeing her, she was breathing with great difficulty; at the lower part of each lung there was dulness on percussion, and respiration was inaudible superiorly, the stroke sound was not sufficiently expressed, and a loud mucous râle was everywhere distinct; cough frequent, and expectoration difficult; sputum opaque, tenacious, and in places slightly streaked with blood; pulse 112, feeble and fluttering; surface clammy; countenance anxious; lips livid; respiration short, quick, and laboured, and occasionally interrupted by a stifled sigh. It was evident in this case that, in spite of treatment, the congestion of the lungs and accumulation in the bronchi were increasing. Further depletion, of course, was out of the question. I advised a repetition of the blister, and prescribed ammonia, with squills, hyoscyamus, nitric ether, and camphor mixture: hot mustard and water to the feet, and mustard plasters to the calves of the legs. Still the chest symptoms increased, until respiration was reduced to a succession of gasps, and the face became almost purple, when death finally closed the painful process of slow suffocation.

In cases like these, depletory measures, local or general, are called for; proportioned, of course, to the strength of the patient and the severity of the attack. It is of much consequence to lessen the impulse of the circulation, but at the same time without unduly depressing the vital powers: if this latter occur, the chances are that your patient will sink. Of all modes of relief, however, none surpasses counter-irritant and derivative measures, and the promoting of expectoration. Free bronchial discharge is of cardinal consequence in the bronchitis. The fact, by no means novel, was well illustrated about a month ago, in the person of a gentleman residing in the country, whom I have been attending for some time past, in consultation with Mr. Chavasse, of

this town. I was summoned hastily one evening to our patient, from a belief of his wife that he was dying. I found him sitting in an armchair, leaning slightly forwards and gasping for breath. He put out his hand to me, but was unable to utter a word. His face was considerably swollen, eyes staring, lips purple, feet and hands quite cold and livid. There was striking pulsation and fulness of his jugulars, which I had never seen before. His pulse was 126, and very labouring; the stroke-sound all over the chest was duller than natural, and the only respiratory sound was a loud mucous rattle audible everywhere. I learned that he had been sitting in a strong current of air for some time, until he felt a disagreeable chill, and that his present symptoms had shortly succeeded. It was quite clear that he was suffering from acute congestion of the lungs. An old heart affection under which he laboured utterly forbade bleeding, so I painted his chest plentifully with *acetum lyttæ*, but not until I had four times applied it abundantly did it make any impression. I immersed his legs and feet in very hot mustard and water, covered them well over, and then opened the door to allow him fresh air, for which he was panting in agony. This treatment was all very well, and perhaps I could not have improved upon it, considering the circumstances, but I should have had little hope of its efficacy, except for one striking feature in the attack—*copious expectoration!* So abundant was this, that at least half a pint of frothy, but still diffluent, mucus was spat in an hour after my arrival. So long as this continued, I felt strong hope for the safety of my patient. I advised him to get the phlegm up as fast as he could, and the task at one time was a pretty constant one. At length the copious bronchial discharge, the counter-irritation, and the derivative action at the extremities, told salutarily, and the evidences of pulmonary engorgement began to disappear. I remained with him during the greater part of the night, and then left him in all respects comfortable and disposed for sleep. It was one of the worst cases of acute congestion of the lungs I ever saw; and, but for the discharge from the bronchi, would have soon ended, I have no doubt, in asphyxia. Beyond considerable weakness, and some increase of dropsical symptoms, with which he had often before been troubled, he has experienced no ill effects from his alarming attack.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), M.B.S., Physician to the Royal Infirmary for Children, &c. &c.

(Continued from p. 172.)

GENTLEMEN,—In my last lecture I occupied your attention by directing it to the consideration of some of the more general relations of scrofulous inflammation and its results, &c.; and it will now be proper that I make a few observations on the other great sign of the general malady—namely, tuberculous deposit. I leave out of consideration for the moment, mind, what relation inflammation bears to tubercle, either as its cause or its effect: this I shall refer to afterwards. As I suppose you are all acquainted with the principles of general pathology, and have studied the general character of tubercle, I shall not detain you with any of the litigated points, as to whether grey granulation is or is not the first condition of tubercle, whether yellow tubercle first softens in the centre or the circumference, in what *texture* the latter is usually deposited, or like points. These subjects you will find discussed in most modern works upon general medicine; but I may, perhaps, direct your attention to the valuable periodical reports of Dr. Ranking, in which you will find everything you can wish.

Now, I may first tell you that as scrofulous inflammation may attack a child of any age, so may tubercle be deposited. There seems to be no period of our existence quite free from the invasion of one or the other. It is true, as we advance beyond a certain point in age, we become less liable to the attacks of either of them, especially the former, as a primary disease, though not of the latter, but at an extreme limit. A fœtus at birth has been seen to have tubercle in the lungs, and an adult at ninety-three years of age has been known to succumb to it.

A child may be brought to you evincing only some external form of scrofulous inflammation; it may have, for instance, conjunctivitis, or enlarged cervical glands, and yet be stout and active, and in other respects thought by its parents to be well. The *artistic* character also of the child may not either exemplify very strongly the scrofulous diathesis. In such a child there is no reason to believe that the other sign of scrofulous disorder—*tubercle*—has made its appearance. By careful attention to its *hygiene*, as growth progresses, you may preserve it a healthy child. But even in this child, let all the powers of life be brought to a low standard by bad food, bad air, deficient clothing, cold, wet, and like depressing circumstances, and tubercle is very likely to be *in futuro* generated. Not simply, mind, because bad food, bad air, and depressing mode of life will of themselves make a person scrofulous; but because here is a body with all the tendencies to the morbid deposit, and which will very soon yield to such exciting causes of its actual eruption. The finest constitutioned child, I believe, might be made tuberculous; but here you would have to make it so, and it might cost you some trouble. But in the other case it will demand equal care on your part that it may be preserved from it. Again, a child may be brought to you with enlarged glands, or conjunctivitis, but, instead of being active and well, it is quite the reverse—it is thin and not disposed to move much about; it pines away, the upper lip is very large and swollen—in fact all the *artistic* characters strongly marked; the fingers are clubbed, and the heads of the larger bones swollen; it coughs and perspires. In such a child as this, tubercle, in all probability, is deposited. Again, a child is brought to you without any of the common forms of external scrofulous inflammation, but it is very thin; hairy, as I before described, coughs much, and perspires abundantly; it may have *ecthyma*—a very common thing in a cachectic little patient; the fingers and bones are such as I just spoke of; it may eat even ravenously, the belly being greatly swollen. It will die, and tubercles will be found widely diffused over the body. A child makes no way from birth—it is a diminutive old man or woman in appearance; the bowels are constantly open; the marasmus is extreme. The mother is a weak leuco-phlegmatic woman, has little milk; the father has died of phthisis, or the mother has suffered from syphilloid affection. The child soon dies, and tuberculous deposit will be found in its body. These are not imaginary examples I am giving you, nor pictures wrought up for the occasion; I have seen varieties of instances which may be ranked under one or other of these classes.

Children may be under treatment for month after month, year after year, for one form after another of scrofulous inflammation; and yet the *tendency*, the *inclination* only, to deposit tubercle be all this time apparent; children may at once, and at a very early age, be brought to you giving the signs of great diffusion of the deposit, and yet present no other inflammatory affections except such intercurrent ones as are caused by the *local irritation* of this peculiar morbid product.

Now, the product we are alluding to may be deposited or evolved in any organ, but still some organs are more liable to it than are others; and also, if it exist in some, it is almost always to be found in others in particular cases. You, perhaps, are not aware that there is a difference between its *distribution*, if I may so call it, in adult life, to that in infantile; but you may know that, as relates to the adult, it has been said that tubercles are never developed in any organ after fifteen years of age, without being also developed in the lungs. Whether this really be the case or not, it is beyond my province to inquire; but I may tell you that Marsh, Churchill, and Bellingham do not confirm this axiom, and give instances of strumous peritonitis occurring in adults in which the lungs were quite free from tuberculous deposit. However, in children it is certainly the case that the lungs may be free from it although it is to be found in other localities. Still, in children the lungs are far more frequently affected than not, whenever the child is tuberculous; and many persons believe that these organs are the chief *nidus* for its evolution. A great law for you to remember with regard to children is, the *great diffusion of the deposit throughout the body;* and this, you know, is certainly not the case with adults. You may examine a child after death, and it will be one of the most astonishing things for you to behold how universally this product is deposited, and how the various organs are *loaded* with tubercle.

The spleen has astonished me, perhaps, more than any other organ. I have seen it an entire mass of tuberculous matter of the densest kind. You will generally find that those organs which undergo tuberculosis more frequently, undergo it more abundantly and intensely too. Perhaps there is an exception to this, however, in the mesenteric glands and small intestines. In the former, very intense tuberculosis is not common, but of a moderate degree is more frequent than in the latter; whilst it is more intense in the latter, but certainly not so frequent. In children the bronchial glands play a very prominent part in the history of tubercle, and the coverings of the brain a very important and interesting one too. The heart is one of the organs of the body in children, as well as in adults, most unfrequently affected, and the stomach is very rarely so indeed. The peritoneum undergoes tuberculosis not unfrequently; and the false layers which are developed near it, and the intestines, may become charged with the deposit. In the liver it is not uncommonly met with; whilst, perhaps, you know it is rare there in adults, who, especially in France, have "fatty liver" instead. I do not know that I have ever seen the pancreas affected, but others have. The spleen, on the other hand, is very frequently in children loaded with tubercle, but its deposit in the kidneys is far less common. I have never seen it in the bladder or uterus, or in the ureters; others have. Nor have I seen it in children in the testicle, but still such cases are recorded to exist. Some persons also have found, they say, tuberculous deposit in the membrane of the tympanum, and suggest that from time to time it might be met with even in the membranes of the organ of vision. Of such extreme cases I can say nothing at all.

I have already told you it is not uncommon in the meninges, nor is it in the mass of the brain or cerebellum. The spinal cord has been seen attacked, especially the upper portion, by several observers. With regard to the bones—*deposit*, whatever it may be, is common, nay, constant, in their cancellated tissue on the occurrence of the "scrofulous disease of the joints." But still undoubted *tubercles* are admitted to occur in the osseous tissue, even by those who deny the "yellow lardaceous matter" to be identical with common tuberculous matter; but, then, such is rare. So is "cheesy matter" common enough in the lymphatic glands, and this, whether it be exactly the same as tubercle or not, is only common to scrofulous disorder. The sub-tegumentary cellular tissue also is a frequent place of evolution of the latter deposit. I think I have before remarked that "favus matter" is said by a good authority to be a modification of tubercle.

What I have now told you will sufficiently answer my purpose, I think, so far as relates to this portion of the history of tubercle as a great sign of scrofula; but as anything like an account of this portion of its pathology you must know it is meagre in the extreme, and gives you nothing

but the faintest outline of this vast subject. But these lectures, I told you, made no pretension to anything else but to be practical observations of a limited character. Still, for treatment you must have pathology, and before we get to the treatment of scrofula I must give you a little more. In doing so I must first touch upon one of the most litigated questions in the whole range of pathology, viz., is inflammation the cause of tubercle—is the deposit of this morbid product in any organ or tissue always preceded by inflammatory action there?

According to a great many pathologists this action is always a forerunner of the deposit of tubercle, whether this action be of the common kind or what others denominate low scrofulous inflammation; and some of them even go so far as to say that this action is sufficient to give rise to it without any pre-existing diseased state or abnormal condition of the blood, viewed as a general or constitutional affection. The opposite party deny this *in toto*, and assert that inflammation of any kind whatever has nothing to do with the production of the deposit, and that whenever—which is common enough—the effects of inflammation are seen in those organs in which tubercle is deposited, such effects are either the result of the local irritation of the deposit—and, therefore, to be regarded as produced by, instead of producing, the latter—or are, on the other hand, mere coincidences. It is an old axiom, you know, that between the extremes is found the truth; and I think such is the position in which you will here find it. These are pathologists who have assumed this position, and I believe it to be the truth. These pathologists believe that the deposition of tubercles may be, and often is, the immediate result of an action to which it would be absurd to give any other name than inflammation, but that there is, then, an essential peculiarity in the nature of the inflammation by which they are produced. But it is also the case, that as this morbid product is found in particular organs, as it were, indifferently—at least as regards its rapidity and extent of formation—under every variety of morbid agency to which these organs may have been subjected, we cannot believe that its immediate formation is *always* due to the previous occurrence of inflammation, and experience rather warrants us in maintaining that it is more often deposited without such inflammatory action having previously occurred. I cannot the extent of saying that inflammation is *never* really and truly the immediate local cause of tubercle being evolved. I cannot believe that wherever it is evolved there also has necessarily pre-existed, or is pre-existing, inflammation. You may depend upon it, a great deal of error in pathological reasoning, and of disagreement, has arisen from our not considering carefully and separately the nature of the *aggregate phenomena* implied, when we make use of the term *inflammation*. So long as we use—and surely it is permitted us at present by the language of pathology so to do—the terms of scrofulous, erythematic, rheumatic, syphilitic, chronic, acute, sthenic, asthenic, low, &c., inflammation—all terms implying some variation in the lesional, plastic, or symptomatic characters by which they are known—it is, as I have said, absurd to refuse the character of tubercular deposit also to be an attribute, mode, quality, element, or some other not unfrequent and immediate connection, if you will, of an inflammation too. Or I may express it thus: we have strong reasons for maintaining, under the common acceptation of terms, and our mode of tracing causation and effect, that the deposit of tubercle must be allowed to enter into the series of aggregate phenomena by which inflammation under certain conditions of body is often made known. What I particularly wish to impress upon you is this, that inflammatory action may be, under particular circumstances, the immediate cause why tubercle is evolved; that in most cases, however, the deposit is not dependent on the precedency of this action; and that in all instances an abnormal condition of the blood plasma must first exist. In the greater number of cases tubercle is deposited as a subversion of nutrition; in others, it is first induced to be deposited, if I may so term it, by local congestion or inflammation; whilst also its elements may be thrown out upon surfaces as simple exhalation. All these immediate local causes of its evolution may or may not be acting at the same time in the same body, and contiguous or not to each other.

Thus far I have thought it necessary, gentlemen, to carry you on in the pathology of tuberculous deposit; and I think this is quite far enough. At one time I had the idea of making these lectures more systematic than I now intend: and had drawn up for your notice the following table of phenomena, in their series of progressive occurrence, so that you might have a sort of bird's-eye view of what I believe to be the theory of the matter. I show it to you without making any remarks upon it, save that some chemists have lately held different views to what was promulgated upon the subject of *protein*. However, the table may be at least *suggestive* to you, if it is nothing else.

I.

Scrofulous diathesis state of constitution of body.	Imperfect chyle	Blood unusually serous, poor in highly oxydized protein compounds, or having an excess of low oxydized ones.	Exudation from such blood of albuminous granular matter forms *tubercle*.

Exudations ensue in the processes of { Nutrition. Inflammation. Simple exhalation.

Exudation of the albumen and fibrine, or protein compounds, &c., ensues.

The albumen, fibrine, or protein compounds, &c., permeate the capillaries, and are imbibed by the tissues.

If the exudation be formed of the due proportion of elements, and is of right protein character, other circumstances also connected with assimilation being normal healthy plastic matter—new and proper tissue is the result.

If the constitutional tendency to make bad blood be great, the proportion of serum be high and constant, the diminution of highly oxydized protein, fibrine, and albumen great, the exudation is not able to form new tissue, a healthy plastic matter but remains as inorganizable granular matter—*tubercle*.

Exudations take place in inflammations.

On these taking place in many inflammations the lymph is organizable, diffused, exuded, is fibrinous, contains highly oxydized protein compounds, decolorized globules of blood, &c.

In inflammation of a scrofulous character the exudation is deficient in oxy-protein is incapable of acquiring vascular organization, does not form flakes or layers like those of other inflammations, &c.: in other words, inflammation very frequently causes an exudation of inorganizable albumen—*tubercle*.

Exudations from simple relaxation of solids and diseased states of the fluids may ensue.

In the healthy condition of the body peculiar properties of fibrine are necessary to retain the blood in the capillaries.

III. In the scrofulous diathesis the blood is poor in oxy-protein compounds, its motion languid in the small capillaries, and exudation of the albuminous, non-fibrinous, mal-oxy-proteinized granular matter is apt to ensue—*tubercle*.

From the above it may be deduced that—

1. The simple act of nutrition—at least an abnormal kind of one—may be sufficient for the deposition in organs of tubercle.

2. If the blood be very bad, and the constitutional tendency to form it so be very great, organic assimilation of any of the more important organs can scarcely be attempted in children without being accompanied by tuberculous formation.

3. In a very great many cases not only is it unnecessary that inflammation should happen, but it is even not essential that that any local congestion ensue for the deposit of tubercle to take place.

4. But in other cases it may be affirmed that, although the blood being bad, the scrofulous diathesis existing, the simple act of the nutrition of organs is not alone sufficient to give rise to the exudation of non-fibrinous inorganizable granular albumen in the form of tubercle. But ere, inflammatory action being superadded, or local congestion induced, the exudations are not in character with those of other inflammations, and tubercle is formed.

A COURSE OF LECTURES ON SURGERY,

BY

SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London; Consulting Surgeon to London University Hospital, &c.

Lecture IV.

The first subject to which a student of surgery should pay especial attention is inflammation. It was a saying with the late Dr. Armstrong, that as soon as a student had obtained correct ideas of the nature of this affection, and made himself acquainted with the characters of some of the chief organic diseases, he might be said to have gained a bird's-eye view of disease in general.

When any part of the body is affected with redness, swelling, heat, and pain, it is said to be in a state of inflammation, implying by a figurative expression that the part is on fire, or seems to be so to the patient. Inflammation is naturally the first subject for consideration in a course of lectures on surgery, although it is one of the most difficult to understand fully and minutely. It forms, however, the key to the nature of other diseases: as it is connected with them as a cause, a symptom, an effect, or even as a means of cure, it may sometimes be considered rather as a salutary process than a disease.

I will first bring under your notice a few illustrations of the importance of inflammation as a mode of cure. We accomplish the radical cure of hydrocele by first evacuating the fluid contained in the tunica vaginalis, and afterwards exciting inflammation of that membrane by means of a stimulating injection, a seton, or some other means of producing inflammatory action. The effects of inflammation on the serous membrane is to cause an effusion of lymph, which obliterates the cavity in which the fluid had been previously effused. Encysted tumours or wens, and some other morbid growths, are cured by exciting strong inflammation in them, by the influence of which they are either slowly absorbed, ulcerate, or slough away. The effusion of lymph, as a consequence of inflammatory action, is necessary for the union of wounds without suppuration by adhesive inflammation—as we see in various autoplastic operations—harelip for example.

Inflammation frequently exercises a salutary operation in the animal economy, by preventing evils which would be attended by serious or even fatal consequences. Thus it frequently increases the strength and thickness of serous membranes, when these are the only parts intervening between collections of matter and the great cavities of the thorax or abdomen, into which the pus would otherwise make its way, and occasion severe or fatal consequences. Inflammation, again, is of great importance in filling the cavities of the cellular tissue surrounding abscesses with lymph, and thus putting a stop to the spread of the matter, as would happen were such an obstacle not in existence. Again,

inflammation surrounds extraneous bodies lodged in different parts of the body with a sort of cyst, in which they may remain for a long period without injury to the system. In wounds of the bowels, again, inflammation plays an important part by preventing effusion of their contents, which would otherwise always follow wounds of these organs, and so bring on fatal inflammation of the peritoneum. This it does by glueing the wounded bowel to the neighbouring ones, or to the peritoneum at the edge of the wound, so that the fæcal matters pass out through the wound instead of entering the cavity of the peritoneum. But inflammation can only be considered a salutary process when very moderate in degree, for where it attacks any part with great violence it is productive of the most disastrous consequences.

We have been accustomed to define inflammation as an increased action of the arteries accompanied by increased heat, swelling, pain, redness, and sometimes throbbing of the affected part. These are frequently accompanied by tension, induration, loss or diminution of transparency, alterations of colour, and other changes, which will come under our notice hereafter.

The term inflammation is often employed in a very vague manner, and without a precise notion of the meaning to be attached to it, either with regard to the symptoms which indicate its presence, or the local changes which are characteristic of it, or even of its intimate nature. Owing to these circumstances the distinguished French pathologist Andral would altogether reject the term as indicative of a complex process involving several others, the connection of which is by no means constant or necessary.

I am unable to give you an unexceptionable definition of the term inflammation. The expression, "increased action of the arteries," is much too vague when unaccompanied by any explanation of its meaning. I must defer the examination of this point until we have gone further into the subject.

Any one of the symptoms which I have noticed as indicative of inflammation may be absent, without our being able to say that the part is not inflamed. Thus, in the superficial inflammation of the skin, called erythema, there is no swelling, tension, or throbbing to be observed. In chronic inflammation, on the other hand, there is often considerable swelling, unaccompanied by heat, throbbing, or even pain and redness. Redness, although a common accompaniment of inflammation, is by no means one of its essential characters: for the vessels may not be so much dilated as to admit a large number of blood globules—as in inflammation of the arachnoid membrane, and slight inflammation of the cornea. The absence of redness is most common in chronic inflammations. Thus you will perceive that inflammation is a process liable to considerable varieties in its character, progress, and effects; and these variations are commonly dependent on the nature of the exciting cause, the state of the system, the patient's age, and the structure, situation, and functions of the part affected. The differences produced by the exciting cause may be illustrated by the influence exerted by morbid poisons on the character of the inflammation. Each morbid poison gives rise to a peculiar variety of inflammation of a specific character, regulated by certain laws, and having often a definite duration. Other examples may be found in the peculiarities of the inflammation, in the ulceration and gangrene of the fingers, toes, and other extreme parts of the body arising from exposure to cold. These peculiar forms require a treatment not at all suited to other forms of inflammation.

The influence of constitutional state in determining the kind of inflammation is well illustrated by scrofula, erysipelas, scurvy, and carbuncle. Inflammation is divided into acute and chronic; into healthy and unhealthy; into idiopathic and sympathetic; and into simple and complicated.

Acute inflammation is that form of the disease which produces all its effects with rapidity, which arises and runs its course, and terminates either in restoration to health or death of the patient, within a few days; if it produce an abscess, this occurs in an equally short space of time.

The varieties of acute inflammation are numerous, comprising not only all cases of healthy inflammation, but many other cases which may be considered as unhealthy and complicated.

Chronic inflammation is that which is slow in its progress, of a more or less indolent nature, accompanied frequently by little or no pain, or any perceptible increase in the heat of the part, and very commonly no redness. This form of inflammation often commences in a most insidious manner, so that its origin is completely overlooked. We refer to this chronic inflammation all those slow thickenings and alterations of various textures, and even the formation of several kinds of indolent tumours.

I am of opinion, however, that the doctrine is carried too far in the last instance, as it is extended to organic diseases and new formations, between which and the ordinary effects of chronic inflammation, the mere thickening of parts and their ulceration, there must exist very striking differences.

Scrofula affords us one of the most striking examples of the nature and consequences of chronic inflammation, as it is one of the most frequent diseases of our climate. Scrofulous inflammation is not, however, always of a chronic nature, for we see it occasionally assuming a very acute form, although it generally is of a chronic, indolent character.

Healthy inflammation is that form of the disease which is not modified by, or under the influence of, any particular disease in the system. Hence it does not show any of those peculiarities which we perceive in erysipelas, venereal disease, carbuncular inflammation, or that of cowpox, smallpox, or any other specific disease.

We commonly use the term phlegmon for healthy inflammation occurring near the surface of the body. Phlegmon has been defined as inflammation of the cellular tissue by some writers and lecturers; but it surely is not to be restricted to this tissue, as we see it involving the cutis fascia and other organs, which may be destroyed if the violence of the inflammation be great.

Unhealthy inflammation may be defined as that form of the disease whose appearances, progress, and termination are under the influence of some specific or determinate disease in the part affected or the system at large. The varieties of unhealthy inflammation are as numerous as the diseases which give rise to them. Thus we have scrofulous, gouty, venereal, rheumatic, scorbutic, erysipelatous, and carbuncular among the varieties of unhealthy inflammation.

Simple inflammation is inflammation of a healthy character, uncomplicated with any other mischief; which, for example, is not kept up by the lodgement of extraneous substances, or dead portions of bone, or surrounds cancerous or medullary tumours. When inflammation is accompanied or produced by such or analogous circumstances, it is said to be complicated.

When the causes of inflammation act directly on the part, the inflammation is said to be idiopathic or primary; but when it arises from disturbance in some other part of the system, or from any cause not acting immediately on the part affected, or preceding it, the inflammation is said to be sympathetic or secondary. These distinctions are of a practical character, and therefore of great importance, because the treatment of a secondary or sympathetic inflammation is essentially dependent on the removal of the primary disorder, which acts as an exciting cause, and is often remote in situation from the seat of the inflammation.

The terminations of inflammation, or, as it might be better expressed, the effects of this disease are—1. Adhesion of neighbouring parts to each other. 2. Suppuration, or formation of pus. 3. Ulceration, or the absorption and removal of portions of the tissue so as to leave an open chasm or broken surface which secretes pus. 4. Death of the parts called gangrene or mortification when attacking the soft parts, and caries or necrosis when destroying the bones.—Looking to these terminations or effects of inflammation, Mr. Hunter divided inflammation into adhesive, suppurative, ulcerative, and gangrenous, according as one or other of these results ensued; and he conducted his investigations in a careful, original, and philosophical manner, as you will percieve when you read his admirable work on Inflammation and Gunshot Wounds.

There is a remarkable tendency in certain cases of inflammation to one or other of these terminations or effects. The common phlegmonous inflammation and that of boils and whitlows has a great tendency to suppuration; that of carbuncles, the malignant pustule, some varieties of erysipelas, that arising from the animal poisons, and pricks in dissection, for its tendency to sloughing. Other forms of inflammation—that of mumps, gout, and rheumatism, for example—are never attended with suppuration, ulceration, or gangrene.

Much of the variety in the terminations of inflammation is dependent on the nature of the texture attacked by this affection, and its proximity to the surface of the body. Thus we observe that the inflammations of the cellular tissue, hose of all the closed cavities of the body, of all deep-seated organs and serous membranes, are of the adhesive character, and are seldom attended with suppuration, ulceration, or sphacelus.

The mucous tissues, and those near the surface of the body, have a strong tendency to the suppurative form of inflammation. I may illustrate this by the progress of extraneous substances lodged in some deep-seated part towards the surface. While deeply lodged they do not cause the formation of pus, but as soon as they arrive near the skin suppuration is established, an abscess forms, is evacuated, and the foreign body finds an exit. Again, in gonorrhœa, we find that slight inflammatory action suffices to produce a discharge of pus, but intense inflammation is required to cause adhesions. The mucous membrane of the larynx and trachea, under ordinary circumstances, produces a purulent expectoration, while it requires the peculiar inflammation of croup to produce an exudation of lymph. You are not to expect that you will always, or even frequently, meet with these varieties of inflammation in their pure and separate state: for they are usually associated with each other in a greater or less degree, and are in this manner blended into one disease. Thus we have abscesses bounded by a layer of lymph, the product of the adhesive inflammation around their circumference.

In those tissues which are possessed of inferior vital powers, and comparatively ill supplied with vessels, ulceration and sloughing are the ordinary effects of inflammation. These results are seen in the sloughing of tendons and fasciæ; in caries and necrosis of bones; in the greater frequency of ulcers and sphacelus of the lower extremities than of the upper, which are nearer the centre of circulation; and in the greater readiness with which newly-formed parts ulcerate and slough when attacked by inflammation, than the original tissues; these, of course, possess a lower degree of vitality, and are, therefore, more obnoxious to injury by disease.

All inflammations of any extent or violence which attack important organs are attended by a disturbance of the whole system, to which the term sympathetic or symptomatic inflammatory fever is applied. In this constitutional affection we observe a frequent, strong, and full pulse; diminished and suppressed secretions; dryness and heat of the skin; parched and furred tongue and fauces, attended with extreme thirst; scanty and high-coloured urine; constipation of the bowels and anorexia, or absence of appetite for food. The nervous system partakes in the general disturbance: anxiety, restlessness, and sleeplessness, headache, subsultus tendinum, wanderings, and delirium, are among the symptoms referrible to disturbance of the nervous

system. The intensity and duration of the sympathetic fever are naturally modified by the violence of the inflammation, and its localization in parts which are of little or of great importance to life. When the inflammation has attacked an important organ, as in peritonitis, the pulse is quicker and smaller than when the skin, muscle, or other parts of smaller vital importance are attacked.

Differences of constitution exercise an important influence on the nature and extent of the symptomatic fever. When this rises to a great height, the pulse becomes more rapid and smaller, the brain is much more affected; and this is particularly the case in women and irritable subjects. You will find that fat and indolent persons bear inflammation very badly, and in them we frequently see the inflammatory fever very severe.

Persons who have ruddy cheeks, the redness terminating abruptly at its edges, and in which the minute vessels are seen to ramify, are commonly of a peculiarly irritable temperament, and bear inflammation worse than most others. In them the constitutional disturbance is extremely severe, and sometimes attended with spasmodic twitchings of the muscles, and imminent danger.

Diseases are not, however, restricted to changes in the solids; changes also occur in the fluids, and even the blood itself does not escape. The blood taken from a patient suffering from inflammation, coagulates more slowly and firmly than in its healthy condition; and, after the completion of the coagulation, you may observe a layer of fibrine of a yellowish or buff colour, or resembling glue, on the surface of the clot. The serum is usually more abundant. We call this yellow substance, the inflammatory crust or buffy coat. As a circumstance to which some importance is attached, it will deserve further consideration in a future lecture.

DUMAS ON ORGANIC CHEMISTRY.
No. XIX.

ON THE BILE.

(Continued from page 192.)

Choleates.—Choleic acid unites with bases, and forms definite salts, some having neutral and others acid reactions. The neutral choleate of soda is the salt which constitutes the base of the bile. We may procure it directly, by purifying the bile by alcohol, animal charcoal, and ether; or else by a double decomposition, precipitating it by subacetate of lead, and treating the basic choleate of lead by carbonate of potass. In the dry state it forms an almost colourless gummy mass, which is soluble in water and in alcohol; its aqueous solution is distinguished from bile by one character only: the dilute mineral acids, when cold, separate it from the choleic acid, whilst bile is not precipitated under the same circumstances. If choleate of soda, dissolved in water, be treated by a concentrated aqueous solution of potass, this salt becomes separated under the form of a soap, and is found floating on the surface of the liquid.

MM. Theyer and Schlosser have analyzed this body, which they found composed of—

Carbon	60·14	60·12	59·60	59·16
Hydrogen ..	8·38	8·62	8·60	8·55
Nitrogen	3·75	3·32	3·30	
Oxygen	21·43	20·99	21·82	
Soda	0·30	6·95	6·68	6·41

Taking into account the chloride of sodium which the purified bile contains, we shall find it identical in composition with choleate of soda.

Choleic acid forms salts with an excess of acid; that which M. Berzélius called biliary substance, and afterwards bilifellic acid with an excess of biline, appears to be nothing more than the acid bilate of soda.

Oxide of lead forms two combinations with choleic acid; they are slightly soluble in water, and are dissolved by alcohol and acetic acid. It may be obtained by precipitating a solution of neutral or ammoniacal choleate of soda by subacetate of lead. If we add nitrate of lead to a solution of choleate of soda, a precipitate takes place. The supernatant liquor is neutral, or at least causes no effervescence with the carbonates (Demarçay). According to MM. Theyer and Schlosser, the choleate of lead contains—

Carbon	40·78	40·81	41·04
Hydrogen	5·92	5·98	5·81
Nitrogen	2·20	—	—
Oxygen..........	15·95	—	—
Oxide of lead	36·03	36·93	—

According to the same chemists, the basic choleate, prepared by rendering the choleate of soda alkaline by a little ammonia, contains—

Carbon	36·60	36·86	37·03
Hydrogen	5·16	5·38	5·24
Nitrogen	2·11	—	—
Oxygen	12·85	—	—
Oxide of lead	43·19	43·09	—

The neutral choleate of soda is changed into a basic salt by repeated washing.

Choleic acid is decomposed with great facility under the influence of various agents: the mineral acids and the alkalis transform it into new bodies. It is owing to these numerous modifications, that so many contradictory opinions have been formed as to the constitution of the bile. When treated by an excess of hydrochloric, sulphuric, or phosphoric acid, choleic acid becomes transformed into a peculiar body, devoid of nitrogen, which M. Demarçay has designated by the title of choloïdic acid, and into an azotized substance, named taurine, first discovered by M. L. Gmelin in the bile of the ox. MM. Theyer and Schlosser have observed that a concentrated solution of oxalic acid, whilst hot, effects the same transformation. If bile be thus treated, the acid seizes on the soda, sets the choleic acid at liberty, and transforms it into taurine and choloïdic acid.

Choloïdic Acid—Biliary Resin (Gmelin).—This body may be prepared by dissolving one part of bile in five or six parts of hydrochloric acid of a mean strength; this solution is to be kept boiling for some time. The choloïdic acid separates from it in the form of a solid, brown, resinous-looking mass. The hydrochloric acid is removed by boiling water. To isolate the fatty matter, it must be dissolved in a little alcohol and subsequently agitated with ether. After separating the latter, the alcoholic solution is to be evaporated and the residue washed with water. It retains with great tenacity some traces of chloride of sodium.

Choloïdic acid is a fixed body, solid at the ordinary temperature; it is of a yellow colour, has a bitter taste, and is easily pulverizable. In the dry state, it melts at a temperature above 100° C. Heated in boiling water, it forms a brown gluey magma. It is almost insoluble in ether, but is dissolved by alcohol, even when dilute; it is slightly soluble in water. Its solutions redden the vegetable colours and decompose the carbonates with effervescence. It forms salts which are partially soluble. Its composition is—

	Demarçay.			Dumas.
Carbon	73·52	73·30	73·16	73·3
Hydrogen..	9.58	9·51	9·48	9·7
Oxygen....	26·90	27·19	27·36	27·0

Theyer and Schlosser.

		Calculation.	Analysis.
C^{60}....	4551·24	72·53	72·23
H^{100} ..	623·98	9·94	10·10
O^{11}....	1100·00	17·53	—
	6275·22		

To prepare the choloïdate of silver, MM. Theyer and Schlosser dissolve choloïdic acid in ammonia, boil the solution until it has become neutral, and precipitate it by nitrate of silver. It gives a voluminous white deposit, which becomes brown by desiccation. It contains:—

		Calculation.	Analysis.
C^{60}...	4551·24	52·77	59·22
H^{96} .	611·50	8·03	8·16
O^{10} .	1000·00	13·13	—
AgO .	1451·6	19·07	19·35

The choloïdates of zinc, manganese, iron, lead, copper, and silver, are flaky precipitates, which, when heated with care, assume a grainy appearance and melt towards a temperature of 80° C.

M. Berzélius has given the name of *dyslysine* to a body produced by the imperfect action of hydrochloric acid on bile. If the resinoid substance, after being washed with water, be treated by alcohol of a specific gravity of 0·84, we shall find this menstruum take up two acid bodies which can with difficulty be separated one from another, and which the above chemist has denominated fellinic acid (*fellinsaure*) and cholinic acid (*cholinsaure*); there also remains a glutinous resinoid mass: this is dyslysine. This body is dissolved with difficulty, even in anhydrous boiling alcohol; on cooling, the alcohol becomes cloudy, and deposits, without growing clear, a white precipitate; by spontaneous evaporation, it is obtained as a white earthy mass. It is not dissolved by the alkaline carbonates.

By prolonging for some time the ebullition of concentrated hydrochloric acid on bile, diluted with a little water, MM. Theyer and Schlosser have obtained a resinous, yellow, perfectly neutral body, insoluble in water, alcohol, potass, acetic and hydrochloric acids, and which they regard as identical with *dyslysine*. It contains—

		Calculation.	Analysis.
C^{60}	.. ..	78·15	78·22
H^{92}	.. ..	9·95	9·68
O^{7}	.. ..	12·02	—

Taurine.—Taurine was discovered by M. L. Gmelin; it is found in the mother-water left after the separation of choloïdic acid. The most simple process for its preparation, consists in boiling the bile with muriatic acid until the liquor, cloudy at first, becomes clear. The choloïdic acid is to be separated and the liquor evaporated until the greater part of its chloride of sodium is deposited. We then add to these mother-waters five or six times their volume of alcohol, and set the mixture aside. In a short time, the taurine will be found deposited as beautiful crystalline needles; these are to be washed in alcohol, redissolved and crystallized anew in water.

Pure taurine crystallizes in prisms having the form of a hexaëdron, terminated by four or by six sided pyramids. These crystals, which possess remarkable beauty, are hard, offer considerable resistance to the pressure of the tooth, and have a cool, fresh taste, which is neither saline nor sweet. Taurine exerts no action on the vegetable colours; it is soluble in fifteen and a half times its weight of water at 12° C.; in boiling water it is dissolved more readily. Alcohol takes it up very sparingly. Sulphuric and nitric acids dissolve it, without causing its decomposition, even at the boiling point.

At 100° C., these crystals lose nothing of their weight. At a more elevated temperature, they become inflated and turn brown, giving out an odour similar to that of indigo when burnt. Subjected to dry distillation, taurine furnishes a thick, brown, empyreumatic oil; we, moreover, obtain a small quantity of an aqueous liquid, of a sweetish and empyreumatic taste, which reddens litmus-paper, and sets free ammonia when treated by lime. This liquid gives a red colour to perchloride of iron.

The ancient analyses of taurine had led to the formula:—$C^{8} H^{14} Az^{2} O^{10}$. But, M. Redtenbacher has recently found that this body contains 26 per cent. of sulphur. Combining this fact, therefore, with the analytical results of M. Demarçay, as well as those arrived at by myself, we find that taurine should be represented as follows:—$C^{8} H^{14} Az^{2} S^{2} O^{6}$.

Cholinic Acid (cholic acid of M. Demarçay; *cholsaüre* of MM. Theyer and Schlosser).—Choleïc acid is decomposed by the alkaline bases, as lime, baryta, strontia, oxide of lead, and even by its basic salts; these matters disengage from it nitrogen and hydrogen under the form of ammonia, and give birth to a new acid.

Cholinic acid was discovered by M. Demarçay. We must not confound it with the *chölanic* acid of M. Berzélius, nor with the *cholic* acid of M. L. Gmelin. To prepare it, we melt one part of bile with two or three parts of hydrate of potass in a silver capsule, frequently adding to it small quantities of water, until all disengagement of

ammonia shall have ceased. We remove the excess of potass by a further addition of water, dissolve the soap which is formed by an excess of this liquid, and then add to it acetic acid. The solution, clear at first, becomes milky, and by repose there is separated a resinous, friable body, of a greyish-white colour, which quickly acquires a crystalline aspect in the water. We remove the precipitate, wash and digest it in ether, which readily dissolves the cholinic acid; then add a little alcohol to the ethereal solution, and abandon it to spontaneous evaporation. The cholinic acid is deposited in large transparent tetrahedrons, or in fine needle-shaped crystals, which are to be purified and rendered colourless by renewed crystallization. In the air, these crystals lose their transparency; they are soluble in alcohol and in ether, but very sparingly so in water. The solutions decompose the carbonates with effervescence, and possess a bitter taste. Heated in the air, cholinic acid takes fire and leaves behind an abundant residue of carbon. It is not volatile, and it gives by dry distillation products which have not yet been examined. It forms with the alkalis soluble salts, some of a neutral and others of an acid reaction; when combined with other bases, the resulting salts are but slightly soluble: they do not offer any fixed arrangement.

The following is its composition:—

	Theyer and Schlosser.				Dumas.
Carbon ..	70·10	70·07	70·23	70·36	68·5
Hydrogen	9·79	9 85	9·77	9·74	9·7

These analyses lead to the formula: $C^{38} H^{66} O_9$, which expresses the composition of the hydrated acid.

Cholic Acid.—This acid, which was discovered by M. L. Gmelin, is prepared by dissolving the precipitate, resulting from the reaction of subacetate of lead on bile, in acetic acid, and then decomposing by sulphuretted hydrogen; the sulphuret of lead is to be separated, and the liquid evaporated to dryness. We thus obtain fine needles of cholic acid, which are to be purified by further crystallization. By treating the sulphuret of lead by alcohol, precipitating the solution by water so as to separate the resinous part, filtering and evaporating, we obtain a fresh quantity of crystals.

Purified cholic acid is presented under the form of long, pointed crystals, which, when compressed between folds of silver paper, acquire a silken aspect. Its taste is both sweet and astringent at the same time. When heated, it melts into a brown oleaginous liquid, swells up, disengages an animal odour which quickly becomes aromatic, and burns with a fuliginous flame. Subjected to dry distillation, it furnishes ammonia: a sign which renders it impossible to confound this body with the cholic acid of M. Demarçay.

Water dissolves it but very sparingly, though more freely when hot than when cold. It is perfectly soluble in alcohol. Concentrated sulphuric acid also dissolves it, but it is precipitated from this solution by water. Nitric acid attacks it and decomposes it.

Cholic acid forms soluble salts with the alkalis. The solutions of nitrate of silver, nitrate of mercury, sulphate of copper, the perchlorides of tin and of iron, and also the neutral acetate of lead, are not precipitated by the solution of cholic acid; the basic acetate of lead renders it slightly cloudy.

M. Berzélius has given the names of *fellanic* and *cholanic* to two acids, which he states to have found in putrified and ammoniacal bile, after its being kept for a long time. Cholanic acid appears to be identical with choloïdic acid. Fellanic acid forms with baryta a salt slightly soluble in water, when cold; but if dissolved in boiling water or alcohol, it deposits itself on cooling under the form of colourless shining prisms.

Biliary Concretions.—The concretions which are found in the gall-bladder of man are formed, in most cases, of cholesterine, generally pure, but sometimes mixed with mucus, or with the colouring matter of the bile in a hardened state. Some of these concretions have been found as big as a pigeon's egg. Where several of them exist at the same time, instead of possessing an ovoid figure, we find them flattened, and presenting the form of a polyedron. Their colour and consistence vary: some have a dirty yellow tint; others are nearly white, and offer a crystalline fracture; sometimes they are brown, or of a brownish green, breaking readily, and appearing as an amorphous powder to the naked eye. Their density varies, according to their composition; the lighter kinds are the richest in cholesterine.

The following are some analyses of biliary calculi:—

	Glaube.		Brande.	
Cholesterine	56	81·25	69·76	81·77
Biliary resin	8	3·12	5·60	3·83
Colouring matter ..	15	9·38	11·28	7·57
Coagulated albumen	9			
Mucus	12	6·25	13,20	—
Soluble albumen, mucus, and salts	—	—	—	3·63

Biliary calculi are, in some rare cases, formed of mineral matters. We sometimes find in them the carbonates of lime and of magnesia. MM. Bally and Henry, jun., examined a calculus which presented the following composition:—

Carbonate of lime, with traces of carbonate of magnesia	72·70
Phosphate of lime	13·51
Mucus, colouring matters, oxide of iron	10·81

A black matter, resembling carbon, has also been found in some biliary calculi.

Bile of Animals.—Those chemists who have turned their attention to the composition of the bile have, in general, chosen that of the ox as the medium of their investigations. In fact, the data which we possess as to the nature of this liquid have served as a starting-point to all the researches which have been undertaken on the bile of other animals; and they have been applied in an especial manner to the study of the human bile, which it is more difficult to procure in large quantities.

Annexed are two quantitative analyses of the bile of the ox, performed by MM. Thenard and Berzélius. According to M. Thenard, 800 parts of this bile contain—

Water	700·0
Picromel	69·0
Fatty matters, partly acidified	
Cholesterine (slight quantity)	15·0
Colouring matter (very little)	
Yellow matter, arising from altered mucus (variable quantity) ..	
Soda	10·3
Phosphate of soda	
Chlorides of potassium and sodium	
Sulphate of soda	
Phosphates of lime and magnesia, with traces of iron	1·2

According to M. Berzélius, the bile of the ox contains—

Water	904·4
Biliary (and fatty) matters ..	80·0
Mucus	3·0
Animal matter, and chloride of sodium	7·4
Lactate of soda	
Soda	4·1
Phosphates of soda and of lime ..	1·1
Trace of matter insoluble in alcohol	
	1000·0

The analyses which have been performed on the bile of other animals have mostly led to some qualitative data, but which are altogether insufficient for the actual state of science.

The bile of the dog has been analyzed by M. L. Gmelin; it is thick, sometimes of a deep yellowish-brown colour, at other times of a brownish-green. It contains biliary sugar, a little biliary resin, much colouring matter, cholesterine, some salivary matter, mucus, an odorous principle, acetate, phosphate, and sulphate of soda, chloride of sodium, phosphate of lime, with margarate and oleate of potass.

M. Kemp has recently performed some comparative analyses of the human bile with that of the ox, the tiger, and the leopard. The following are the results at which he has arrived:—

	Human bile.	Bile of the ox.	Bile of the tiger.	Bile of the leopard.
Soda...............	6·63	6·59	5·2	4·6
Chloride of sodium.	1·87	0·37	—	—

	Human bile.		Bile of the ox.		Bile of the tiger.	Bile of the leopard.	
	I.	II.	I.	II.		I.	II.
Carbon....	68 11	68·3	61·60	61·85	59 6	59 08	59·5
Hydrogen	10 13	10 0	9 62	9·10	11 8	9·19	10·0
Nitrogen.	3 44	3·0	3 40	3·40	6·0	4·60	4·6
Oxygen	18 03	18·2	23·38	23·35	22 6	26·11	25 9

These figures are seen to differ remarkably from those which express the composition of hydrated choleic acid. They were obtained by deducting from the weight of the bile analyzed that of the soda and of the other solid materials, and they consequently express the composition of an anhydrous acid. It is, therefore, not surprising that the carbon should here be found in larger proportion than in the analyses of choleic acid, made by MM. Demarçay, Dumas, Theyer, and Schlosser. Moreover, the experiments of M. Kemp were often performed on quantities of matter much too small to enable us to accord to all his analyses a full degree of confidence.

ORIGINAL CONTRIBUTIONS.

OBSERVATIONS ON THE ACTION OF MERCURY IN INFLAMMATION, AND ITS EFFECTS ON THE SYSTEM.

By HENRY SMITH, M.R.C.S.,
Late House-Surgeon to King's College Hospital.

(Continued from page 173.)

Having considered, in my last paper, those evil effects which are most liable to arise from the use of mercury, namely, excessive salivation and purging, I shall proceed to speak of its administration, mentioning those forms of inflammation in which it is most chiefly useful, and the mode and form in which it should be employed.

Knowing the great power which mercury possesses in controlling some forms of inflammation, medical practitioners are, perhaps, too much in the habit of giving it indiscriminately, without sufficiently considering the locality of the disease, its nature, or the constitution of the person affected; and it is this fact that has, no doubt, brought some discredit upon the remedy, without its having really deserved it.

Before we use any powerful remedy, we should consider the disease for which we are going to employ it, and the effects which it usually produces on the system; if we have clear notions on these points we shall probably go on in as safe and clear a manner as our "conjectural art" will allow us.

Recollecting, then, that there are some forms of inflammation in which the nutritive function is chiefly deranged, and the constituents of the blood are thrown out in their most organized state; and that mercury has the power of altering the blood and changing the quality of those constituents which are thrown out as morbid products, we should suppose it was chiefly in such forms of inflammation that mercury would do most good; and so we find it. It is in inflammation of the solid organs of the body, and of the serous and fibrous membranes which envelop them and line the cavities in which they are placed, that this agent is so powerful, and its effects are so well observed.

In inflammation of the membranes of the brain, after general and local bloodletting has been used, and the bowels have been well purged, mercury should be given in quick and large doses, in order to get the system rapidly affected, as we know how rapidly morbid products form then, and what injurious results may take place, even should the patient recover from the present attack.

We sometimes see cases where inflammation is

suddenly lighted up in the brain and its membranes by the poison of syphilis. It is particularly in such cases as these that mercury is found to be so highly serviceable. Although the practitioner may be inclined to dispense with mercury in inflammatory attacks of the brain or its membranes, brought on by common exciting causes, yet, if he finds that the poison of syphilis has produced it, he has no other remedy to depend upon.

The practice of giving mercury indiscriminately in paralysis from affection of the brain is injudicious, and must be attended with bad results. In some cases when inflammation has preceded the paralysis, and there are indications of the existence of inflammatory softening going on, it may be proper to get the system under the influence of mercury; but we should always recollect that paralysis from affection of the brain indicates a loss of nutrition in that organ, and that mercury will only tend to increase this, and thus rather render the condition of the patient more serious.

In inflammation within the chest, mercury is perhaps more useful and more employed than in other parts. Here are situated organs which, when attacked with inflammation, are, from their texture, soon spoiled if the disease is not checked, and speedy means are not resorted to. Mercury, therefore, is so valuable. In pneumonia, the morbid products are quickly thrown out; there is a great increase of fibrine in the blood, and this is deposited in large quantities in the structure of the lungs, rendering the part of them impervious to air, and, if a sufficient quantity of the breathing apparatus is thus injured, death will soon ensue. We want some remedy to prevent this deposition of fibrine. We have it in mercury. Bloodletting and tartar emetic diminish the whole quantity of blood in the system, and relieve the engorged state of the lungs, in the earlier stage of the affection. Mercury, speedily and carefully given so as to affect the system, immediately after the bloodletting, or the first two or three doses of antimony, so alters the condition of the blood that the inflammatory process is checked, the fibrine is not deposited from the vessels, or, if it has been poured out, reabsorption takes place, and the lung is restored to its healthy state.

In some forms of pneumonia, bloodletting, and even tartar emetic in large doses, are not borne. Calomel and opium in moderate doses will be found effectual, especially if any parts of the lung have become solidified.

I allude to those cases in which the disease is produced by, or accompanies, some specific poison, as typhus fever, measles, inflammation of the veins, and erysipelas; at the same time that mercury is given, stimulants may without danger be employed.

In pleurisy, mercury is more generally employed than in inflammation of the substance of the lung; as a large quantity of lymph and serum is generally thrown out from this serous membrane, and their prevention and removal are considered to be the chief indications in the treatment of this disease. If the medicine is given at all it should be given at once (that is to say, after bloodletting, if that be deemed necessary), as the abnormal products are deposited rapidly and in enormous quantities from the inflamed pleura; and it must be admitted by all who have seen cases of acute pleurisy which have been followed by large accumulations of fluid, that mercury will sometimes have no effect in causing the removal of these, even should the system be well influenced by it.

The same remarks may be applied with regard to the pericardium when attacked with inflammation. It is undoubtedly a useful remedy in such cases if given early, before much has been thrown out; but if the physician waits until adhesion is beginning to take place between the two surfaces, or a large quantity of fluid has collected, the remedy which, if timely applied, would have assisted to prevent the mischief, will fail of doing any good; and that this is actually the case, I need only appeal to any of my readers who have been in the habit of studying practical medicine in the right way, namely, by following his patient from the bedside to the dead-house: looking for the effects of his remedies not only in symptoms produced on the living body, but also in the signs which are presented to him after death. How often have they observed the sides of the pleura and pericardium joined together by recent lymph, their cavities filled with fluids, although the system may have been thoroughly brought under the influence of mercury!

If we look to the diseases in the abdomen, we again find that mercury is our most valuable therapeutical agent. The most formidable inflammatory attack man is exposed to is undoubtedly that in which the peritoneum is frequently involved: the extent of this membrane is so great that the most serious results are always to be anticipated; and the morbid products, as in pleurisy, are thrown out rapidly in large quantities, but particularly in that form of peritonitis to which puerperal women are liable. Mercury in these cases is our most useful agent. It was formerly the custom to employ general bloodletting to a large amount in these disorders; but it appears to be getting more out of fashion now, and practitioners mostly rely upon mercury and large doses of opium. The value of this combination cannot be too highly estimated in the treatment of these abdominal affections: the opium removes the pain and irritation, whilst the mercury prevents the deposition of lymph and serum by altering the condition of the blood. So much benefit results from this combination, that many persons are inclined to attribute the good to the opium alone, and to deny the principal power to the mercury. But it must be remembered that opium acts only upon one element engaged in the inflammatory process, namely, the nervous, and that it has very little power of controlling the disorder in the nutritive function; whilst mercury has no power over the former, but chiefly influences the latter. It would be folly to give the opium without the mercury, but a cruelty to give the mercury without the opium. Dr. Watson in his lecture on Peritonitis well says, "The opium is not to supersede the bleeding nor the mercury; it is not incompatible with either of these remedies; and it may, I believe, be most advantageously adopted in conjunction with them both."

There are many other inflammatory diseases in which the physician employs mercury, and which I have not mentioned; but before I leave the subject I must make a few remarks upon its use in the hands of the surgeon in one particular class of diseases, namely, in acute and chronic inflammation of the various joints.

When we come to consider the structure and functions of a joint; its great liability to inflammation, either traumatic or idiopathic; the rapid disorganization which ensues on such inflammation, if acute; and the more slow but not less certain spoliation, if chronic when we witness the lasting misery which is brought upon the poor sufferer from disease of particular joints, such as those of the hip or spine—we feel how necessary it is to use our utmost efforts to arrest the disease, and save the patient from the inglorious and unsatisfactory use of the knife, or from dragging on an unhappy existence; and, fortunately for our patients and our own reputation, conservative surgery is beginning to be generally cultivated, ay, even by those who pre-eminently shine in the use of the knife (as I can testify by the fact, that whilst conversing a short time ago, about a case of diseased joint, with one whose reputation needs no praise of mine, and whom I have many times assisted in the most severe and bloody operations of surgery, and whose coolness under the most embarrassing difficulties, and whose precision under favourable circumstances, I have so often admired; he made the remark, that "he hated to lose a limb"); and there is no doubt that many limbs, which would have been sacrificed a few years ago, can be saved by judicious treatment; and amongst the remedial measures, the employment of mercury stands prominent, and more particularly, perhaps, in the chronic than in the acute diseases of joints. In acute inflammation of a joint, occasioned perhaps by a blow or puncture, the pain is so intense, the disease runs on so rapidly, and suppuration is so quickly produced, that the surgeon chiefly trusts to local measures applied vigorously and without delay, and these will frequently accomplish the object he has in view; but at the same time, if the disease does not appear to yield to these measures alone, and suppuration has not taken place, the system may at the same time be affected with mercury; and this will be found to assist much in overcoming the disease, and, with other judicious remedies it may prevent chronic inflammation from becoming persistent.

But it is in those cases of chronic inflammation of the synovial membrane that mercury cautiously given, together with other remedies, is very serviceable; and when we come to consider the nature of the changes which take place in a joint from this disease, we can readily understand how mercury proves useful. There is an increased secretion of synovial fluid, and effusion of lymph, and finally the membrane becomes thickened from abnormal deposits. Mercury will prevent this from taking place, and assist in restoring the injured joint to its proper function. If the inflammation in the joint has been the result of rheumatism, this remedy will be more particularly serviceable, and, if given early and carefully, may prevent the disease running on to a worse condition, which doubtless sometimes occurs after rheumatism, namely, ulceration of cartilages, and suppuration.

In those cases where we suspect incipient disease of the cartilages, produced either by chronic inflammation of the synovial membrane, or of the cancellated structure of the bone, and when the system has not been much depressed, and the powers of nutrition are not altered, the symptoms will be found to be alleviated by a judicious employment of mercury, and, if other suitable measures are followed, a complete restoration of the joint may be effected; but if the destruction of the cartilage is extensive (as we can ascertain by the grating sensation, and the distress of the patient at night), and the constitution has suffered much, it will be advisable to lay aside mercury altogether. It is, perhaps, a question as to whether mercury should be employed at all in scrofulous affections of the joints. When we come to consider the nature and pathology of scrofula—that it is essentially a disease of nutrition, that the products of scrofulous inflammation are of a totally different nature from those of inflammation excited by common cause, indicating a depressed and depraved condition of the nutritive powers—and, on the other hand, when we think of the effects which mercury produces on the blood and nutritive system, we shall find no difficulty in coming to a conclusion that this powerful mineral must be bad, and that the practitioner who employs it for the purpose of getting rid of the products of, and stopping, scrofulous inflammation, is not justified in his practice either by reason or sound pathology.

But, although the specific effect of mercury is hurtful in scrofula, there is no reason why it should be thrown aside altogether. We know that it benefits the body, by correcting certain depraved states of nutrition, when it is given in small doses as an alterative; and, as scrofula stands at the head of these morbid conditions, we may conjecture that the remedy will be beneficial here, and so undoubtedly it is: by exciting the whole glandular system, which is that mostly affected in scrofula, it proves useful when not carried too far; for to use the words of Brodie, whilst speaking of scrofula, "mercury used in large doses is invariably prejudicial."

Before I leave this part of my subject, I must say a few words on the beneficial effect which mercury possesses in some diseases of the spinal column. In those forms of disease where there is extreme pain and tenderness over a portion of the spine, and where it has not existed for any length of time, so as to produce suppuration,

but the symptoms clearly indicate the existence of chronic inflammation of the bones, or incipient ulceration of the intervertebral substances, mercury may be employed with a very good prospect of curing the disease. The product of inflammation in these cases is a large effusion of lymph which, pressing upon the nervous chords as they emerge from their canals, produces either partial or total paralysis; and it is by preventing the too copious effusion of this substance that the benefit is produced; and even after palsy has existed there may be still a chance of a cure, as the mercury will cause the absorption of the lymph which has been already thrown out.

(To be continued.)

A NEW ARRANGEMENT OF THE BLOODVESSELS.

By JOHN JACKSON, Esq., Long Clawson, Melton Mowbray.

FIRST, OR HEPATIC VASCULAR SYSTEM.	SECOND, OR PULMONIC VASCULAR SYSTEM.	THIRD, OR SYSTEMIC VASCULAR SYSTEM.
1.—*Hepatic Afferent Vessel.*—The Spleen, that is, its Venous Portion, and the Splenic and Portal Vein, and its ramifications in the liver.	1.—*Pulmonic Afferent Vessel.*—The Right Auricle and Ventricle, and the Pulmonary Artery and its ramifications.	1.—*Systemic Afferent Vessel.*—The Left Auricle and Ventricle, and the Aorta and its ramifications.
2.—*Hepatic Capillaries.*—The minute bloodvessels intermediate between the terminal branches of the Hepatic Afferent Vessel, and the primary roots of the Hepatic Efferent Vessels.	2.—*Pulmonic Capillaries.*—The minute bloodvessels intermediate between the terminal branches of the Pulmonic Afferent Vessel, and the primary roots of the Pulmonic Efferent Vessels.	—*Systemic Capillaries.*—The minute bloodvessels intermediate (1), between the terminal branches of the splenic artery, and the primary roots of the Hepatic Afferent Vessel and (2), between the terminal branches of the hepatic artery, and the terminal branches of the Hepatic Afferent Vessel; and (3), between the terminal branches of the Systemic Afferent Vessel generally, and the primary roots of the Systemic Efferent Vessels.
3.—*Hepatic Efferent Vessels.*—The Hepatic Veins.	3.—*Pulmonic Efferent Vessels.*—The Pulmonary Veins.	3.—*Systemic Efferent Vessels.*—(1), the Gastro-Intestinal (or Mesenteric) Veins which terminate in the middle of the trunk of the Hepatic Afferent Vessel; and (2), the Superior and Inferior Venæ Cavæ and the Coronary Vein.

The Hepatic Afferent Vessel consists of a Spleen and Vein; the Pulmonic Afferent Vessel consists of a Heart and Artery; and the Systemic Afferent Vessel also consists of a Heart and Artery.

The Pulmonic Afferent Vessel causes a *constant* and *rapid* motion of the blood through the Pulmonic Capillaries; and the Systemic Afferent Vessel causes a *constant* and *rapid* motion of the blood through the Systemic Capillaries. *What kind of motion* of the blood does the Hepatic Afferent Vessel cause through the Hepatic Capillaries? It must cause some kind of motion. It can never be true that of the three Afferent Vessels two cause motion of blood and one not. Nor can it be true that an Afferent Vessel consisting of a Spleen and Vein can cause the same kind of motion of blood as an Afferent Vessel consisting of a Heart and Artery. If, then the Hepatic Afferent Vessel *does* propel the blood through the Hepatic Capillaries, and not, as is commonly supposed, the *Systemic* Afferent Vessel; and if it cannot cause either a *constant* or *rapid* motion, it must of necessity cause an *intermittent* and *slow* motion. The question, therefore, for physiologists to settle is, whether the Hepatic Afferent Vessel consisting of a Spleen and Vein is as perfectly adapted for effecting an intermittent and slow motion of the blood through the Hepatic Capillaries as either the Pulmonic or Systemic Afferent Vessel consisting of a Heart and Artery is for effecting a constant and rapid motion of the blood through the Pulmonic or Systemic Capillaries? If it is, the enigma is solved; and Heart and Spleen, and Artery and Vein, are *anatomical antitheses*.

But it may be said it is only the Venous Portion of the Spleen which is the roots or commencement of the Hepatic Afferent Vessel; what is the Splenic Artery for? And the Splenic Capillaries? The splenic artery, by dividing and subdividing, and ultimately splitting up into hair-like tubes or vessels, *forms* the splenic capillaries; and these splenic capillaries simply *furnish points of origin* for the roots of the Hepatic Afferent Vessel. These venous roots, the true spleen, could not originate from *nothing*; and, moreover, they could not originate from *anything else* than capillaries; and how could there be any splenic capillaries if there were no splenic artery? Venous roots only were wanted; but capillaries were necessary for them to originate from; and an artery was necessary out of which to make those capillaries. If there were no splenic artery there could be no splenic capillaries; no splenic capillaries, no splenic veins no splenic veins or spleen, no roots or commencement of the Hepatic Afferent Vessel; no roots or commencement, no trunk and no branches; no Hepatic Afferent Vessel, no Hepatic Vascular System; no Hepatic Vascular System, no Pulmonic Vascular System; no Pulmonic, no Systemic; no Vascular Systems, no motion of blood; no motion of blood, no life! See, then, the utility and importance of the splenic artery! From its capillary terminations springs the Hepatic Afferent Vessel, the first link in the great vascular chain! And why is it so large an artery? Because a large number of venous roots could not originate from a small number of capillaries, nor a large number of capillaries proceed from a small-sized artery. Why is it so tortuous? Why is not the splenic artery straight like the renal arteries? Because it is not the *blood* that is wanted, but the *bloodvessel;* and the tortuosity of the artery has the effect of minimising the quantity of blood that passes through it.

Intimately connected with the physiology of the Hepatic Afferent Vessel is the question, What becomes of the food eaten, and the fluids drunk, after they have been received by the alimentary tube? In other words, through what vessels, and into what vessel, do the fluids pass, and likewise the solids, after they have undergone fluidification or digestion? Are they both imbibed by the Gastro-Intestinal Capillaries, and then transmitted by the Gastro Intestinal Veins into the middle of the Hepatic Afferent Vessel? Or are they both imbibed by the lacteals and transmitted by the thoracic duct into the left subclavian vein? Or do the fluids drunk take the former course, and the solids eaten the latter?

If, before birth, the Vessel which conveys the materials of nourishment and growth to the fœtus, the Umbilical Vein, instead of going to the liver and terminating in the Hepatic Capillaries, like the *permanent* Hepatic Afferent Vessel, had gone behind the liver, and, like the thoracic duct, running along the spine, had ultimately terminated in the left subclavian vein; and if, in addition to this, the thoracic duct of the adult, instead of being so much less, had been very considerably larger, than the umbilical vein of the fœtus, I would not then presume to call in question the truth of the prevailing opinion, that, after birth, the lacteals and thoracic duct convey the materials of nourishment and growth from the alimentary tube into the left subclavian vein. But, as such is not the anatomical disposition of the umbilical vein and thoracic duct, I venture to take a totally different view. I maintain that the *fluids* drunk, and the *solids* eaten,(a) are both imbibed—the former rapidly, and the latter slowly—and not until they have become fluidified by the Gastro-Intestinal Capillaries; that they then pass through the Gastro-Intestinal Veins into the middle of the Hepatic Afferent Vessel; and that this vessel, being contractile as well as distensible throughout (*i.e.*, in its roots, trunk, and branches), propels them with an intermittent and slow motion through the Hepatic Capillaries. I hold, therefore, that the materials of which the blood is formed, or, as I may now say, the blood itself, passes *first* through the Hepatic System; *secondly*, through the Pulmonic System; and *thirdly*, through the Systemic System. From the Systemic System a small portion finds its way back again into the Hepatic Afferent Vessel—that is, into its extreme roots by the splenic artery, into its extreme branches by the hepatic artery, and into the middle of its trunk by the gastro-intestinal veins; but by far the larger portion passes by the superior and inferior cavæ again into the Pulmonic Afferent Vessel, and so through the Pulmonic and Systemic Systems alternately, and for an indefinite number of times; that is, until its component particles are either deposited in some tissue, or eliminated in some secretion.

(a) These remarks, of course, apply to *medicinal* as well as to *alimentary* fluids and solids.

CASE OF SYPHILITIC INFLAMMATION OF THE UPPER EYELID—TOTAL DESTRUCTION OF THE TARSAL CARTILAGE BY ULCERATION.

By H. EVANS, Esq., Pwllheli, North Wales.

HISTORY.—An unmarried man, aged forty, had a foul ulcer, with inflamed elevated edges, along the lower margin of the right eyelid; the lid itself was very œdematous; the eyeball and its tissues undisturbed. It was then more than three months since its commencement; it began to show itself as a hard round swelling; he could not attribute it to any cause except having slept one night with the bedroom window open. He placed himself under the care of a surgeon, who scarified the palpebral conjunctiva, considering the case to be inflammation of the latter membrane. He was severely purged; and, not improving, the œdematous lid was leeched, and the temple cupped, and for some time took vegetable and mercurial tonics, being permitted also to have generous diet. No improvement taking place, he was ordered two grains of calomel with half a grain of opium, twice a day, and to persist in this treatment until the system was fully brought under its influence; to live well, and, in order to be able to form a better opinion of the effects of the mercurial treatment, to have no other local applications to the ulcer than water-dressing. The mercury was continued for six days, when profuse salivation was produced under this treatment: the burning pain, which he so much complained of, in the ulcer entirely left him, and the ulcer itself, instead of presenting the inflamed, raised, chapped margins described, presented characters totally different, so much so that, in three weeks from the date of his application, he was fit to follow his work as a joiner.

REMARKS.—The external characters of the ulcer, its suspicious situation, the man's age, and his previous dissipated habits—having been numberless times affected with syphilis, from which he never had been properly cured; the least exposure to wet and cold laying him up with pains in the bones, &c.; added to this, the knowledge of the fact that the general and local treatment to which he had been first submitted proving injurious rather than beneficial—left little if any doubt about the real nature of the complaint.

STRICTURE IN THE URETHRA.

There are circumstances which occur in stricture of the urethra from accident not mentioned by Sir B. Brodie, nor am I aware preceding authors having noticed them, viz., a flaccid state of the urethra anterior and posterior to the stricture, the anterior yelding upon slight pressure, forming a fold, carrying the bougie or sound, as it were, upon or over the stricture. The first case which came under my notice was in 1836, viz., James Abrey, aged twenty years, a seaman belonging to Sunderland, when in that harbour, fell from aloft and injured the perineum; he was attended by Mr. Crisp and a physician, at the time. After a few days, his ship being ready for sea, he was deemed sufficiently recovered to proceed in her. At this period there existed but slight difficulty in passing urine; this, however, daily increased, and when the ship arrived at her destination, St. Petersburg, after a passage of twenty-nine days, complete retention had taken place; he had not been able to void a drop of water for several hours. On his admission into hospital the bladder was distended above the pubes, and the slightest pressure caused increased agony; by bleeding, hot baths, leeches, opiates, &c., he was relieved of the urgent symptoms for a time, but no instrument could be made to dilate the stricture; and, after suffering nearly three months, passing much of his time upon his elbows and knees, straining to expel the contents of his bladder, it was considered advisable to cut through the stricture. The first steps as for lithotomy were proceeded with and, on bringing the urethra into view, the strictured part was obscured by the urethra above being greatly dilated, forming a pouch, protruding downwards and forwards, covering the stricture.—The second was John Klein, belonging to a Boston ship, U. S., who fell at sea, striking the perineum across the rigging; he was received into hospital thirty-four days after the accident, with hœmatocele and difficulty in voiding his urine; the hæmatocele was cured, and large bougies could be passed down to the obstruction, but, upon moderate pressure, the urethra was doubled over the stricture, whichever way the point was directed. This case progressed at the last, and was operated upon ere the patient had endured the severe and lengthened sufferings related in the first case. They both succeeded in every respect; but the pouch above the stricture in the latter was not larger than an acorn. The operation was not free from difficulty: in the first case the stricture was covered by the dilated urethra from above, which might have been, in some measure, obviated by a puncture, and letting out its contents; but the object was to effect a cure, and it was considered that a wound in the urethra so much enlarged would leave a troublesome, if not an incurable fistula: this was pushed backwards and upwards, and the stricture, which was of cartilaginous firmness, divided. In effecting this part of the operation, the most difficulty was experienced, and one not anticipated: from the commencement of the latter section the sound was useless, the fingers holding back the sac greatly obscured the sight, and when the hardened urethra was pressed upon by the knife, there was nothing to keep it from moving about in its connecting cellular membrane; this mobility caused nearly as much difficulty in the second case, and requires due consideration.

R. Southee.

Cambridge, Jan., 1847.

War-office, April 30.—2nd Regiment of Life Guards: Surgeon Abraham James Nisbet Connel, M.D., from half-pay 88th Foot, to be Surgeon, vice Calder, deceased.—To be Surgeon: Staff-Surgeon of the Second Class John Forrest, M.D., vice Hadaway, who exchanges.—Hospital Staff: Surgeon Samuel Maitland Hadaway, from 91st Foot, to be Staff-Surgeon of Second Class, vice Forrest, who exchanges.

PROGRESS OF MEDICAL SCIENCE.

France.

ACADEMY OF MEDICINE.

Meeting of April 20; M. Begin in the Chair.

Inflammation of Fibrous Structures, by Professor Gerdy.

The essayist began with remarking that in another publication he had already pointed out the close analogy which unites white tissues in general—such as the fibrous, cellular, synovial, and cutaneous structures. The influence of inflammation upon these structures was to indurate and shorten them; and this was the real cause of what was erroneously called muscular retraction, and more erroneously still treated always by tenotomy. Three cases were brought forward in support of this view. The first was one of contraction of the forearm, consequent upon diffused phlegmonous inflammation of the extremity; the skin was nowhere perforated, but its internal surface was ulcerated, and the dermis was reduced to a singular degree of thinness. The patient died from the progress of the acute disorder, and on dissection the anatomical cause of the contraction of the forearm was found to consist in the condensation of the cellular tissue, and the induration of the fibrous muscular attachments around the joint. The second case was one in which chronic inflammation of the knee-joint, complicated with caries of the tibia, had gradually brought on retraction of the limb. The synovial membrane and its fibrous lining, the cellular tissue of the neighbourhood, were thickened and indurated, without any alteration of the fleshy part of the muscles. In the third case, the cellular and fibrous textures of the temporal region had occasioned a considerable degree of stiffness in the movements of the jaw, and yielded to the beneficial application of poultices. These cases, said M. Gerdy, proved the hitherto-received opinion on the mechanical cause of contractions to be erroneous. Some years since, no surgeon attempted, for instance, to explain deviations of the spine—of club-foot, by the shortening of indurated fibrous tissue. When the question of tenotomy was agitated in 1842, before the academy, M. Gerdy alone defended this opinion; whereas it was generally contended that the cause of retraction was to found in the fleshy parts of the muscles, and was most properly to be combated by section of their tendons. It was for this reason that in 1845 the essayist had read a paper on the retractions of white tissues, consequent upon inflammatory symptoms. This mechanism was the same in the strictures of the natural orifices and canals of the body, as it might be proved by reference to the anatomical alterations of strictures of the vagina, rectum, or urethra. It was true that in these parts another cause of retraction was also observed: M. Gerdy alluded to the deposition of morbid secretions around the diseased organs.

M. Bouvier agreed with all the opinions brought forward by Professor Gerdy except one: in the case of contraction of the knee-joint, M. Gerdy had said that the fleshy part of the muscles presented no modification of texture. Now, this was the case in every instance of retraction; it was absolutely impossible, on dissection, to detect in the muscles any anatomical appearances characteristic of the affection which had existed during life.

M. Blandin observed that the facts related by M. Gerdy fully demonstrated what it had been his intention to establish—namely, that the disease of fibrous textures might bring on deformation of the joints; but they went no further. They did not prove that prolonged muscular contraction could not have the same result. This state of things was not forcibly accompanied by a change of texture of the fleshy part of the muscles, but merely implied a diminution of their length—in a word, the disease was constituted by shortening, not by degenerescence.

M. Gerdy insisted upon the frequency of anatomical changes in the fleshy portion of muscles affected in this manner; he did not absolutely deny the existence of deformations caused by prolonged muscular contraction, but he asserted that they were very uncommon, and that generally their nature remained enveloped in considerable obscurity.—Meeting adjourned at five.

ACADEMY OF SCIENCES.

Annual Meeting of April 26.

M. Flourens read an historical *éloge* of Blumenbach, one of the eight foreign associates of the academy.

Distribution of Prizes.

Experimental Physiology.—Gold medal, value £35, Mr. Bernard.

Physical Sciences.—M. Papenheim and Vogt.

Development of the Fœtus—MM. Baudrimont and Martin St. Ange.

Insalubrious Arts.—M. Laignel, £100.

Surgery.—£80 to M. Guillon, for the invention of a Lithoclast; £60 to M. Lucien Boyer, Researches on Strabismus.

Medicine—£60 to Dr. Briere à Boismont, for his Mémoir on the Treatment of the Acute Delirium observed in Asylums for Insanity; £20 to Dr. M. Lavallée, for a Paper on Cystitis caused by the Absorption of Cantharides; £20 to Dr. Maisonneau, for his Experiments on Intestinal Inosculation.

HOPITAL BEAUJON.

Case 1.—A workman was accidentally struck in the region of the sacrum with a hammer, and was immediately brought to the hospital. Abundant hemorrhage had taken place from the urethra; the blood was of a bright scarlet colour, and escaped in an intermittent stream, as if an artery had been divided. Compression of the perineum was unsuccessful in arresting the loss of blood, but the introduction of a catheter into the urethra at once stopped the hemorrhage. After five days the instrument was removed, and the hemorrhage recurred with the same violence as before. Again the introduction of a large catheter was resorted to; it has now been retained sixteen days, and the accidents have not reappeared.

Case 2.—We recorded in a former communication (see page 97 of the present volume) a case presented to the Academy of Medicine by M. Hutin, surgeon of the Invalides, in which destruction of olfaction and of taste had been the result of adhesions of the soft palate to the posterior part of the pharynx. It was supposed by M. Hutin that the restoration of these two senses might follow the removal of these adhesions. A precisely similar case was recently admitted into the hospital by M. Robat, and the operation performed has produced the desired effect: olfaction and taste have returned, but the latter only imperfectly.

D. M'Carthy, D.M.P.

EXTRACT OF A LECTURE ON PUNISHMENTS,

Delivered to the Students of Military Surgery in the University of Edinburgh.

By Sir GEORGE BALLINGALL,
Regius Professor of Military Surgery.

There are general sentiments which I have expressed in this place for some years, upon corporal punishment, as regards the surgeon's duty in superintending its infliction, and in treating its consequences. If, upon the present occasion, I am induced to add anything of a more particular or personal character, it is from a desire to state fully and unequivocally the result of my individual experience as bearing upon a case which has recently been the subject of deep interest both to the profession and to the public. I allude to the case of Frederick White, of the 7th Hussars, who died, having been subjected to corporal punishment. Upon the medical evidence I was induced to offer some remarks which called forth a reply from Mr. Erasmus Wilson. My opinion as to the soldier's death

is given in the following words:—"I can only look upon this as a case of thoracic inflammation, *supervening from atmospheric changes*, in the case of an individual who had recently been subjected to corporal punishment; except in so far that I hold every man who may have undergone such punishment, *and who may in consequence be confined to hospital*, to be in a condition which renders him more than usually susceptible of morbid influences, and particularly of those arising from atmospheric causes."

Here Mr. Wilson seems to think I have made an admission that this man's death was distinctly the consequence of his punishment. But observe, gentlemen, the words upon which I have laid an emphasis, and which I shall take the liberty of printing in italics. Observe also that a man is not of necessity confined to hospital because he may have undergone a slight punishment, not even such a punishment as that inflicted upon the soldier White; and which, in former times, would have been considered a moderate one. It is the assumed connection between punishment and pleurisy which I am disposed to question. It were altogether unfair to take Mr. Wilson's evidence as given in the newspaper reports, or to say how far some of the expressions put into his mouth countenance the parallel which has been drawn between the effects of burns and of corporal punishment; but he is well aware of the relation which exists "between the skin and the internal organs," and how much this relation has been dwelt upon, as explaining the fatal result in the present case. Mr. Wilson's own explanation of this result is distinctly given in the following words:—"The pulpy condition of the muscles existing in close relation with the pleura, was the real cause of the pleuritis which was found on that side of the chest."

Now, it is the immediate connection of the fatal pleuritis, either with the state of the skin or with the state of the muscles, which, in my opinion, remains to be proved. If this is not the professional question at issue, I should be glad to know what that question is. And why this persevering attempt to ascribe to a peculiar—I had almost said a nondescript—state of the muscles of the back, those morbid appearances within the thorax, which are abundantly common where no such cause can exist? The concatenation of extraneous or accessory circumstances in this case—the soldier's trial, his punishment, his reception into the regimental hospital, the healing of his back, his subsequent death, and repeated dissections—have never been denied.

Mr. Wilson then places me hypothetically before the coroner, and, after having delivered my opinion as formerly expressed, supposes the following question to have been asked of me:—"If the deceased had not been flogged, would he in your opinion have been alive at the present time?" To this I should at once have answered, "I can give no opinion on the subject. I cannot tell." A coroner's inquest is to me by no means so novel a scene as may be supposed. I have been repeatedly a witness before that officer, and have never met with anything in the least degree puzzling or unpleasant; which I attribute to my having uniformly adhered to the following simple rules: to make my answers as brief and concise as possible; to avoid any "medical dissertations on the relative dependencies of predisposing, exciting, or proximate causes;" to abide rigidly by the dictates of "common sense," and to eschew all professional refinements into which it were impossible for a jury to follow me.

Mr. Wilson, in the course of his reply, enters again upon ground over which I have already professed my inability to follow him—the softening of the muscular tissue, analogous to the softening (ramollissement) of the brain. The latter is an affection with which we are all familiar; the former is to me altogether unknown. I have no inclination and no title to deny its existence, but I am entitled to say that after a period of upwards of forty years' service in hospitals, civil and military, I have never seen, and, until within these few months, never heard of, such a morbid affection. I regret that the knowledge of such a degeneration of the muscular tissue has come upon me at a late period of life, when many valuable opportunities of investigating its nature have passed away; and when the state of my eyesight, independently of other considerations, renders it now impossible for me to pursue with any advantage the "slim unravellings of minute anatomy." I have repeatedly seen the superficial muscles of the back twittering under the lash, and I know something of the rupture of the long muscles of the extremities; but I have a difficulty in conceiving how a muscle like the multifidus spinæ, peculiar in its structure, thickly covered by the superincumbent parts, and limited in its range of action, should be so powerfully affected as to lead to its rupture and subsequent degeneration. And here an important practical question presents itself. In cases of severe contusion it is not unfrequent for suppuration, and even sloughing, to go on in deep-seated parts, while the texture of the skin remains unbroken. But in a complicated injury of the superficial parts like that from flogging, consisting of laceration, contusion, and extravasation of blood, is it usual, *or is it known*, that such superficial parts recover themselves, and that this recovery goes on to a complete cicatrization of the skin, while such a morbid process as that described by Mr. Wilson is going on below?

In opposition to my opinion of the infrequent connection of corporal punishment, *as inflicted in our army*, with inflammation of the thorax, and in reply to my repeated demand for evidence of such connection, I am referred to the testimony of Lord Hardinge, the present Governor-General of India; to that of Kirckhoff, formerly a physician in the army of the Netherlands; and to the memorable case of Sergeant Armstrong, as supporting Mr. Wilson's belief "that diseases of the thoracic viscera are far from being an uncommon result of corporal punishment." It so happens that there is not a man in the British army, from right to left, for whom I entertain a more sincere respect than for Lord Hardinge, but upon a matter of professional opinion I shall not be expected to yield my judgment even to the matured experience of his lordship. But is Lord Hardinge's evidence upon this subject fully and fairly represented? I have looked over the "Blue Book" containing the "Report of the Commissioners for inquiring into the System of Military Punishments in the Army," and there I find the following questions submitted to Mayor-General Sir Henry Hardinge, with the replies respectively annexed to them:—

"5656. Are you at all acquainted with the discipline of any of the other armies of Europe, from having served with them?

"No, except of the Portuguese army, of which I was the Deputy Quarter-Master-General from 1809 to 1813.

"5657. In the Portuguese army there are very severe punishments by strokes of the sword?

"Having commanded five battalions of Portuguese in the Pyrenees, the result of my observation is, that the soldier, from his nature and character, is not so difficult to manage as the British soldier, and principally because he is much more sober than the British soldier; he has less personal resolution to resist authority; more submission from his previous habits as a peasant. Punishment was inflicted by a corporal seizing the culprit, and striking him with the flat of the sword upon the back. It was necessary to be done with the utmost caution, for it shook the chest so severely that sometimes consumption and lingering complaints were the consequence.

"5658. It did not leave any mark?

"No, it bruised the body, and frequently led to spitting of blood and very serious complaints; and it was not calculated to have the same effect of deterring from crime that our system has, because being given with the clothes on, and the man not appearing to suffer much from it, if he had the resolution to conceal his suffering, which many firm men have, it had not the effect which our punishment has of deterring by the appearance of a more severe punishment."

Here it will be observed that Lord Hardinge is contrasting, morally and physically, two punishments of a very different description—that of the forcible blows with the flat of the sabre, as practised in the continental armies, with the cat-o'nine-tails as employed in our own. It is of the former alone that the spitting of blood is said to be an occasional consequence; and this is an event which I confidently affirm that I have never observed as a sequel of the most severe punishments as inflicted in our service.

For the authority of Kirckhoff, to whom I had occasion to refer in the introductory part of the course, you are aware that I entertain all possible respect when treating of subjects with which he is personally conversant. He speaks of the "coup de baton" as productive of hæmoptysis; but in reference to corporal punishments, *as inflicted in our army*, his authority must go for very little. Upon the latter subject he could have had little if any experience, infinitely less than what Lord Hardinge has had of the "coup de plat de sabre;" and no one who has had an opportunity of seeing the two punishments inflicted will, for a moment, look upon them as likely to be productive of the same results.

Of the case of Sergeant Armstrong, whose life was sacrificed to the violence of his commanding officer, Governor Wall, I am not at the present moment in possession of any perfect detail. He is said to have passed blood constantly after his punishment, both by urine and by stool; and the surgeon stated also *that he had an asthma from the extraordinary absorption of the blood*. It is altogether unnecessary for my present purpose to inquire how far "the flogging occasioned *disease of his lungs*," as stated by Mr. Wilson, because, if my memory serves me, Sergeant Armstrong was said to have been punished with *a rope an inch in diameter*. If this is correctly stated, it will be seen at once how completely it takes the case out of the category of punishments as usually inflicted in the British service, and how far it assimilates this case to those punishments spoken of by Lord Hardinge and by Kirckhoff.

I have now disposed of all the evidence adduced in support of Mr. Wilson's position; and of the several analogies brought forward in illustration of the views of those from whom I differ as to the nature of White's case, it will be observed that there is not one of them which I can admit. The parallel between burns and flogging I stated, in my former paper, to have been, in my opinion, "pushed much to far;" the parallel between the ramollissement of the brain and a correspondent state of the muscular tissue is a point upon which I am unable to speak; and anything like a parallel between the punishment with the flat of the sabre, or with "a rope an inch in diameter" and the cat-o'nine-tails, I altogether deny.

I come next to what was the principal object of my former communication, and what now becomes to me the most important object of this, the statement of my personal experience. Upon this, Mr. Wilson observes, "Sir George Ballingall's assertion, that in the two hundred cases above referred to there had not been any prominent or dangerous symptoms of thoracic inflammation, is most disagreeably qualified by the adjectives prominent and dangerous." Now, I beg to assure Mr. Wilson that in making the above statement, I had no equivocation nor mental reservation in view, and that I had studiously and purposely understated both the extent and the result of my experience, as bearing on the question at issue. Mr. Wilson goes on to ask, "What was the proportion of thoracic disease of whatever kind? For what period after punishment were these men observed? Might they not, months after, nay, perhaps years, have languished with disease of the thoracic viscera, the seeds of which had been sown by the punishment to which they had been subjected?"

These are most proper, most pertinent, and most legitimate questions; and it is to me a source of regret that I am unable to give a more direct and specific answer. I can only state generally that I have served in four different battalions, and in three different quarters of the world. I was painfully reminded by an old brother officer, a few days ago, that there can be but few men living who have seen more corporal punishment than I have, or under a greater variety of circumstances. I have seen such punishments inflicted, both at sea and on shore, in the field and in quarters, in the cold of a severe English winter, and under the heat of a tropical sun. I have seen them inflicted by the powerful arm of a boatswain's mate, and by the tiny hand of a puny drummer, the number of lashes varying from one dozen with the heavy naval cat to six hundred with the less formidable instrument used in the army; both of which are now in your hands. And, in reply to Mr Wilson's questions, I can only say that in all this variety of circumstances, I have not only seen no "prominent or dangerous symptoms of thoracic inflammation," but, so far as my recollection serves me, I have seen no such symptoms whatever. I say this with all the increased confidence which further reflection gives me; and I repeat that in no case under my own care has there been a direct or obvious connection between punishment and pleurisy or carditis. There was no such connection as to induce any soldier to attribute the occurrence of such diseases to a preceding punishment, so long as I remained in the regiment with him.

The mode of dressing punished men's backs, in this and other cold climates, during the war—a practice still in use—appears to me a very powerful argument against anything like a general or frequent connection between punishment and pleurisy. This dressing consisted of a solution of the acetate of lead, with which the contused or broken surface was kept continually wet, by means of a pledget of cloth or charpie soaked in the solution; the patient's body linen, his sheets and bedding, being not unfrequently imbued with moisture; and this at all periods of the year.

In a matter of this grave importance, upon which I have expressed myself so strongly, it is a great comfort to know that my experience is by no means singular or isolated. I have looked into all the cases mentioned in Mr. Marshall's recent work on military punishments. I have looked into those detailed in "Hamilton's Regimental Surgeon," into a few that are noticed in the periodicals, medical or military, and into some manuscript cases in my own possession; and, singular as it may be, it does not appear in any of those cases that life was either lost or endangered from the supervention of acute thoracic disease.

I have also been favoured in the course of the bygone winter with a voluntary and unsolicited statement of the experience of five medical officers of long standing in the public service, three of them holding the rank of inspectors of hospitals, and all assuring me that their observation is coincident with my own. The dangers have been, as formerly stated, from "profuse suppuration, sloughing, or hospital gangrene;" or, as Mr. Marshall has expressed it, "fever and sloughing of the back are the consequences of flogging most to be dreaded."

Fatal cases of acute inflammation within the chest from atmospheric changes (and to which men depressed and debilitated by confinement to hospital are particularly obnoxious) are, in this country, cases of every-day occurrence; while, on the other hand, I trust I have been able to show that such complaints as a consequence of punishment are, in our service, exceedingly rare, if not altogether unknown. That White's case was an example of the more frequent, not of the more rare, occurrence, I am firmly persuaded; and I am bound to conclude that the only one of the five medical gentlemen examined in the case who entertains an opposite opinion is equally sincere in his belief. Had any doubt existed in his mind, I must presume that he would have given to the surgeon more immediately concerned the benefit of that doubt. That he would have been slow to lend the weight of his testimony to the support of those who had evidently prejudged the question, while, on the other hand, that testimony was calculated to injure the character of a professional brother, to impair his usefulness, to expose him to public odium, and to destroy his peace of mind.

I would, gentlemen, most willingly forego the necessity of coming again before the public, in reference to the case upon which I have just been commenting. For professional controversies I have ever entertained but little respect, and the tardiness of my reply upon the present occasion will, I trust, be admitted as some indication of the little taste I have for what frequently proves a most unprofitable waste of time. There are circumstances also in the present case which render any protracted discussion of it to me more than ordinarily disagreeable. I have found from experience, that it is difficult, in the eyes of many, to controvert the professional opinions of the coroner and Mr. Wilson, without being at the same time supposed to counteract their praiseworthy object.

Upon the propriety of abolishing corporal punishment in the army and navy I have never permitted myself to enlarge in this place, being of opinion that it is a question not within my province; but I have elsewhere stated, many years ago, the result of my professional experience as to the unequal operation of this punishment on different individuals; and I have stated a fact which ought never to be absent from your recollection—that those who most deserve this punishment are often the least able to bear it. Trusting then to these statements for the vindication of my humanity, I go on to observe, that if I can hope to be of any use to you, it is by the accuracy of the professional opinions which I may deliver from this chair, and by being always prepared to defend them. I feel, at the same time, that I am not entitled to take advantage of my position here, to say anything to you which I am not prepared to say to the public. It is not then in the spirit of controversy, nor is it for the purpose of qualifying or retracting one syllable of my former statement, that I again resort to the press. No, gentlemen, it is from a desire to repel something like an insinuation of *mala fides* that I have been thus prolix and thus egotistical. If there is anything for which I have obtained or desired to obtain credit, in my intercourse with my pupils, it is for a candid statement of the results of my experience, and I am not willing to forego any character I may possess in this respect, now that I am looking forward to the termination of my professional life.

Incision of the Os Uteri in Obstructive Dysmenorrhœa.—Dr. Simpson has been in the habit, for the last three or four years, of performing this operation in cases of obstructive dysmenorrhœa. He thinks that the sufferings in this complaint arise from the uterus being driven into contractions to expel *retained* menstrual secretions, and that the retention arises from a want of relation between the quantity of fluid secreted and the quantity allowed to escape. The instrument which the doctor uses is a kind of lithotome caché. The end of the instrument is passed up through the cavity of the cervix, and within the os externum. It is then slightly opened laterally, first on one side and then on the other, so as to divide any fibres that may be causing constriction of the internal orifice. The principal incision is then made in withdrawing the instrument. This incision commences at the union of the cervix with the body of the uterus, and passing gradually more and more into the substance of the cervix as it descends, the blade is brought out at the outer and lower edge of the cervix, at the point of reflection of the mucous membrane upon the wall of the vagina. The instrument is then turned, and a similar cut made on the other side. Care must be taken that it does not pass beyond the substance of the cervix, as it is closely surrounded by a plexus of veins. The operation causes but little pain, and the hemorrhage is usually very trifling. If there is a tendency in the lips of the wound to cohere, they must be touched two or three times with nitrate of silver.

Ringworm treated by the Application of Blisters.—Dr. Maclaglan has found that this troublesome disease, when it exists on the scalp in one or two detached spots, or when it appears on the face, neck, or arms, may, if taken in time, generally be cured in a few days, and prevented from spreading, by blistering the surface thoroughly, and dressing the blisters with cotton. The blister must be a little larger than the affected spot, and it will be found to be more manageable than the caustics frequently used.

Mode of detecting Sugar in the Urine.—In the hospital wards of Paris the following method is adopted:—Place in a small tube two drachms of urine, add half the quantity of liq. potassæ, and boil for one or two minutes. If the urine contain sugar, it will assume an orange brown or lustre tint. If there be no sugar present, it will become paler on ebullition. All that is necessary for this operation is a small tube, a little bottle containing potash, and a spirit-lamp.

Typhoid Fever.—M. Rayer has used tepid baths daily with considerable success in the treatment of this disease. The pulse loses its frequency, the heat diminishes, the tongue becomes cleaner, and the head feels clear under this treatment.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct from the Office of the Medical Times *to Annual Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.*

A HANDSOME PORTFOLIO *for holding the* "MEDICAL TIMES" *—very desirable to those who would keep the numbers clean for binding, and easy of reference—may be had, by order of any Bookseller, or at the Office, price 5s. An allowance is made to the trade.*

Ignoramus. *—To apply a bandage well requires practice; and patients judge of the skill of their medical attendants by their dexterity in little things.*

Mr. Horace Wells, of Hartford, U.S., *has forwarded to us a pamphlet, addressed to the European and American public, in which he brings forth many documents, signed by most respectable individuals, professional and non-professional, to show that in November,* 1844*—nearly two years before Drs. Jackson and Morton—he had used and had made known the effects of nitrous oxide gas, and ether, in rendering persons insensible to pain.*

L. A. C., Stroud.*—A licentiate of the Apothecaries' Company will be admitted to examination for the diploma of a licentiate of the Royal College of Physicians, London, when he is forty years of age, and having been in practice a certain time.*

J. Turnbull*—The suggestion shall receive our best consideration.*

Caustic *is too strong for our pages.*

Mr. Goulding's *letter did not reach us. We cannot account for the cause.*

The indignation of an Old Surgeon *is just. He need have no fears about the bill.*

Rusticus *may use the article in question in any way he please. Its publication may be of use.*

Permissus extra Urbem.*—The College is in a quandary. It is likely the rulers will offer no very determined opposition to the new charter of incorporation of general practitioners, from a desire to get something themselves.*

A Reporter *is requested to communicate his name* in strict confidence.

Senax *and an* Army Surgeon, *on the recent application of Dr. Warren, have been received and are under consideration. We cannot publish the letter of* "Vindicator" *on the same subject, without entering ourselves on the merits of the whole matter—a task we are not desirous of seeking.*

M. D. *is informed that we shall early give attention to the facts he forwards.*

A General Practitioner near Manchester *says*—"*I regret there is not a medical agent for you Manchester; I am sure one there would make an excellent thing of it. If a communication is made in your valuable periodical it may be a means of bringing some one.*

M.D., M.R.C.S.E., Ashton-under-Line.—*The articles you name being charged in a bill may, we think, be recovered by action at law.*

The Rev. Charles Chambers, Amport Vicarage, Andover.—*The lectures are not yet published, but will be very shortly. The request shall be attended to.*

Dr. Barker's *case has been received.*

T. E. Jamieson.—*A five years' apprenticeship cannot at present be dispensed with if the license of the Company is afterwards to be obtained.*

Inquirer.—*The Poor-Law Commissioners can put a veto on the election of a surgeon by a board of guardians if he does not possess the double qualification.*

Justitia *very justly complains of the many defects in the bill. Nobody imagines that it has been introduced into the house with a view to passing. Parties are wide awake.*

A. B. C. *informs us that No. 277 in the exhibition of the Royal Academy is no other than Professor Holloway. The picture must be well worth seeing.*

E. A., Bury, *can obtain every information in the Army or Navy Lists.*

Mr. H. B. Norman.—*The account of the testimonial lately presented to Dr. Taylor, late professor of clinical medicine in University College, has been received, and will be noticed next week.*

We have received communications and letters from Mr. Doyle, Liverpool; Dr. Roe, Cavan; Mr. Brownlow, Banbridge; Dr. Curran, Dublin; Dr. Vallack, Ventnor; Mr. Cass, Cowes; Mr Rutherford, Rothberry; Mr. Boulton, Usk; Mr. Hay, Portsmouth; Mr. Fallon, Liverpool; Mr. Broughton, Ruyton; Mr. Cartwright, Teignmouth; Mr. Foster, Todmorden; Dr. Minchin, Dublin; Dr. Price, Waterford; Dr. Seward, Cahirconlish, Mr. Dalley, Markfields; Mr. Hopper, Rotherham; Mr. Smith, Belper; Mr. J. H. Smith; Mr. Evans, Pwllheli, North Wales; A Constant Reader; A Candidate, Grosvenor-square, Manchester; Mr. Chamberlain, Cantab; J. B., Beccles, Mr. Bridge, Paul Pry, A Student of Charing-cross Hospital.

Notices of several schools, including St. Bartholomew's, must stand over till our next number.

THE MEDICAL TIMES.

SATURDAY, MAY 8, 1847.

THE MEDICAL REGISTRATION BILL.

The coroner-member for Finsbury has again bid for professional support, by the introduction into the House of Commons of an old Registration Bill with new dressings, an abstract of which, divested of technicalities, will be found in another part of our columns. We have given it for the inspection of the profession, that the members may look at it carefully, intelligently, and thoughtfully, remembering that they are the parties for whose benefit, ostensibly, it is intended, and that future honourable prosperity is closely connected with the stability or destruction of this bill. There can be no dispute about the necessity of legislating for medical men as speedily as possible, in order that they may be placed in that honourable station to which their education entitles them, and that they may be eminently efficient as conservators of the public health. Here there is but one opinion, and there are hopes long fostered that the time is not far distant when an enlightened Government will, with parental kindness, bestow upon us the advantages we claim. Reform, however, has so long echoed in our ears and occupied our thoughts, without the realization of any of those advantages, that many are nearly ready to despair about the results; and if any measure having some good in it be offered, it is seized with avidity, and accepted with humble expressions of gratitude. Our benefactors know this, and so do our enemies; and it requires the utmost vigilance and activity in the former to prevent the latter making us mere tools to gratify a fierce and dubious ambition. The seven-hilled city, which called herself eternal—whose temples and monuments bade defiance to the ravages of time, and whose armies triumphed over the world—fell by the wounds which her recreant sons inflicted on her under the cloak of friendship. In vain did the Roman Brutus strike even to the death his bosom friend, because he saw him flattering the multitude to trample on their liberty. In vain did Cato struggle for his country, and then pour out his blood—a libation to the gods—serenely hoping that he should yet behold another Rome, in a more congenial country, with better laws and beyond the reach of the tyrant's hand. The multitude had been beguiled, not at once, but by reiterated and covert attacks upon their liberty, till Rome existed only in name, and the stern citizen became an abject slave without energy or courage. As wise men, it becomes us to keep our eyes open, and our intelligence in activity. There is comparatively little danger to be apprehended, when that which is opposed to our welfare comes without any ornament to disguise its most unlovely features. Pseudo-reformers would not dare to offer to the profession any measure professedly for their welfare, without having something that is really good in it. Even the personification of evil is represented as being capable of making himself appear as a very angel of light, to accomplish his purposes. And men of fierce ambition can clothe themselves in the garments of good intentions, and adorn themselves with jewels purloined from the casket of benevolence.

The misnomer of the bill's title is surpassed by the viciousness of its contents. We have hitherto purposely abstained from bestowing any notice on the scheme, as we felt assured that the good sense of the profession would reject it directly it was published; and we have, moreover, no desire to come into more frequent collision with the author than the public welfare and our duty make necessary. We now say, however, in brief, after a careful examination of the measure, that, practically, a more insidious attempt to destroy the interests and degrade the *status* of the general practitioners of this empire was never before perpetrated.

It is not our intention to enter upon a minute dissection of the mass, but we cannot refrain from pointing out, that by the operation of the third and fourth clauses providing for a registration (*legally qualifying for practice*) of all individuals possessing only a *single* qualification, and by the twenty-third and twenty-fourth clauses, which would place in the hands of the Secretary of State an *absolute* control over the education of the members of our profession, with a distinct intimation that the *qualification* shall be different for the different grades of the profession, we declare that by these clauses the utter destruction of the present high character of the general practitioners will ensue, and the profession will be placed in a worse position than it was before 1815.

The mode in which this bill has been quietly pushed through its first reading, and hastened on to its second, clearly proves that its author has no confidence in his own designs, and no expectation of their success. We have been accustomed to rebuke the state-craft of Sir James Graham: he gave us, at least, full time to consider every measure which he introduced into Parliament; but this Registration Bill was passed through its first reading without even the decent observance of the ordinary parliamentary form—that of giving an explanation of its provisions! The second reading was appointed to take place within a fortnight, and the bill itself was not published until the Wednesday previous to that on which it would be read. There was absolutely no time given to consider the measure. It was impossible that it could be passed through the hands of the profession within the specified period. Public meetings could not be held to express an opinion of its contents. The darkest secrecy, the most indecent haste, were practised to pass a bill which his own experience should have foretold the author would disgust the profession and subvert, if successful, the interests of the general practitioners.

We have said that no time had been given to hold public meetings: we were in error. A large and highly respectable meeting of the profession, *consisting of twelve members*, was held on Monday night at the Freemasons' Tavern. We believe they resolved themselves into a committee to support the bill. It was, doubtless, a bold resolution, considering the weight of public reproach they will have to endure. We do not know how these gentlemen can look in each others' faces without laughing at the transparent humbug of their proceedings. Empedocles jumped into Mount Etna for the sake of fame, and there are some men who will do even worse than that—they will write themselves down asses rather than not be notorious. They may fire their crackers if they will, but they must take care that they do not burn their fingers.

While we thus write, in order to keep our professional brethren awake, we do not think for a moment that there is the least shadow of a chance of the coroner's Medical Registration Bill ever becoming the law of the land. It is the "old dodge" to fix immoveably the tottering foundations of the Lincoln's-inn establishment. Now, if there be a post of honour in medical politics never to be yielded—if there be one sacred principle in our contest for professional amelioration never to be abandoned—it is that of undying hostility to the perfidious injustice of the new charter of the College of Surgeons. There can be no amity between the profession and that mismanaged institution while such a document remains to disgrace the collegiate archives; and we again repeat our unchanged resolution of never accepting that deed of injustice directly or indirectly as *un fait accompli.*

If we did not know that the bill, now nominally before Parliament in a triplicate or quadrupled metamorphosis, was but "an airy bubble," alike blown to excite and amuse public expectation—if we could fancy for a moment that there was any serious design of anything approaching to legislative *action*—we should advance against it *in limine* this insuperable objection, that it involves

a legislative recognition and sanction of this monster wrong of the surgical portion of the profession. The bill, under present circumstances, is one for more firmly establishing the despotic powers of the College of Surgeons, and for more effectually degrading the general practitioners. Not a syllable is there in the whole document about the expediency of revising the College charter, or of giving a professional *status* to those who have been so long demanding this act of justice.

Mr. Wakley, as a medical politician certainly, has the powers of the chameleon, for he seems as if he could change his colour according to circumstances. We will endeavour to illustrate our meaning by reference to the bill or bills of Sir James Graham in 1844 and 1845, and the member for Finsbury's in 1847, and we will just note his consistency as a public advocate of professional improvement.

SIR JAMES GRAHAM'S BILL, WITH MR. WAKLEY'S COMMENTS, 1845.

EXORDIUM APPLICABLE TO BOTH.

By T. Wakley in 1844.

"As a preliminary to the examination of this summary, the members of the profession should recollect that they have been petitioning Parliament, during nearly twenty years, for a law which should confer upon them the right of governing their own medical institutions and affairs, through the instrumentality of *a liberal and faithful system of representation.* Now, then, for a recapitulation of the most striking and distinctive characteristics of the notable plan for placing medical practitioners, &c., under an *improved* system of administration."*

Wakley on Bill of 1844.

"Is a system of *registration* acure for the evils which afflict the profession? Can *any* system which directs the mere putting down the names of medical men in alphabetical order and in classes be attended with that relief from annoyance which has compelled them to present their petitions to the Legislature?

"The arrangement which it contains must stand in a certain order:—1. Physicians; 2. Surgeons; 3. Licentiates in medicine and surgery.

"In a word, the plan for registering the members of the medical profession in THREE CLASSES is objectionable in *principle*, and must operate painfully and injurious in *practice*."

Wakley's Bill of 1847.

1. "*Names of Persons, &c., to be registered in a Book kept for the purpose.*—Persons must register under one of the following classes:—1. Physicians; 2. Surgeons; 3. Apothecaries."

Wakley on Bill of 1844.

"The appointment of principal secretary down to the lowest clerk and messenger are all placed at the disposal of Sir James Graham. The appointment of *messengers!* What a noble occupation for a Secretary of State! But the duty is forced upon him; there is no choice; if *he* did not make the appointments the power of making them would be exercised by some of the members of the medical profession. Such an evil was not to be tolerated. What next? There is something curious, we opine, in the following clause. Sir James Graham having appointed all the principal and local secretaries, clerks, &c., somebody must determine what salaries such persons shall receive. We know well enough by whom the payments will be made, but the amount is the matter for consideration here; and, a friend or dependant being put in office, who so proper to determine the salary he shall receive as the party who placed him there? Accordingly, the Secretary of State appoints to offices, and then fixes the amount of salaries."

Wakley's Bill of 1847.

2. "*Registrars to be appointed; the Secretary of State to appoint fit and proper persons for the office;* also registrars, clerks, and officers, respectively, who shall have a salary, fixed by the Lord High Treasurer, and they shall be allowed reasonable travelling expenses by him, as he shall think fit."

Wakley on Bill of 1844.

"Any member of the council deputed to be present at examinations, and if regulations infringed, &c., to refuse register until the same be amended," &c.

"Here, then, is the grand contrivance of the Government for securing the efficiency of examination. What means, then, does the clause provide for securing such efficiency? 1. Returns may be required to be made; 2. A person deputed may be present; 3. Registration of testimonials may be refused."

Considering the object to be attained, the first two provisions are mere absurdities. The third carries with it the semblance of useful authority. But under what circumstances could the authority be exercised? And, moreover, we ask when would it be exercised? An examining body, anxious to possess the fees to be paid for diplomas, might strictly comply with the letter of the regulations of the council, and yet entirely evade them in spirit. In reality, the examination, as a test of acquirement and ability, might be wholly valueless, and the council not possess the slightest information which would enable it to interfere. When there are different examining bodies in different divisions of the same kingdom, "the best" securities for enforcing efficient examinations would be found in making the governing body of every medical college *elective by the profession*, rendering it imperative for examinations to be conducted in *public, before the profession*, &c.; and another would consist in paying the examiners *by salary*, and not rewarding them by fees proportionate to the number of candidates whom they might allow to pass muster.

Wakley's Bill of 1847.

"*Inspection and Supervision of Examinations.*—The Secretary of State may order returns to be made; may depute a person to be present at examinations; and if regulations infringed, &c., to admonish, and finally refuse to register till conduct of offending party be altered.

Wakley on Bill of 1845.

Persons not registered incapable of being appointed to Public Situations.—"All the directions contained in this clause, with the exception of the two last, are already provided for by the existing laws and the conventional arrangements of society. Persons who are not qualified by law are *already* excluded from offices in our public institutions. This section, therefore, offers no advantage to the profession or to the public.

"In all these provisions the profession may see why it is they are *not allowed to choose their governing authorities*, under the influence and sanction of a *principle of medical representation.* In every clause of the bill indisputable evidence is furnished of the *mistrust* and *dislike* which were entertained by the framers of the measure towards the *vast majority of the profession.*"

Wakley's Bill of 1847.

Persons not possessing certificate of registration incapable of acting as medical officers in public and other situations! &c. &c.

Wakley on Bill of 1845.

Privileges of persons registered.—Exempt, while practising, from all juries, inquests, corporate and parochial offices, &c.

"Privileges, indeed! What are they? Exemptions which all legally-qualified men at present enjoy.

"Privileges! Why, even these exemptions are not henceforth to be allowed if the practitioner be *unregistered*—in other words, if he have not paid (*paid*) for the insertion of his name in a certain printed list; so that this new privilege of exemption, as a substitute for the old, both being identical, is not to be had except at the price specified in the bill. Such 'privileges' should, undoubtedly, be known by *another term*, as they are the reverse of advantages. The 'privilege clause' ought to have been framed thus:—

"'And be it enacted, that the exemptions which the members of the medical profession can now claim *without cost* shall not be allowed to them in future without being *paid for.*'"

Wakley's Bill of 1847.

Registered medical practitioners exempt from serving on juries, inquests, corporate and parochial offices, &c.!

Wakley on Bill of 1845.

Penalty for falsely pretending to be on the Register.—Guilty of a misdemeanour, &c., and punished by fine or imprisonment, or both as the court shall award.

"This clause is not worth a straw. It was thrown in as a sop at the end of the poisonous hash. It does not prevent any impostor from styling himself a physician or surgeon, or apothecary!"

Wakley's Bill of 1847.

Penalty for falsely pretending to be a Medical Practitioner.—To be find not more than £10, nor less than 40s.

Shall we add one quotation more?

"Are not the qualified medical practitioners of the United Kingdom registered or enrolled in the institutions to which they respectively belong? Such undoubtedly is the fact. Thus the proposal of the Government amounts to this—that there shall be *three* registers instead of seven or eight. What an improvement"!!

So much for the bill and the author's estimation of it. He has emphatically condemned it in advance. But then he *can* plead one circumstance in his exculpation. The bill he condemns is not his own, except inasmuch as he has bought it from the Queen's printer. He has *borrowed* every provision from Sir James Graham's offspring, omitting the good features, and deforming the indifferent. Pressed by his numerous engagements, he had no leisure to excogitate originality, or indicate an actual parentage, and he good-humouredly laid hands on the first little bill that came in his way. That one is unfortunately the very child which above all others he should have avoided. It has been too maltreated ever to be useful to him.

The advertisement of the National Institute gives the leading objections to this measure, and

* See *Lancet* for 1844.

these objections are so vital that no honest well-wisher of his profession can overlook them, or refrain from acting against a measure so pregnant with injury to the general body. We do not think that, at present, we need say more than to caution our readers against trusting in the artful and delusive advantages which are held out as likely to accrue from this measure if it could be framed into a law. There is nothing good in it which was not contained in former bills with more desirable concomitants; and all the evil is entirely its own. That evil is crushing and irremediable when once perpetrated. It is our business to prevent the evil being done. We advise our readers to *petition* strongly against it. The more briefly in space, the more quickly in time, the better.

MEDICAL POLITICIANS.

Dr. Lancaster, who had this week the high distinction of presiding over a public meeting of twelve (the modern apostles of a low civilization) had, it appears, *one* qualification for his new post of precedency—viz., a recent plucking at the College of Physicians. His associates, having no higher merit than that of being "pluck-able," of course yielded the *pas* to a gentleman actually "*plucked*." He had practically demonstrated the higher qualification in this *Lancasterian* school of low medical education, and became leader by that readily-acknowledged title of ascendancy. When resolutions are published in the newspapers under such a sanction, deference and respect are necessary results. Sir George Grey must readily accept a legislation so recommended!

THE HOUNSLOW CASE AND THE MEDICAL TIMES.

Mr. Wakley having commenced proceedings in the Court of Exchequer, before Chief Justice Pollock, for substantially the same criticisms for which he had sought a criminal information in the Queen's Bench from Lord Denman, Mr. Lush, the eminent counsel, appeared for the *Medical Times*, on Saturday, before the court, and obtained a rule *nisi* to strike out the first count of the declaration served in the case. The plaintiff, by these attempted proceedings, also made himself liable to an attachment for contempt by the said court.

A BILL FOR THE REGISTRATION OF QUALIFIED MEDICAL PRACTITIONERS, AND FOR AMENDING THE LAW RELATING TO THE PRACTICE OF MEDICINE IN GREAT BRITAIN AND IRELAND.

The *preamble* sets forth the declaration, that the laws relating to the practice of medicine in the united kingdoms are numerous, complicated, and contradictory; and that the public possess no certain means of distinguishing between legally-qualified physicians, surgeons, and apothecaries, and mere pretenders to a knowledge of medicine; and that it is desirable that the names, qualifications, and places of residence of qualified practitioners should be duly registered by competent authority.

Clause 1. *Provides for the Appointment of Registrars.*—The Secretary of State, within one month after the passing of the act, to appoint three proper persons to be registrars—one for England, another for Ireland, and another for Scotland; also clerks and other officers for carrying into execution the provisions of the act; the Secretary to remove, at his discretion, any one of them, and to appoint others in their places; their salaries to be fixed by the Lord High Treasurer, and reasonable travelling expenses allowed.

2. *All moneys received by registrars to be paid* by them into the Bank of England, as the Secretary of State shall direct, to the credit of the Lord High Treasurer, in the name of the "Medical Registration Fund of Great Britain and Ireland."

3. *Registration of Names, &c., of Persons qualified to practise before the passing of the Act.*—The name and place of residence, legal qualification or qualifications, with date, of every physician, surgeon, or apothecary, who shall produce a diploma, &c., or proof of having one, to be registered without fee; also those who were actually practising prior to 1815, and who shall sign a declaration according to the form in schedule (A); also every surgeon and assistant-surgeon of the army and navy, and in the East India Company's service.

4. *Registration of Persons obtaining their Qualifications after the passing of the Act.*—Such persons, on the payment of *two pounds*, to have their names, places of residence, and qualifications registered.

5. *Registrars to issue annual certificates to registered practitioners* on application, and according to the form in schedule (B). Registrars to issue certificates only for those parts for which they are appointed.

6. *Payment of five shillings for certificate*, to bear date on the day on which it shall be issued, and continue in force till 31st of December. Registrars on 15th of December to issue to persons registered, and making application, on payment of five shillings, a fresh certificate.

7. *Registrars to keep a Record of Certificates.*—A record to be kept of every certificate issued, and in the month of January a register to be printed according to the form in schedule (C); the register to be called respectively "The Medical Register for England," &c. A copy of this to be evidence in all courts, &c.; and the absence of any person's name from it, until the contrary be made to appear, shall be evidence that such person has not obtained a certificate. Registers to be furnished on application, upon the payment of *one shilling*.

8. *Persons accidentally omitted from Register may obtain Certificate on paying twenty shillings.*—A person entitled to register, and who shall prove to the satisfaction of the registrar that through his own neglect or mistake his name has been omitted, or that he intends commencing or resuming practice, or changing his residence before the 1st of January in the ensuing year, to have a certificate on the payment of twenty shillings.

9. *Repeal of Restrictions on Practice, excepting such as are in this Act.*—Acts or charters granted before the passing of this act, prohibiting persons from practising medicine, &c., without such license as is mentioned in the act or charter, to be repealed.

10. *Registered Persons entitled to Practise when Certificates are issued.*—A person registered, and possessing a certificate according to the provisions of the act, entitled to practise without other license.

11. *Registered Practitioners entitled to charge for Advice, Visits, and Attendance.*—To be recovered in any court of law with full costs of suit.

12. *None but Registered Persons to recover Charges.*—A certificate in force, or proof of legally practising in the capacity in which the practitioner claims such charge at the time when the debt was incurred, necessary to its recovery.

13. *Repeal of enactment requiring five years' apprenticeship to an apothecary.*

14. *Summary Penalty against Unregistered Practitioners.*—Any person not being on the register, and not having a certificate, who shall practise as a physician, &c., shall, on conviction, forfeit not more than *five pounds*, nor less *than forty shillings*, to be recoverable within three months.

15. *Penalty on Unregistered Persons for acting as Medical Officers.* Any person accepting an office, medical or surgical, for which he is not qualified according to the act, and practise in such office, to forfeit not more than *ten pounds*, nor less than *forty shillings*.

16. *Expulsion of Registered Practitioners for Disgraceful Conduct.*—If *five* registered persons shall complain to the council of any college or other governing body, that a person having their diploma has conducted himself in a disgraceful manner, the council empowered to cite the accused person before them, giving him due notice and a full statement of the charges against him. If the charges are proved, the name of the person to be erased from the roll of the college and from the register for ever; unless the governing body by whom the name was first erased shall readmit him.

17. *Persons not possessing Certificates incapable of acting as Medical Officers in public and other Situations*—from a hospital down to a friendly society for affording mutual relief in sickness or old age. Their certificates not to be received in a court of law.

18. *Penalty for wilful falsification of the Record of Certificates by any Registrar.—A person so offending to be imprisoned for a term not exceeding six months.*

19. *Penalty for obtaining Certificate by false Representations.*—To be deemed guilty of a misdemeanor; and, on conviction, to be imprisoned, with or without hard labour, for not more than *six months*.

20. *Penalty for falsely pretending to be a Medical Practitioner.*—An unregistered person assuming to be so, on conviction before a magistrate to, pay not more then *ten pounds*, nor less than *forty shillings*.

21. *How Penalties are to be recovered: if not paid, the Offender may be committed.*—A magistrate may hear and determine a complaint on the oath of one or more witnesses; and, upon the non-payment of the fine, may commit the offender to gaol for *one month* when the sum does not exceed *forty shillings*, and for three months when it does not exceed *ten pounds*.

22. *Application of Penalties.*—To the Medical Registration Fund.

23. *Uniformity of Education, Qualification, and Fees, throughout the Kingdom.*—The several colleges shall lay before the Secretary of State a scheme of education, including midwifery, of the course of study, and particulars of the examination to be passed by all persons applying for letters-testimonial as a physician, &c., with an account of the fees proposed to be taken. The qualifications and fees to be uniform, according to the nature thereof, and these of no force unless sanctioned by her Majesty.

24. *Inspection and Supervision of Examinations.*—The Secretary of State may require returns to be made respecting the examinations, &c., and may depute a person to be present at them, and to make a report. If the regulations approved by her Majesty be infringed, the examining body so doing to be admonished; and if the admonition be neglected, the registrars to refuse to register upon the testimonials until the Secretary of State be satisfied.

25. *Examiners may take candidates to hospitals, workhouses, &c., for practical examinations.*

26. *Act not to affect Students of two years' standing.*—Such persons being allowed to complete their education, and pass their examinations, as if this act had not been passed.

27.—*Act not to extend to dentists or cuppers in business before 1st of March*, 1847.

28. *Act not to affect the business of chemists and druggists.*

29. *Registered medical practitioners exempt from serving on juries and inquests.*

30. *Names of Criminal Practitioners to be erased from the Register.*—Any one guilty of a crime inferring infamy, or the punishment of death or transportation—of obtaining a false certificate, giving a false statement, evidence, or certificate—upon conviction, shall have his name erased, and lose all the privileges of a registered medical practitioner.

31. *Interpretation Clause.*—The words "medicine" and "medical" mean in this act "physic," "surgery," and "surgical."

32. *Act may be amended.*

HOUSE OF COMMONS.
Wednesday, May 5.

Mr. Wakley moved the order of the day for the second reading of the Medical Registration and Medical Law Amendment Bill; but after some conversation between Sir G. Grey, Mr. Hume, Sir J. Graham, and Mr. Wakley, the second reading of the bill was postponed till Tuesday next.

[To the Editor of the Medical Times.]

SIR,—Permit me to make a few observations upon the new Registration Bill, now before the public. I claim this more on account of the circumstances in which I have been placed, than from any superiority of discernment above that of my professional brethren. I have for the last few years watched with considerable interest the different bills and plans which have been proposed as a substitute for that justice which the general practitioners of this country claim at the hands of our Government, and which cannot be denied them if they will only unite. But I can state with great confidence, that there has been no bill, either proposed or introduced into Parliament of late years on the subject of medical reform, that has had embodied in it so much that is directly and decidedly injurious to the future welfare of the general practitioner as the Medical Registration Bill now before us. It is very painful to think that a bill so manifestly unjust should be allowed even to be introduced to the notice of Parliament, and I am sure it makes a larger and a louder claim for a comprehensive and equitable scheme of medical legislation than could be uttered by the general practitioners themselves. The bill is in every respect put together for the purpose of crushing them. Its very title is intended to deceive as many as it is possible, and especially those who are not aware of its design. Taking for its preamble, the plea that there are *numerous complicated* and *contradictory* laws relating to the practice of medicine, it seemed desirable that the names, qualifications, and residences of all legal practitioners should be registered. This is the substance of the preamble, and all, therefore, that the act ought to contain. Accordingly, after this we are prepared for an act which is simply to make registration imperative on all those who wish to practise legally—the clauses being strictly confined to the carrying out of this object. But what must be the reader's surprise when he finds at least half-a-dozen other subjects, all far exceeding in importance and interest even the subject-matter of the preamble? Surely they cannot be introduced in this way unintentionally, on account of the little weight that is to be attached to them: for, independently of this being an unreasonable supposition, all who are in the smallest degree acquainted with medical polity must be assured that many clauses not alluded to in the preamble contain individually sufficient subject-matter for a separate act of Parliament.

The bill before us, then, is not merely *de medici et chirurgici registratione*, but, we may be permitted to add, *de omnibus rebus et quibusdem aliis*. On this ground alone I have not a doubt in my own mind that the bill will be thrown out; nevertheless, it may not be altogether unprofitable to bring before the reader's notice a few of the clauses which have been so craftily introduced, not only on the subject of registration, but also on apprenticeship; on the conduct of members of the different colleges; on the education, qualification, fees, inspection, examinations by supervision of the Government; and lastly, upon the effect this bill is to have upon druggists, as set forth in the 28th clause, the great master clause of the bill, which has been constructed such a manner as to allow the only class of people to go loose who alone really required to be tied up by the bill in question. First, then, on the subject of registration in the third clause, which gives directions as to qualified persons: the registrar is empowered to receive any diploma, certificate, or license, granted by any English, Scotch, or Irish university, or any corporation, society, or college, and to give in return the registration certificate (clause 5), which certificate by a subsequent clause (10) is made sufficient to practise legally without any other license, but only in that part of the United Kingdom for which the certificate was issued. Now, let us see the extreme and unnecessary inconvenience which this clause would entail upon Scotch and Irish graduates, whose capabilities of practising, without danger to the public, could no more be disputed than those who are members of English colleges. If this is purely a Registration Bill, the *capability* to practise having been decided, we contend that its great object ought to be rather to check the unlawful practising of druggists and quacks, than to look with jealousy upon those who have as a body quite as much claim on the confidence of the public as the English general practitioners, and far more than the pure surgeons, whose deficiency in the knowledge of medicines and their action upon the human body has now passed into a proverb. Yet the bill in question hesitates not to give the certificated license to practise medicine, midwifery, and what not, to the man who can bring a diploma from the College of Surgeons of England—a college which is disgracing the profession by giving its members their diploma almost without examination. Why, the College of Surgeons could not, if it wished, grant a license to practise medicine; how then can its diploma alone, which barely sets forth its members as capable of undertaking the "ordinary exigencies" of surgery, in any decency pretend to have its members registered as legally-qualified to practise medicine? As well might a member of the Geological Society make a similar claim, and not without reason: for the College of Surgeons, as a body, think much more of the bones of some extinct creature, though their thinking is to so little purpose on that subject even, than they do of the art they profess to teach. This part of the bill that bears upon the subject of registration—that actually condescends to confine itself to the subject of the preamble—is so obviously unjust towards the Apothecaries' Society, that, if it were allowed to pass, this valuable society, which has done more to maintain the *status* of the general practitioner than any other college or society in the kingdom, would pass into complete desuetude—the *immaculate, disinterested* College of Surgeons taking its place. *Quantum in rebus inane.* We trust, if we are to have legislation, it will not be such as to throw us back, but such as will carry us forward.

By the 13th clause of this bill, one of the most important clauses in the Apothecaries' Act of 1815 (56 Geo. III., c. 194, s. 15) is proposed to be repealed, without the slightest allusion to any plan which is to supersede it. So that the progress of civilization, and the advance which society necessarily makes in the course of thirty years, and particularly in education, having rendered a clause in the old act comparatively ineffectual, though it still exercises much useful restraint, this bill proposes to repeal it, and that not for a better one, forsooth, but for none at all. Probably all are ready to admit that the old apprentice clause might have been advantageously amended long ago; but to contemplate its repeal without offering any sort of substitute argues a carelessness and a want of thought for the welfare of the rising members of our profession during a period when they are most in want of some one to advise and direct them aright. If this bill were in all other respects faultless, and this clause were allowed to remain, it ought never to become an act of Parliament.

The 14th clause proposes to transfer the power of prosecuting for illegal practice out of the hands of the Apothecaries' Company into those of nobody—making the registrar's certificate the protection, and the absence of this certificate the plea for conviction. Thus, by these five clauses, the 3rd, 9th, 10th, 13th, and 14th, the Apothecaries' Society are deprived of every power of control they now possess over illegal practice, as well as over the education of their candidates.

The 23rd, 24th, and 25th clauses are most important for consideration, seeing that they aim directly at a great principle in medical polity, that has more depending on its issue than any other single question now agitating the minds of medical men generally. If a comparison is made between the mere question of registration and this of the interference of Government in directing the examinations and other matters relative to the candidates and members of the medical profession, we may fairly put it down in figures as one stands in relation to a thousand. If the profession of medicine is ever made to take its proper stand in the society and institutes of this great country, it will be subsequent to, and not before, that period when the colleges retained the power of granting degrees and licenses to practise medicine and surgery. What would be said if such a college as Brasennose or Queen's had the power vested in it of granting degrees in divinity, or giving licenses to hold the rank of a deacon or a bishop, as the case might be. But the question is far too important to be tacked on to a mere bill for registering names; and a conscientious Minister like Sir G. Grey would never give his consent to such a principle, however much he must approve of it, being introduced in so unguarded and inconsiderate a manner as an attempt has been made to do in the bill before us. As I have some foundation for believing Sir George Grey to be high in principle, and really desirous for the welfare of all branches of the profession, I shall rest in the thought that he will never allow the interference of Government in our colleges to be made the law of this country until he has placed every branch of the professions, not only of physicians and surgeons, but also general practitioners, in an equitable position one towards the other.

I have finally to make a short remark on the 28th clause of the bill, which I do not know how to hold up to my professional brothers in too wicked a light: whether to regard it as most dangerous for the circumstance of its having been introduced in order to sweep away the very little amount of good which a *correct* registration *only* would afford, or for the extreme folly it casts upon the whole bill, by permitting all those unlawful practices pursued by druggists to continue unchecked, which ought to have been the primary, if not the only, reason for its introduction. But I have said enough to put the profession on their guard, and here I will conclude.—I am, Sir, your faithful servant,

Alton, May 5. C. M. BURNETT.

COURT OF QUEEN'S BENCH—MAY 4.
(Before Mr. Justice Coleridge.)

THE QUEEN *v.* THOS. WAKLEY, ESQ., M.P., AND CORONER.

Mr. Warren, with whom was Dr. Lane, applied for a rule calling upon Thomas Wakley, M.P., and coroner for the western division of Middlesex, to show cause why a criminal information should not be filed against him at the instance of Dr. Warren.

Mr. Warren said: My lord, I am here on behalf of Dr. Warren, who in June last was surgeon to the 7th Hussars. The affidavit states that Dr. Warren has been for thirty years in her Majesty's service, and is a Doctor of Medicine. On the 15th of June, private White having been tried, for drunkenness and for striking a superior officer, by a court-martial, was to be flogged, the sentence having been previously communicated to head-quarters and confirmed. Dr. Warren took care to make himself acquainted with the condition of White, and ascertained that he was able to undergo the punishment. On the morning of the 15th of June he examined him carefully, and found that he was in perfect health and capable of undergoing his punishment. He also asked the poor man if he had any complaint by which he was not fit to receive the punishment, and, as there was none, it was his painful duty to certify to that effect. It was also his duty to witness the infliction of the punishment, which

he did, in the presence of Captain Shirley and several other officers. He stood close to the sufferer and most carefully and anxiously watched him, in order to ascertain if he grew unfit for the infliction of more punishment. He saw nothing like faintness or anything to indicate that he was unable to bear the infliction, nor was any complaint made. It was inflicted without any undue severity whatever; and in the absence of any complaint of physical incapability he (Dr. Warren) had, according to the regulations of the service, no power whatever to interfere. After receiving his punishment, White walked into the hospital without exhibiting any undue effects of its infliction; Dr. Warren attended him and fomented his back, and perceived nothing calling for particular notice. He gave him such directions as were necessary, but no marks of extreme suffering were visible on the back, and he went on well. Ten days after this, Dr. Warren perceived a few boils of an ordinary character forming on White's back, which yielded to poultices. Dr. Warren continued to attend him regularly to the morning of the 6th of July. On the 4th of July he found him in a proper position for being removed. On the evening of that day he called upon him and found his pulse accelerated, and other symptoms showing inflammation of the pleura to be taking place; he gave him the best advice he could, and continued to attend him. On the morrow he found, to his great astonishment, that this man had, voluntarily and of his own free will, offered to scrape and clean out the ward, and, besides this, to do the same thing in the dead-ward. The affidavit states that on that day the heat was more intense than it had been known for forty years, the thermometer standing at 88°, and the said dead house or ward was cold and exposed to constant draughts and currents of cold air, and that his presence there was highly dangerous to one liable to disease of the lungs, heart, or pleura, and especially as White would be, from the labour in which he was engaged, in an excited state and perspiring, and that this was sufficient to account for the accelerated pulse, and would hasten on the incipient inflammation. On the morning of the 6th of July he found him complaining of acute pain in the region of the heart, which Dr. Warren noted and prescribed for accordingly. He continued to attend him to the 11th of July, and at half-past eight he died.

It was contrary to the regulations that a person who was not suffering of a surgical injury should remain in the surgical ward, and on the 10th he was removed to the medical ward. Finding that the case was likely to end seriously, he communicated with Sir James M'Grigor, who sent down a military medical officer, a first-class staff-surgeon, Dr. John Hall, who has since been made an inspector of hospitals. Dr. Hall went at once to White, and attended him to his death, and concurred with Dr. Warren in his views of the treatment which had been adopted. When death had taken place, according to the requirements of the army regulations, a *post-mortem* examination was made by Dr. Reid, in the presence of Drs. Warren and Hall. On this part of the case Sir James M'Grigor, who is at the head of the medical department of the army, makes oath, and says—that these officers were men of the highest honour and integrity, and able to make a proper and competent examination of the body as to the cause of death. The body was opened by Dr. Reid, and examined with the greatest possible care. In all these matters the regulations of the army have been rigidly adhered to; when the examination was concluded, he made a report, in which it is said —"there were marks of corporal punishment across the shoulders, particularly over the right scapula; but the punishment does not appear to have been severe, and the part where it was inflicted was quite healed; the back was discoloured from the granulation of blood since his decease." A portion of the integument dissected off the shoulder and the parts below was given to Henry Potter, who was directed to place it in spirits of wine, the usual mode of preservation. In the ordinary manner a certificate was sent in on the 13th of July, which goes on to state that the deceased died of inflammation of the pleura and of the lining membrane of the heart, and that the cause of death was in no wise connected with the corporal punishment which deceased had undergone. Thus it rested till application was made to bury the body, by which time it appeared that rumours had gone abroad that something cruel had been connected with the cause of death. When the man who was sent to Heston to make arrangements for the burial was asked of what complaint the man had died, he replied "of liver complaint." Dr. Warren makes affidavit that he never authorized the man to say thus, and he does not know how or why he made such answer. On this Mr. Trimmer, the clergyman, informed the troop sergeant that he had heard that rumours were afloat about the man's death, and that he would not bury him without a coroner's warrant. Mr. Wakley sent his messenger to the barracks to make inquiry concerning the circumstances of death, to whom the officers and others connected with the barracks gave every information and facility, with full permission to see the body. Colonel Whyte also gave orders for the attendance upon the messenger of all who from their knowledge of the case could throw any light upon it. In Mr. Wakley's letter of instructions to his messenger it is said, "It should be stated whether any surgeons have opened and examined the body." The messenger was informed at the barracks of all that had taken place. Mr. Wakley is, therefore, fixed with a full knowledge of the facts of the case as it stood at that time, and he should have felt that the responsibility of his office required of him the greatest calmness and fidelity. The affidavit states that neither Dr. Warren nor, to his knowledge, any one connected with the regiment mystified the subject, or threw any obstacle in the way of a right understanding of the facts by the coroner.

On the 14th of July the warrant summoning the jury was issued, and, through the adjutant, the officers and medical men of the regiment were ordered to attend on the 15th and give information. Dr. Warren, Lieutenant Ireland, Captain Shirley, and several others were there on the morning of the 15th to assist the coroner by their evidence and information, and in every way in ascertaining the facts of the case. Reports were prevalent in the neighbourhood, which, however, did not attribute the death of White to any bad conduct of the deponent until after the coroner wickedly and maliciously, by wilful and unlawful acts, had pointed out Dr. Warren as the man on whom the charge should rest. The first thing he did was to ask every witness if he had supplied to the barracks any articles in sale, and on these grounds he rejected not less than six witnesses who would have given evidence before the jury. Dr. Warren accompanied the coroner and jury to the barracks, and rendered all the assistance which was in his power, and when one of the privates was asked by the coroner to turn over the body for the purpose of inspection, and was unwilling, it being in a state of decomposition, with his own hands Dr. Warren assisted to turn over the body for the coroner and jury to see. The skin had on a former occasion been delivered to Henry Potter, and Dr. Warren did not, when unexpectedly applied to for it, know where it was to be found, but he immediately sent for Henry Potter, who attended and produced the said skin to the jury; yet, notwithstanding this, the coroner unlawfully, wickedly, and maliciously, and in order to prejudice the minds of the jury, insinuated in their hearing that the absence of the skin was a most suspicious circumstance. Captain Shirley presented himself before the coroner to be examined, and his evidence was taken and heard by Mr. Mills, the deputy coroner, in the absence of the coroner and jury, and while the latter were gone to the barracks to see the body, with a view to such statements being sworn to on their return.

Mr. Justice Coleridge: Is that the practice in the Coroner's Court?

Mr. Warren: No, my lord; and that is a most important point in the inquiry. Captain Shirley was told to continue in attendance, and to hold himself in readiness to be sworn, and to answer any questions that might be put to him. On the return of the coroner he cast his eye over the deposition of Captain Shirley, and asked other questions on them. He never, however, swore Captain Shirley, nor submitted his evidence to the jury, though it was most important. This, my lord, is very material. At the several adjournments of the court Dr. Warren and the other medical and military officers were in attendance, ready and desirous of being sworn and of giving evidence; but Dr. Warren was not sworn and examined upon oath at all at the inquest.

Mr. Justice Coleridge: Might there not be a reason for this?

Mr. Warren: Perhaps, so, my lord; but he did not bring the evidence fairly before the jury: he omitted and purposely excluded some from their knowledge. With respect to the piece of skin also, of the absence of which he had received a fair and reasonable explanation, he persisted in stating that a portion had been concealed or destroyed, and said that not one-fifth part of it had been produced, and that it would not correspond with the back; and that such a fact looked very suspicious. When it was attempted to be stated that the skin had shrunk in the spirits of wine, and that if properly stretched it would fit the back, the coroner interposed and unlawfully prevented such explanation from being received; his observations thus went to the jury, who were prevented receiving the reasonable explanation of them. Dr. Warren next complains that, although the coroner knew that he had attended the deceased for some time previously and up to his death, and had made a *post-mortem* examination, he yet refused to examine him, which was contrary to the provisions of the statute; but appointed one Mr. Horatio Grosvenor Day. The statute to which I refer your lordship is the 6th and 7th William IV., chap. 89, sec. 2, and provides that if the cause of death is not made clear by the testimony of the medical men who had attended the deceased, the jury may name another: showing that previously they should hear such evidence as they have. This course of conduct Mr. Wakley must have taken knowingly. Then a Mr. Christopher Teuten, a reporter, attended the inquest and took shorthand notes, the coroner knowing, as Dr. Warren believes, that such notes would be published, and stating to the jury that publicity would be given to the proceedings: thus showing the *animus* of his proceedings.

Mr. Justice Coleridge: What *animus* do you impute, Mr. Warren?

Mr. Warren: A wish and intention, my lord, to prejudice the minds of the jury and the public. The affidavit goes on to say that the coroner, on his return to London, invited the reporter to ride with him in his carriage, and then and there asked him to suppress a portion of his report, viz., the full evidence of Captain Shirley and Private Rising, and he, the coroner, suppressed that evidence subsequently to the jury. Dr. Warren complains that these publications have created grave suspicions, and raised against him great prejudice as well as against the other officers, as to the cause of the death of White. Drs. Hall and Reid also attended the inquiry, but were ordered by the coroner to be excluded; by which means many partial statements were allowed to remain and go to the jury, without such correction and explanation as they might have been able to supply had they been present, and that such partial statements were published without such explanation. The officers of the regiment were also by the same authority excluded, and many private soldiers who had been tried and convicted by courts martial were examined, from whom the coroner elicited certain things in nowise relating to the cause of death. Dr. Warren then goes on to say that neither he nor the officers of the

regiment had any knowledge of Mr. H. G. Day, and that he exhumed the body and examined it as to the cause of death, and came to the conclusion that there was no connection between the punishment and the death which followed. But Mr. Wakley refused to allow even his own nominee to give evidence to the jury, when this was its substance, and he prevented him from being examined. He ordered him to retire, and in his absence induced the jury to believe that he had made an improper or incomplete examination, and said that another person must be nominated to make examination. With the desire of obtaining evidence to criminate Dr. Warren, he called in Mr. Erasmus Wilson, a private friend, who was or had been connected with him, and who was under some kind of obligation to him, and had been sub-editor of the coroner's paper, the *Lancet*. He afterwards gave him orders to examine the body, excluding every one from such examination, except Mr. Day. This was in very hot weather, and when the body was in an advanced state of decomposition. Then, my lord, we have three affidavits, in addition to Dr. Warren's, swearing that in a midday adjournment Mr. Wakley had a private interview with two of the witnesses, Matthewson and Ellsworth, who had been before examined, and whom he subsequently again examined. The coroner called to give evidence this person named Ellsworth, who had been twice tried for desertion, and seven times for other offences, from whom he took some false statements calculated to prejudice the minds of the jury and to mislead the public with regard to the flogging. Of this person the coroner asked if Matthewson had not been punished for giving evidence, but that the witness was compelled to admit it was on no such account. The coroner also said that he should call neither Dr. Warren nor Colonel Whyte, but that, if they wished to state anything, he would take down whatever they might say. But, when they offered to give evidence, the coroner wilfully, maliciously, and wickedly, to make it appear that they stood in the position of persons who might become chargeable with the murder of White, told them that he should have to charge the jury as to the cause of death, and that he could not swear Dr. Warren, and further warned and cautioned him that he was about to make a voluntary statement, and unlawfully took the evidence of Dr. Warren without his being sworn to any part, although Dr. Warren persisted in requiring to be sworn. Drs. Hall and Reid and Mr. Day concurred in the opinion of Dr. Warren, that the death was not at all in consequence of the flogging, but of inflammation of the pleura and of the lining membrane of the heart. After this Mr. Wilson was called, and here the affidavit of Mr. Day states that, when with him Mr Wilson saw and examined the body, he agreed in opinion with him (Mr. Day) and with Drs. Hall and Reid as to the cause of death, but that when he was called by the coroner to give evidence to the jury, he then stated that he had observed certain morbid appearances quite new to him and to the science of physiology, and which were not described in any books. On the fourth and last sitting of the jury, on the 3rd of August, the coroner produced a letter, and, without inquiring into the truth of the statements it contained, he proceeded to read the letter to the jury, and examine witnesses as to the truth of its statements, when it came out that these statements were flagrant falsehoods. By these representations great excitement had been raised throughout the kingdom, and reports were circulated that the deceased had been murdered, and that for allowing the same Dr. Warren was liable to be indicted, and that Drs. Warren and Reid had removed and concealed a portion of the skin. By these statements, and by the conduct of the coroner, the private soldiers of the regiment were encouraged, to gain favour with the coroner, to contradict many statements of other witnesses, and proceeded to many acts of insubordination. The affidavit then states that the coroner offered a sum of money towards procuring the discharge of two of the men named Matthewson and Cook. When, further, Dr. Hall proceeded to explain that the opinion of Mr. Wilson was not to be relied on, the coroner obstructed and prevented him, and would not allow such explanation to be given. The coroner then addressed the jury as follows:—"I trust the past will be a lesson to those who have been desirous to avoid this investigation." My lord, the medical and military officers were in constant attendance; they had, moreover, provided both mounted and foot orderlies to go off at a moment's notice. "In this case," he says, "there has been a deliberate attempt to keep back the truth." Thus, my lord, throughout does he steadily endeavour to prejudice the minds of the jury against the medical and other officers. On the 19th of August, Mr. Wakley was at a meeting at Exeter Hall, and made strong criminatory observations on the part which the officers had taken. In September following, advertisements were inserted in the *Lancet*, of which Mr. Wakley is proprietor, asking for subscriptions for obtaining a testimonial to himself as coroner. He also applied for an information against the *Medical Times*, and your lordship knows what judgment was then pronounced. Pending the decision of this court in that case, Dr. Warren abstained from making any application of this kind; but since that decision his attention has been called to some unlawful acts performed by the coroner during the time, showing that at that time he was unlawfully endeavouring to prejudice the jury against him. The transaction to which I now call your lordship's attention is one which to my mind presents itself as an instance of most remarkable and extraordinary conduct in a minister of justice. The affidavit states that the coroner did wickedly give instructions to a certain counsel—the name I do not state, there are particular reasons why I should not, but it can be mentioned if your lordship wishes it; and were I to mention it, your lordship would recognise it as among the most eminent, perhaps the most eminent, of special pleaders—to draw up and prepare a verdict charging this deponent, Dr. Warren, with the death of private White, and that this took place before he had charged the jury. These instructions were returned by the eminent counsel referred to, who refused to take part in such matter. It is impossible, my lord, to conceive of conduct more ——

Mr. Justice Coleridge: Does the deponent affirm this upon oath of his own knowledge, or does he state that he is informed?

Mr. Warren: He is informed, and verily believes it, my lord.

Mr. Justice Coleridge: Ought a grand jury to find a bill when a person merely says—"I believe such and such things"?

Mr. Warren: This, my lord, is quite a different case; he here was present as a judge, to do judicial acts. I have the name of the party to submit to the court, and if they dispute the fact, that will appear in their answer.

Mr. Justice Coleridge: But if the counsel, making the same objection as I have been doing to the sufficiency of the evidence, makes no answer to it?

Mr. Warren: Surely, my lord, I submit he must deny it. On the 11th of March a public meeting was held at the Craven's Head, in Drury-lane, and I have here the placard by which the meeting was convened. It was a public meeting, according to the bill, to take measures for completing the subscriptions necessary to the discharge of Matthewson and Cook from service in the army. This was after your lordship had discharged his motion. The bill says that the meeting will be attended by "Thomas Wakley, Esq., coroner for Middlesex, *and at the Hounslow inquest*," and that he and others would address the meeting.

Mr. Justice Coleridge: But how do you seek to fix him with that placard, Mr. Warren? Might not that have been issued and he not have been a party to it?

Mr. Warren: My lord, it was issued long before the meeting was held, and he cannot be supposed ignorant of it. He attended the meeting as coroner.

Mr. Justice Coleridge: As coroner, Mr. Warren?

Mr. Warren: As coroner, my lord; not in the sense that he went to discharge there the functions of that office, but it was the fact that he was the coroner and had been concerned in this inquest that gave an importance to his attendance. When there he made the following remarks—"Mr. Chairman, I do not see"——

Mr. Justice Coleridge [illegible] with the publication of these remarks?

Mr. Warren: No, my lord, but with having addressed them to a public meeting.

Mr. Justice Coleridge: How do you do that?

Mr. Warren: By the affidavit, my lord, of the shorthand reporter, who was present.

Mr. Justice Coleridge: What are the words of the affidavit?

Mr. Warren: That the deponent was present at the meeting and took shorthand notes, of which this is a copy; and that he has compared this report with his notes, and he says that it is a true and correct report. He states, my lord, in this speech, that he is satisfied that, in the prosecution of his great object, he had the sympathies of the public, and that the privates were, and are, exposed to persecution on account of the evidence which they had given. He then says that *these* men appeared to give honest testimony; thereby impugning, indirectly, the testimony of some of the other witnesses. Imagine the effect of this upon Dr. Warren. He then, my lord, has the presumption to say that his conduct has led Lord Denman to deny him justice, to which I particularly call your lordship's attention. He then says: "A calumnious public writer had charged me with having participated in the fees of the inquest with one of the medical witnesses, and I moved for a criminal information. Shortly after the publication of this calumnious statement, I was attacked in the House of Commons, and I defended myself. But what does the Court of Queen's Bench do? It alleges as the chief reason for denying me its protection that I had taken the law into my own hands by this defence which I made in the House of Commons, so that, because I would not hear a foul libel against me repeated without a word in reply, I am denied justice in the highest court in the kingdom. Well, the Chief Justice complains that I did not call the medical witness who had attended White. Now, White had been flogged twenty-six days before his death, and had been taken into the surgical ward of the hospital, and very properly, because it was a surgical case—they had made it so by inflicting a wound; he was taken into the ward, and kept there for twenty-five days; but when his legs and bladder were paralyzed, he was taken in that helpless state, against his own wishes, into the medical ward, to make it appear that he had died, not from a wound, but from internal disease. No attempt was made to deny this at the inquest, and I could not call that witness safely who had attended the deceased under these circumstances. What did Lord Denman say? He said that that medical officer was placed in a most perilous position. Lord Denman stated that, if that witness had stood by and seen too much punishment inflicted on White so as to cause his death, he would have been responsible for such loss of life; and yet that is the witness whom I should have first put into the box! A man who may be liable to a charge of murder is to be put into the witness-box, to give his testimony to the jury!"

Mr. Justice Coleridge: Supposing, Mr. Warren, that you had been coroner, what would you have done?

Mr. Warren: Why, my lord, if it were a person of education and known honour and integrity, I would examine him.

Mr. Justice Coleridge: That would be, no doubt, in the exercise of your judgment; might not a person honestly come to a differ[illegible] judgment?

Mr. Warren: My case is, my lord, that all this was done with explicit design and intention, and

dishonestly. He then, my lord, has the boldness or audacity to say, "I am satisfied that no one could have more misstated the law than Lord Denman has done in this case, and it remains the duty of an inferior coroner to correct the mistakes of the chief coroner of this kingdom." These, my lord, are acts done and statements made by an officer of a court of justice.

Mr. Justice Coleridge: Now, Mr. Warren, you apply for a criminal information on the ground of improper conduct in discharge of the office of coroner, and are acting as the Attorney-General, which I think is not within your competence.

Mr. Warren: Dr. Warren, my lord, is, I submit, entitled to charge him with this, and thus establish a case for the intervention of this court. I think the case of the King *v.* Watson, contained in the "Second Term Reports," p. 199, bears me out in this view. Mr. Wakley, notwithstanding the decision of this court against him, and his own refusal to admit important evidence, now seeks to destroy by representations of this kind the peace of mind of Dr. Warren. Your lordship has also to say whether by these remarks the administration of justice is not in danger of being brought into contempt. Judge Buller says, "Nothing is more important than to put a stop to wanton attacks upon the manner in which justice is administered, since for every wrong there is a remedy; but that any person who, by publication or any other means, seeks to calumniate the proceedings of a court of justice, by such conduct tends, by weakening the estimation of justice to sap its very foundations." Not satisfied with declaring that he was denied justice, he says that Lord Denman had misstated the law, and that it remained the duty of an inferior coroner to correct the mistakes of the chief coroner of this kingdom. Dr. Warren has done everything in his power to stand well with his fellow-men; but, after his character has been vindicated in a court of justice, the coroner impugns the justice of that decision, because it had censured his conduct and protected Dr. Warren, and says that justice had been denied. But if so, then Mr. Wakley was right, and Dr. Warren wrong. I put it to your lordship, that Mr. Wakley had no *boná fide* belief that Dr. Warren would be found criminal, but that from first to last he was actuated by a determination to seize upon everything which would help to get up a case against him and the other officers. Accordingly, the jury returned a verdict quite conformable, if not to the evidence, at least to the charge—that deceased died from the effects of a severe and cruel flogging. Thus, in spite of the unimpeachable statements of the medical officers, and in spite of the testimony of their own nominee, Mr. Day, they return a verdict bearing out the summing up. These are, my lord, the circumstances of the case: they have not been brought forward earlier because Mr. Wakley was already, on his own application, before the court. Upon the discharge of that application, Dr. Warren found that those instructions which I have referred to had been sent during the progress of the inquest. It was far from his feeling to wish again to enter into the matter, but Mr. Wakley has taken another opportunity to wound him as in the apple of the eye, and makes use of your lordship's court for this purpose. There is evidence of a complete, systematic course of conduct on the part of Mr. Wakley, with a view to injure Dr. Warren in his character, in personal estimation among his friends, and in every way in which he could. In a similar case Lord Denman stated it to be one of the greatest advantages of this application, that it gave a person an opportunity to come forward and deny the imputation. This case is very hard, and all the more important, as it relates to the conduct of a public functionary. On all these grounds I trust your lordship will grant a rule.

Mr. Justice Coleridge: This is a case of very great importance indeed, and if I had any doubt upon it I should think it right to ask for time to consider the affidavits; but they have been read, and it was fully discussed upon the former trial in reference to this same inquest; I have thus a fuller knowledge than I should otherwise have had. I cannot feel surprised that Dr. Warren has felt himself much aggrieved, and has, in consequence, made this application, and that it has been a satisfaction to him to bring the facts of the case under the notice of this court, and to have an opportunity of stating them fully, distinctly, and upon oath; and after having so done, whatever impressions have been made, and opinions taken up with before, I trust none will now remain prejudicial to his character on the mind of any person, but that every one will be convinced that he has conducted himself throughout the whole of these transactions with honour and humanity, with good will, and without any corrupt or sinister motive. He has done his duty, and his duty only, has done it with honour, and with humanity, exhibiting all that ability and skill which it is so desirable should be brought to bear on such a case, and which was to be expected from a man of his experience and knowledge.

But I have, notwithstanding, no doubt whatever that this application ought not to be entertained. It has been put by the learned counsel in a twofold shape: as a personal application by a private individual for redress of his grievances; and has also made Dr. Warren an advocate of the public, accusing Mr. Wakley, as a public officer, of a grave misdemeanour. The case divides itself into three parts: the conduct of Mr. Wakley in the investigation; in seeking to press a verdict for the jury before they were in possession of the whole case; and his conduct at the public meeting, on March 11. One cannot but see that the substance of these charges is the first. With respect to what has been alleged, no fact but the one I am about to mention was not as well known to Dr. Warren in August last as now and during the interval. Dr. Warren could not apply for a criminal information, unless it is shown that some new fact had come to light which gives colour to previous transactions. Dr. Warren has been aware of the necessity of giving that explanation, which, as I understand it, is that he did not think it proper to make application, because Mr. Wakley had taken upon him the initiative, and he felt bound to wait until such proceedings had terminated. Now, it is certain that such proceedings did not commence till Hilary term; he thus allowed Michaelmas term to go by without any notice being taken of Mr. Wakley's misconduct.

But what is the new fact which came subsequently to his knowledge? Why, it is a very serious one: an application to a party to draw up a verdict, charging certain persons with the death of the unfortunate subject of the inquest, before the jury had been placed in possession of the whole case. But, unfortunately, there is no evidence of that fact, and it therefore rests upon information and belief. The party supplying such information is not named, nor is any explanation given why that name is not furnished. I dare say that such explanation would have relieved the difficulty. The affidavit stated the name of the party to whom the application was made, but it does not say that such person will make an affidavit of the fact.

It then resolves itself into a question of belief or information, which I cannot take as the foundation of a criminal charge. It seems, then, that the case is now too far removed from the time in which the grounds of the case originated, to be taken notice of either by Dr. Warren or others.

Mr. Warren, in his address, stated that enough was stated to bring the other side to answer to the charge. I had always understood that this court puts itself in the place of the grand jury, and it cannot be stated that less evidence should be taken here than before a grand jury. I will not go into authorities now on this subject; it is a well-known rule at common law, and has been acted on continually in this court. Mr. Warren, as I understood, said that if evidence was not found to bear out the statements made at the granting the rule *nisi*, it would be discharged; which, in my opinion, would show at once that the rule never ought to have been granted.

We now come to the meeting of the 11th of March, and this is to be considered in two ways: either as a misdemeanour for which a criminal information is to be granted; or as standing connected with the conduct of Mr. Wakley at and during the inquest, and bringing proof of and improper conduct or feeling towards Dr. Warren down to that time. His ground is that it points the arrow—to use Mr. Warren's expression—before directed against Dr. Warren. I have paid attention to this representation, and have since looked into the remarks of Mr. Wakley, and I do not think that was the intention, nor do I think it has had that effect, and I will not go further into it.

With regard to its being properly a subject for a criminal information I must say the application wholly fails. I agree with Mr. Warren and the learned judge whom he has quoted, that no one has any right wantonly to bring into discredit the decisions of a court of justice; and if respect is due to any court it is to the supreme court of judicature, especially as presided over by the noble and learned judge as at present. But I do not think that the Court of Queen's Bench needs the support of a criminal information to uphold its decisions, and I think it best asserts its own dignity by disregarding such comments, especially when I cannot see that there was any intention wantonly or in an offensive manner to throw discredit on the judgment pronounced. Every person who has become the subject of a judgment of a court painful to his character or property feels sore, and one cannot wonder that afterwards, if he have to speak of that judgment, that he does so as an injured man; and I think he on this occasion delivered himself with no more freedom than was allowable and natural to one in his position. I do not think he had examined the judgment fairly; nor do I think the judgment will suffer by Mr. Wakley's criticisms. So much, then, for these observations as supplying substantial grounds for a charge, or as bringing the conduct of Mr. Wakley down to the present time. As long as Mr. Wakley addresses a public meeting on this subject, which it is lawful for him to do, he will believe and speak in the same manner, and I cannot think that this will make his conduct the subject of a criminal information.

This application was made on the affidavits of Sir James M'Grigor, Lieutenant-Colonel Shirley, Dr. Knox, Dr. Warren, Dr. Reid, Mr. Day, and three privates belonging to the 7th Hussars, with the addition of affidavits of reporters.

UNIVERSITY COLLEGE.

On Saturday last the distribution of prizes in the medical department of this college took place. Lord Brougham occupied the chair, and the proceedings opened with the reading of the annual report by Mr. Liston, Dean of the Faculty of Medicine. From that document it appeared that the number of medical students who attended classes during the past year was 290, the number of the preceding year being 292.

At the first examination for the degree of M.B. in the University of London, gold medals were awarded to Mr. Thomas Littleton for proficiency in anatomy and physiology; to Mr. Thomas Armstrong Cammack for chemistry, and to Mr. Joseph Burgon for Materia Medica; and both the gold medals annually conferred on successful competitors by the Society of Apothecaries were gained by students of this college, namely, the medal for botany by Mr. James Morris, and that for Materia Medica by Mr. Thos. Park.

The following is a list of the prizes awarded April 30, and the names of the successful competitors:—

Class of Medicine.—Thomas Park, of Lincoln; H. Briggs, of Halifax; J. Bailey, of London.

Class of Anatomy and Physiology.—James Morris, of London; Archibald P. Childe, of Bungay; Daniel Badcock, of Sheffield.

Class of Chemistry.—N. C. Wood, G. H. Bailey, W. M. G. Hewett, J. Lister, J. R. Reynolds, and W. Payne.

Class of Anatomy.—J. W. Saunders, W. M. G. Hewett, W. Bayldon, J. Morris, C. D. R. Symons.

Class of Comparative Anatomy.—B. Bose.

Class of Materia Medica and Therapeutics.—J. Rigby, W. Squire, T. Limbery.

Class of Midwifery.—F. C. Webb, W. Bayldon, H. Briggs.

Class of Surgery.—T. Park, F. C. Webb, C. D. R. Symons.

Class of Dental Surgery.—W. Bayldon.

SUMMER TERM, 1846.

Class of Botany.—B. Bose, W. D. Wilkes.

Class of Medical Jurisprudence.—T. Park.

Class of Pathological Anatomy.—W. H. Ransom, of Cromer.

Fellowes Clinical Medal. — Gold medal, W. H. Ransom.

Prize of £40 for General Proficiency.—W. H. Ransom.

THE CHARING-CROSS HOSPITAL.

At the annual distribution of prizes to the students attending the medical school of this hospital marks of distinction were awarded by the Right Hon. Vernon Smith to the following gentlemen:—

Surgery.—Junior Class: Bronze medals, G. M. Young and J. W. Paternoster; certificate, F. W. A. Rawlins. Senior Class: Silver medal, C. R. Durell; certificate, J. Buckstone.

Materia Medica.—Silver medal, C. Terry; certificate, C. Wood.

Practical Anatomy.—Junior: Bronze medal, C. Terry; certificate, C. Wood. Senior: Silver medal, J. Fayrer; certificate, C. R. Durell.

Midwifery.—Junior: Bronze medal, G. M. Young; certificate, M. Todd. Senior: Silver medal, J. Buckstone; certificate, C. R. Durell.

Physiology.—Junior: Bronze medal, C. Terry. Senior: Silver medal, J. Fayrer.

Medicine.—Junior: Bronze medal, G. M. Young; certificate, G. W. Paternoster. Senior: Silver medal, C. R. Durell; certificate, J. Buckstone.

Chemistry.—Silver medal, C. Wood.

Botany.—Silver medal, S. Ludlow.

Forensic Medicine.—Silver medal, J. Buckstone; certificate, A. Butler.

Clinical Prize.—Silver medal, J. G. Green.

General Proficiency.—Gold medal, C. R. Durell; silver medal, C. R. Durell.

Two gentlemen received honorary testimonials for diligence and good conduct.

ST. GEORGE'S SCHOOL OF MEDICINE.

A public distribution of prizes awarded to the students of the School of Anatomy and Medicine adjoining St. George's Hospital took place on Saturday, the 1st inst., Sir James Clark, F.R.S., in the chair.

The Hon. Secretary (Dr. W. V. Pettigrew) read the report, giving a slight sketch of the history of the school, from its establishment by Dr. Wilson and Mr. Lane in 1830.

The prizes and honorary certificates were thus awarded:—

Anatomy and Physiology.—Mr. T. Webb, Mr. A. Brown (equal), silver medals; certificate, Mr. C. H. Payne.

Junior Anatomy.—Certificates, Mr. R. E. Price, Mr. Turner, Mr. Finnimore, and Mr. H. Brown.

Clinical Medicine.—Prize, Mr. T. S. Gundry.

Clinical Surgery.—Prize, Mr. Symes.

These prizes are given by the lecturers at this school to all students entering to St. George's Hospital practice, irrespective of the school at which they may have studied.

Medicine.—Prize, Mr. R. E. Price.

Surgery.—Prizes of equal value, Mr. P. Allen, Mr. T. Webb; certificate, Mr. R. E. Price.

Chemistry.—Prize, Mr. W. Bloxam.

Materia Medica.—Prize, Mr. W. Bloxam; certificates, Mr. G. Fast, Mr. R. E. Price.

Midwifery.—First prize, Mr. G. Jago; second prize, Mr. C. H. Payne.

Medical Jurisprudence.—Prize, Mr. Marley; certificate, Mr. Parnell.

Botany.—Prize, Mr. W. Bloxam.

Practical Chemistry.—Prize, Mr. F. Godrich.

GOSSIP OF THE WEEK.

ROYAL COLLEGE OF SURGEONS.—The following gentlemen were admitted members at the meeting of the Court of Examiners on Friday evening last—viz., Messrs. John Henry Walker, Dublin; Theodore Sheldon Tearne, Worcester; John William Williams, Southwell, Nottinghamshire; William Johnson, Leeds; James Lardner Green, Holywell, Flintshire; Robert Stead Jones Stevens, Ely, Cambridgeshire; Alfred Adney, Exeter; Michael M'Donnell, Randalstown, county of Antrim, Ireland; Henry John Barrett, Commercial-road; and Wm. Hyde Cooke, Stockton, Worcestershire.

APOTHECARIES' HALL.—Gentlemen admitted members April 29:—John Robert Humphreys, Richard Eliot West, George Goforth Wyer, John Sebastian Helmcken, Richard Thomas Smith, Thomas Stillman, and Henry Fisher.

NAVAL APPOINTMENTS. Surgeons: Charles K. Nutt, to the Excellent; Augustus Slight, to the Growler; J. W. Elliott, superintendent to the Joseph Soames, convict ship; Edward T. Dickson, to be Admiralty Surgeon and Agent at Jersey.—Assistant Surgeons: George Everest, to the Kestrel; James Peters, to the Victory.

ASSERTIONS.—Mr. Wakley, in the House of Commons, on Wednesday evening last, stated that, if the bill which he had introduced for the better regulation of the medical profession was not successful, he would trouble himself no more medical bills. The value of this assertion may be estimated by that of the following, made in the Queen's Bench by the Attorney-General, Jan. 30, "that the continued exercise of the office of coroner by Mr. Wakley depended upon the granting of that rule."—*Rule refused.*

DURHAM UNIVERSITY.—Several cases of acknowledged fever having occurred in Durham, the warden and senate of the university have deemed it expedient to take a medical opinion upon the subject. After due inquiry, it was determined that it did not seem requisite to disperse the members of the university, but that if the immediate friends of any student were desirous that he should be removed from the university for a time leave would be given on due application, and every facility afforded to alleviate the inconveniences which may arise. Some of the students have availed themselves of this permission; but all the lectures are proceeding in the regular manner.

WASTE OF MANURE.—"I shall say nothing of the liquid manure which, as I have been given to understand, is suffered to drain away into the ditches, thence into the rivers, and from them into the sea, from fully one half of all the homesteads of England; I will speak merely of the unappropriated refuse of large towns. In Flanders, where manure is carefully collected, instead of being, as here, suffered to run to waste, the *excreta* of an adult is valued at £1 19s.; considering the enormous additions made to this manure in our towns, it will not be thought unreasonable to estimate the value of that part of the refuse which now runs to waste at £2 per head of the population; and supposing that, in England or in Wales, the towns which are guilty of this extravagance contain in all only 5,000,000 inhabitants, we shall have an annual waste of at least ten millions of money." Mr. Smith, of Deanston, also expressed his opinion that, "taking a general view of the subject, we may assume a clear revenue of the sewer-water of all towns of £1 for each inhabitant." Dr. Arnott said that "the value of town manure might be estimated by the fact that a portion of the drainage of Edinburgh has increased the value of these lands by more than £5,000 a year, and that if the whole drainage of London could be saved, at a sufficient distance from the town, the value would exceed £500,000 a year." Dr. Arnott observed that Milan had benefited to a great extent by the adoption of such measures as he suggested; and he then went on to say that "it has been calculated that, whereas the cesspools cannot be emptied by nightmen for less than seventeen shillings a year, and whereas water-carriers get a halfpenny for a pailful of water at the door, an addition of twopence to the rent per week will suffice for the expense of water-closets and of an unlimited supply of water to every house; and that the entire sanitary purposes contemplated under all the recommendations of the Health of Towns Commissioners may be procured for threepence halfpenny a week per house." These calculations might be looked upon as sanguine, but those persons who were best acquainted with the subject knew that much was to be done with regard to economy by adopting efficient sanitary regulations.—*Lord Morpeth's Speech.*

OBITUARY.—At 238, Canongate, 14th ult., Mr. William Snodgrass, surgeon.—At Alloa, 22nd ult., Dr. Russell.—At Lochgilphead, Argyleshire, 21st ult., John Wright, Esq., M.D., much and justly regretted by a wide circle of friends, amongst whom he practised successfully for many years, but more particularly by the poorer classes, to whom his kindness, whether in a pecuniary point of view or in his professional capacity, was always cheerfully and liberally bestowed.—April 19, at his residence, Sans Souci Villa, Entrehill, Bath, aged 78 years, John Gray, Esq., for more than half a century a practising surgeon in that city.—April 23, at his residence, Oakhills, near Taunton, Henry Sully, Esq., M.D., Surgeon Extraordinary to the King of Hanover.—On the 4th inst., at Tottenham, John Ramsbotham, Esq., M.D., formerly of Broad-street-buildings, in the 80th year of his age.

MORTALITY TABLE.

For the Week ending Saturday, May 1, 1847.

Causes of Death.	Total.	Average of 5 Winters.
ALL CAUSES........	983	914
SPECIFIED CAUSES...	981	909
Zymotic (or Epidemic, Endemic, and Contagious) Diseases..............	148	166
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	116	99
Diseases of the Brain, Spinal Marrow, Nerves, and Senses................	156	158
Diseases of the Lungs, and of the other Organs of Respiration	304	275
Diseases of the Heart and Blood-vessels..........	50	29
Diseases of the Stomach, Liver, and other organs of Digestion	86	70
Diseases of the Kidneys, &c.	11	8
Childbirth, Diseases of the Uterus, &c.	13	10
Rheumatism, Diseases of the Bones, Joints, &c. ...	15	8
Diseases of the Skin, Cellular Tissue, &c.	4	2
Old Age.................	63	57
Violence, Privation, Cold, and Intemperance........	15	26

No. 393. SUMMARY. May 15.

A COURSE OF

LECTURES ON SURGERY,

BY

SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London, Consulting Surgeon to London University Hospital, &c.

LECTURE V.

At the conclusion of my last lecture I was speaking of the buffy coat, or, as it is sometimes called, the inflammatory crust which is usually observed on the blood abstracted from patients suffering from inflammatory diseases. The buffy coat bears a striking resemblance to size; and the the blood is often said to be *sizy*. In many instances such contraction of this buffy coat takes place during the coagulation as to raise the edges of the clot, and render the surface of the coagulum concave, and then the blood is said to be cupped. In cases where the buffy coat is thick, the texture of the subjacent crassamentum is proportionately loose, as if the greater portion of the fibrine which gives firmness to the crassamentum were collected at the surface of the clot. In inflammatory diseases it would appear that there is a strong tendency in the blood to to throw off its fibrinous matter; and we see this both in the body as well as out of it: large quantities of coagulable lymph being thrown out in the cavities of serous membranes, or into the cellular tissue of other parts. The buffy coat forms on the arterial as well as the venous blood in cases of inflammation, as in blood taken from the temporal artery, where from any circumstance there has been an objection to taking this fluid from the veins. Dr. Tweedie was the first to observe this fact. We do not very well understand the process by which the buffy coat is produced. Mr. Hunter explained its formation in the following manner:—He attributed it to the slowness of coagulation of inflammatory blood, which allowed time for the more complete subsidence of the red globules, which are the heaviest part of the blood, and this more complete subsidence allowed a layer of fibrine to collect at the surface of the clot almost free from globules. A strong objection, however, may be raised to this explanation, that, if it be true, we should always find more or less of the buffy coat on healthy blood, inasmuch as time is required for the completion of the coagulation. The buffy coat is absent also in all those cases where the blood does not coagulate after death, as is the case in animals which have been chased to death, in those killed by lightning, or by a sudden and severe blow on the stomach. In these cases we do not find any buffy coat, although ample time is allowed for complete subsidence of the globules. Hence we may infer that mere slowness of coagulation affords but an imperfect explanation of this phenomenon. The buffy coat demands considerable attention from the surgeon as well as the physician, because it yields, to a certain extent, evidence of the existence of inflammation, and affords an indication for the further employment of bloodletting and other antiphlogistic measures. It will excite some surprise, that there should be any doubt of the existence of inflammation, when you take into consideration the signs of this affection I have heretofore noticed; but the detection of inflammation is in some cases by no means an easy matter, especially when it attacks deep-seated parts, where it is entirely out of the reach of ocular or manual examination. The results might be serious if we mistook inflammation for some other affection requiring an opposite plan of treatment: for in some cases our decision on the propriety of bloodletting may affect the very life of the patient. Experience will soon convince you that this is a fact.

It is necessary that I should now explain to you how far the presence of the buffy coat may be depended on as indicative of the existence of inflammation; and, in commencing your future practice, you will discover how important it is to have some guide to the use of the lancet in this disease. The doctrine that the presence of the buffy coat is an indication for bleeding, must be taken with some limitation: for, although it is a fact that the blood of patients suffering from inflammatory disease is usually buffed, yet it often occurs where no inflammation exists, and where you would do wrong to bleed your patient to any great extent, or even at all. Sizy blood occurs in some cases of fever, and also in some nervous affections, when the pulse does not rise above the natural standard. Again, the buffy coat may be altogether absent where severe inflammation really exists. The concomitant symptoms must, therefore, be attended to: the amount of fever, the frequency of the pulse, the nature and situation of the pain, and the general functional disturbance, are points of great importance in establishing our diagnosis, and the indications founded upon it. These considerations, taken conjointly with the state of the blood observed in the first bloodletting, will usually enable us to form a correct diagnosis of the disease, and the amount of its severity.

It has been asserted by some practitioners at Edinburgh, that, although the blood presents no buffy coat in some cases of inflammation, the cupping of the coagulum affords a constant sign of the presence of inflammation. I am induced to think that the cupped state of the clot is a corroborative sign of the presence of inflammation. In some doubtful cases it may be prudent to take away a few ounces of blood, which can do no harm to the patient, and will give additional certainty to our opinion of the nature of the disease. In cases of deep-seated inflammation, where the signs are somewhat doubtful, our opinion must be based on an examination of the amount and kind of symptomatic fever, as ascertained by observing what functions are disturbed, and noticing whether the blood is buffed, and whether it is cupped. Inflammations of internal or deep-seated parts may be attended by the usual effects of inflammation, and produce swelling, redness, induration, suppuration, mortification, and others of its less frequent results. These are discovered in the *post-mortem* examination of the patient, although they may not have been discoverable during life. In a former lecture I told you that heat, redness, swelling, and pain were the ordinary symptoms of inflammation, although the whole of these might not be present in a particular case. We must not, however, rest satisfied with the knowledge that these are the usual signs of inflammation; we must investigate their causes. Redness, then depends on a dilatation of the capillary vessels of the part, which are so increased in diameter as to allow a much larger quantity of blood to accumulate in them. They are, however, not merely dilated in a passive manner; they are positively injected with blood, there is an excessive turgescence—a vascular congestion or hyperemia, as it is called by Andral. Some theoretical writers on inflammation have supposed that the minute arteries were affected with spasm, and constricted so as to force the blood in larger quantities into the minute veins, which, being dilated, render the part redder and more turgid. A serious objection to this theory is, that we are unable to determine where the arteries terminate, and the veins commence. It was the opinion of the celebrated John Hunter, that in some instances new vessels were produced, and that some portion of the redness might be accounted for by that circumstance; but this cannot frequently occur. Parts which are in their natural state colourless may be strongly reddened by minute anatomical injection; and this proves that the dilatation and turgescence of the capillaries may cause preternatural redness, by admitting a much larger supply of blood than under ordinary circumstances. Tendons and other parts which are not naturally red become coloured by inflammation. In the healthy condition you cannot produce redness of a tendon by the finest anatomical injection, but when a tendon has been inflamed, the injection penetrates vessels which are naturally too small to admit it, and the tendon is easily reddened. Many vessels which, from their minuteness, are not visible in the healthy condition of the part, are so much dilated by inflammation as to become visible, and hence the doctrine, that new vessels are formed during inflammation, must be received with great caution. A very common result of inflammation is the destruction of the transparency of the parts. This change is readily observed in the inflammation of the arachnoid and other serous membranes, which, from being transparent, become perfectly opaque when inflamed. This change,

common to all serous membranes as well as the transparent tunics of the eye, is brought about by the deposition of coagulable lymph either on their surface or within their texture. A preparation, still preserved in the museum of the College of Surgeons, shows the effect of inflammation in destroying the transparency of a part subjected to its influence. Mr. Hunter froze the ear of a rabbit and then thawed it, after which the ear became strongly inflamed. While in this state the rabbit was killed, and the vessels of the head injected. The two ears were dried, when it was found that the healthy ear became quite transparent, and its vessels of a natural size, while the inflamed ear was opaque, thickened, and otherwise enlarged.

Swelling, another of the signs of inflammation, is caused by the greater amount of blood in the part as a result of their dilatation, and by the effusion of coagulable lymph into the surrounding cellular tissue. In inflamed parts the action of the absorbents appears to be diminished or altogether interrupted, which may have some influence in increasing the swelling.

The sensation of heat in an inflamed part, of which patients so grievously complain, is usually much greater than the actual rise of temperature as shown by the thermometer. The fallacy of our sensations, as a measure of heat, is equally observed in cases of fever, where, judging from the dry and hot skin, we should imagine that the heat was considerably raised above the natural temperature; but, when we apply a thermometer, we find that the utmost increase is five or six degrees. Mr. Hunter made some experiments to ascertain the actual increase of heat in inflammation. He produced inflammation in the chest of a dog, and in the abdomen, rectum, and vagina of an ass, but was unable to detect any rise of temperature. In a patient who had undergone the operation for hydrocele the heat increased from 92° to 98½°. Some authors have attributed the increase of heat to greater velocity of the circulation; but this explanation cannot be received, because the same increase of temperature has been observed in a patient whose pulse was not more than forty-five in the minute. Moreover, the current of blood in the capillaries of the inflamed part is now well known to be slower than in the healthy condition.

The pain of inflammation has been attributed to increased sensibility of the nerves of the part; the unusual circumstances in which they are placed; the changes taking place in the inflamed part to which they are distributed, or to inflammation of the nervous fibrillæ themselves. To which of these, or indeed to what cause, we must attribute the pain is extremely uncertain, and I shall not lose time in discussing these speculative questions. Throbbing, which is a frequent accompaniment of inflammation, is attributed to the strong pulsation of the arteries. It was the opinion of John Hunter, that not only the arteries in the inflamed part, but also those leading to it, pulsate with increased vehemence. In whitlows, for example, the radial and ulnar arteries beat with increased force, and this force he attributed to their unnatural dilatation. The first act of inflammation is compared by that celebrated physiologist to a blush, after which a new action is set up, followed by an effusion of coagulable lymph and serum, which produces the tumefaction so often observed around an inflamed part. Serous membranes are the parts, as I have already remarked, that are most liable to adhesive inflammation. When inflamed, they throw out coagulable lymph with equal ease and rapidity, which after some time becomes organized, and converted into bands of cellular tissue. The radical cure of hydrocele depends on this property of serous membranes; and the coagulable lymph which glues the surfaces of the tunica vaginalis together subsequently becomes organized. Adhesions of the pleura pulmonalis to the pleura costalis, of the investing with the reflected pericardium; of the intestines to each other and to the peritoneum, are the consequences of the effusion of coagulable lymph. In patients who have died of pericarditis we find the heart covered with a layer of this coagulable lymph, which in some cases produces universal adhesion of the pericardium to the heart. Lymph is in like manner effused on the serous surface of the dura mater, between the layers of the arachnoid; while in rarer instances it is deposited on the surface of mucous membranes, as in croup and other forms of laryngitis.

Another result of inflammation is preternatural hardening or solidification of parts. Thus in pneumonia the lung becomes as hard as the liver, and is said to be hepatized. When tumours press upon parts, the exposure of which would be dangerous to life, thickening is produced instead of absorption, the usual result of pressure. Thus in cases of internal aneurism, when the bursting of the aneurismal sac would be attended with fatal consequences, thickening of the superjacent parts is produced until, by the increase of the pressure corresponding with the increase of the tumour, these parts can no longer resist its ordinary influence, and an opposite action is then induced—that of thinning or atrophy.

Mucous membranes, as I have demonstrated to you, sometimes throw out coagulable lymph; but in such cases the inflammation is of a peculiar and violent character. Here is an inflamed bladder which is lined by a layer of lymph which has exuded during the course of the inflammation. The inflammation was induced by the extreme irritation produced by stricture and retention of urine. There is this difference between effusions of lymph on the surface of serous membranes and into the cellular tissue, that in the former case the lymph remains and becomes organized, while in the latter it is after a time absorbed and disappears. When during the process of organization of effused lymph it becomes vascular, the vascularity is not produced by the formation of new vessels, but by the prolongation of the original vessels of the tissue into it, extending into the lymph like the roots of plants in the soil.

Inflammation is always most violent near the surface, as if it had a constant tendency to spread outwards. Inflammation induced by a decayed tooth, for example, produces inflammation of the surrounding gum, which is almost always confined to the outer side nearest the cheek, which in its turn becomes swelled and inflamed, while the inner side of the gum is but little affected. It would seem that this spreading toward the surface is one of the laws of inflammation; and the utility of this law is frequently very evident, for when we have extraneous bodies or collections of matter in the body, if the inflammation were to spread inwards, the probability of mischief would be rendered much greater, and the chances of cure more uncertain; but, as the inflammation tends towards the surface, it produces changes which end in the expulsion of the offending substance.

The causes of inflammation are divided into proximate and remote. The remote causes are again subdivided into predisposing and exciting. The human body has a natural tendency to inflammation, for if this were not the case, there would be no chance of recovery from certain injuries and diseases; and in this light inflammation may be considered as a salutary process. Moreover, certain constitutions have a greater tendency to inflammation than others, and this disposition to inflammation we term the inflammatory or phlogistic diathesis. Such a state of the system may be innate or acquird. In the latter case it is dependent on the habits of the individual, or on the application of particular predisposing causes. The most powerful of all the predisposing causes of inflammation is plethora, produced by excessive eating and drinking. The practice of high living, generally accompanied by indolence, produces an inordinate quantity of blood, which distends the vessels, and renders the individual more liable to inflammation, and the inflammation itself more difficult to remove. This circumstance is observed in porters and draymen, who consume large quantities of alcoholic drinks, which induce a plethoric state of the system, and at the same time render them very bad subjects for inflammation. These men appear to the common observer in the most robust health, but let them be the subjects of slight injuries, and inflammation follows, of a kind which is almost invariably fatal, and from which persons of temperate habits would suffer comparatively little inconvenience or danger.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), M.R.S., Physician to the Royal Infirmary for Children, &c. &c.

(Continued from p. 210.)

GENTLEMEN,—In a previous lecture, when speaking of the signs of scrofulous disorder, whether of the inflammatory or tubercular character, I necessarily indicated some of the *symptoms* of the *general* malady; but I have yet to draw your attention to some of the more particular ones of tuberculization itself. Of course you will at once perceive that, from tubercular disorder being liable to attack such important organs as the *lungs, brain, mesenteric glands*, the *larger joints*, &c. &c., the symptoms indicating the affection will vary extremely in the different cases, according to the structure or organs in which it is going on or the amount of its diffusion, and as to whether there be intercurrent inflammation, and of what grade, and also according to the metamorphosis the morbid deposit itself undergoes. The symptoms and diagnosis, therefore, of turberculous disease of the lungs, brain, &c., I can only speak to you about when I shall happen to treat specially of *phthisis, hydrocephalus*, &c., and shall, therefore, at present bring before your notice some very general symptoms only. As a general rule you will find that—beyond the symptoms I have already alluded to—emaciation, debility, and fever are the three chief phenomena by which the progressive development of tubercle is mostly accompanied. With these, of course, exist symptoms of a *local* character having special relation to the organs or structure most severely attacked. *Emaciation* is certainly one of the most constant and prominent features of the progress of tuberculization; and although you *may* find children, between the completion of the first and of the second dentition, die with very general deposit of tubercles, and yet without much emaciation, yet, before and after that age, extreme emaciation is seen as the general rule. When severe tuberculization is going on, and there is no emaciation, or at least not much, then the disease is generally very acute in its attack; but, on the other hand, emaciation does not often follow when there is simply chronic tuberculization of the contents of the cranium. If a child above four or five years of age becomes evidently emaciated, and this loss of flesh has not *quickly* supervened upon the decline of an acute malady, but has been present for some little time, you should direct attention to it especially. When emaciation has gradually obtained a certain point, its after progress is often very rapid; and, if diarrhœa sets in, the loss of flesh is seen to be extreme—children often being reduced to mere skeletons. Here, of course, we have superadded, loss of appetite, diarrhœa, affections of the mucous membranes, colliquative sweats, hectic fever, &c.

Debility is another very early symptom. Long before any discharges are present, or colliquative sweats, and even the digestion often good, and no febrile exacerbation, the little patient feels weak, gets thin, and makes "no way." There is a gradual disinclination to mix in the usual sports, at first when more than common exertion is required; afterwards, it will remain constantly quiescent. In some cases it is true, however, that you will find children who suffer under very general and intense tuberculosis, and yet are able to go about until almost the day they die.

I remember a case I had of a boy whose mother was obliged to lock the doors and windows, to prevent him running about in his nightshirt when she happened to leave him. One day, the day before he died, she went out, fastening the door of his bedroom, but not the window. He attempted to get out at the open window, alarmed the neighbours, who immediately spread reports as to the *cruelty* of the mother, and a coroner's inquest was the result. The tuberculosis in this boy was very general, and his brother died under my care a few months afterwards of the same disease. I may remark that in both of these patients the development of hair over the body was remarkable, so were their ravenous appetites and ecthymatous eruptions. Still, in most cases, you will find the depression of power gradually increase until the slightest movement becomes too much to execute. The mother constantly tells you she has brought you her child because "he gets so thin and has no more strength than if he was a baby." Whenever you are told such a story, attend anxiously to such a boy, and be careful to examine for the general and *artistic* characters of the scrofulous tendency.

In young persons, even on the first approach of tuberculization, some degree of *fever* may be said to be present. The type of this fever is subcontinued or remittent, but of course varies in its periods, intensity, and amount of exacerbation, according to contingent circumstances. Once established, whenever it may come on, its course is onward, with a gradual and regular increase of symptoms, and *hectic* becomes established. The perspirations, diarrhœa, emaciation, and debility, become all extreme; but still the amount of the former two vary according to the organ or structure more intensely attacked, or the integrity of which is more essential to the patient.

Serous effusion, I may also notice, as being amongst the less universal accompaniments to tuberculous disorder, although in one particular form it is pretty constant: when the brain is invaded by scrofula, either *primarily* so, or as contingent with the deposit elsewhere, effusion into the ventricles is a frequent phenomenon, and constitutes one of the forms of that important affection — hydrocephalus; sometimes there arise œdema or anasarca of the face or extremities, or effusion into the larger cavities.

I do not think it worth while to detain you with any theoretical disquisitions on what has been called "strumous dyspepsia" and "dyspeptic phthisis," nor with any notice of the conditions of appetite, pulse, tongue, rest, &c.:—this last category of symptoms being easily reasoned upon by you, from the knowledge you already possess of the general principles of medicine.

Important as you will find these three phenomena—*emaciation*, *debility*, and *fever*, and justly guiding you to investigate narrowly their causes, yet they may neither of them be presented to you in sufficient intensity to become prominent enough to be taken notice of, but still the child or youth will evince something is going on very wrong. He may not be very weak, thin, or fevered, and yet present you with warnings of vast importance. These warnings may be comprised in what is understood by the French writers as the feeling of "malaise," "de moins bonne disposition générale," occurring in a child of from ten to fourteen years of age, of the scrofulous diathesis. It is a kind of vague, general morbid condition—a sort of continual oscillation of health betwixt a very doubtful or incomplete and insufficiently pronounced state of malady. The phenomena of which this *malaise* is made up are at first very irregular in their occurrence, the child getting better and worse, worse and better, for some length of time, until at last—if proper hygienic measures have not been had recourse to, or too often, alas! if they have—this feeling of *malaise* gradually gives place to a distinct and easily expressed one of complete illness. We have, then, loss of flesh and power, and febrile crethism is superadded, with what has been called by Fournet an "expression de travail ou de souffrance organique," which is not an expression of pain, but a sort of reflection of feeling instinctive of the gradual deterioration of the body. Now, whatever may be the signs or symptoms by which tubercular disorder is made known to you, of course they will vary in intensity and degree as well as in rapidity of progress; and upon such variation depends what may be called *acute chronic*, and *latent* tuberculosis. The general character of the first, or acute form, is, that it is accompanied from the outset with febrile excitement of considerable intensity. This fever is also less broken into periods, less remitting, than is usual—it is more continued, and sometimes of a very low type; nothing, also, can be gleaned from it as to where the tubercular disease is going on, or how great is its diffusion. Soon, however, you will find that certain local symptoms will be presented to you—cough, dyspnœa, &c.—indicating that the respiratory organs are suffering; or vomiting, constipation, cephalalgia, and finally coma, indicative of the meninges being the parts involved. Until these local symptoms supervene, the true nature of the disease is very liable to be overlooked. Tuberculization of the meninges is the most rapid form of the disorder that we know of.

The *chronic* form is the one most frequently met with, but still not such a *prolonged* chronic form as we meet with in adults. The younger the child the less chronic does it usually appear. In certain cases this form is liable to be confounded with other maladies. Of its symptoms I have already spoken, and therefore need say nothing further here.

The term "latent tuberculization" has been rather indefinitely applied. For instance, it has been made use of to imply cases in which no general symptoms or constitutional signs are very evident, nor any local ones either, and yet the disease be making considerable progress; or, again, it has been applied to instances in which the constitutional symptoms appear *long before* any local ones. Others employ it to express the occurrence of tuberculosis of a special organ, the disease not making itself known by either the constitutional or local signs usually attendant upon it, and yet the fatal event be certainly induced by it, the patient all this time, however, having been known to be labouring under tuberculization of *other* organs of the body. For instance, a child exhibits the usual symptoms of disease of the mesenteric or bronchial glands, but you find no reason (from the want of appreciable symptoms) to believe it suffers under tuberculous meningitis," yet a day before death it is slightly convulsed, or partially paralysed, and upon inspection evidences of the latter disease are seen. Other modes of applying this term also have been followed, more especially in relation to adults. In many cases of latent tuberculization of a special organ in children the "latency" of it is partly owing to the patient labouring under severe disease of some other structure, which by the prominence of its symptoms masks those of the former. But there are cases in which such does not hold good: the disease is overlooked on account of the slight degree of its symptoms, attention not being paid to the organ really at fault, and the child does not labour under any other severe disorder. I have already told you about latent peritonitis, as also of latent forms of tuberculosis of the mass of the brain itself, and shall have more to say upon these points hereafter.

Before passing on to the consideration of the treatment of scrofula, I have yet a few words to say upon some portion of its pathology. You know that, in reasoning upon the nature and cause of any disorder, we generalize as much as we can, and when we have done so, we accept the facts developed by the most extensive generalization as the most ultimate laws we can attain to, and build upon them as our foundation in our theory of the special disease. Generalize and extend our analysis of phenomena as far as ever we like, however, there always will remain a phenomenon beyond which we can no further proceed, and any attempt at explanation of such a phenomenon will be either a venture of a mere hypothesis, or else one unguided by the principles of common sense. It will waver between one and the other according to the amount of possible or probable data to go upon, and their entire want in the opinions of those generally held to be the better able to judge.

As regards the most fundamental law we can attain to in scrofula, it is that there is a diseased state of the blood. We may express this in other terms, or attempt to indicate the nature of the diseased state, but then, I fear, we dive into hypothesis. As to the why and wherefore, also, of this diseased or abnormal condition of the circulating fluid, we can only offer very general opinions. Some, it is true, seem to bear very closely upon the subject in question; others, again, have evidently but a very vague and distant connection with it. You know that the nature of the components of the blood may depend either upon that of the digested matters taken up by the lacteals from the surface of the digestive tube, or on the after actions exerted upon them in the absorbent system, or upon both. The nature of the digested matters taken up by the lacteals may also depend either upon the materials obtained from without, or upon the powers of selective absorption or of appropriation possessed by those structures whose duty it is to take up the proper substances from digested matters and give them to the lacteals. This state of the blood in scrofulous children, therefore, may be brought about either by improper or insufficient nutritive material obtained from without, or from their having a peculiar condition of body by which no proper assimilation can go on even when due and proper nourishment is offered to it; or both these causes, of course, may operate together. The latter statement you may think is indeed vague and indefinite—capable of all sorts of construction, and so in truth it is: when we attempt at extreme generalization in medicine, it always must be so.

I believe you may accept this as truth, however, derived from plenty of experience—that the scrofulous diathesis is transmissible from parent to offspring, and that, therefore, scrofula is hereditary. That the diseased tendency imparted to the child from the parent may be so strong, that do what you like, take all possible care both as regards hygiene and therapeutics, and all may be of no avail in saving the child, even from fatal forms of the disorder. It is equally my belief that a child may be entirely free from the least hereditary taint or disposition, but that it may be fed so badly, both as regards quantity and quality in all their relations, clothed so indifferently, exposed to such depressing powers of life—such as cold, damp, darkness, confinement—that, several of such conditions acting together, shall cause scrofula to be developed in the child so subjected to them. It is my belief, however, that in the greater number of cases the constitution is impressed with an original morbid tendency; but I cannot for a moment think of siding with the extreme opinion of Lugol, that scrofula must always be *transmitted*. You can readily imagine what must be the result, when, as often amongst the poor, both the hereditary taint and a long-continued though mild, or temporary but intense duration of the vital depressors I have alluded to are conjoined together. I am of opinion that bad or insufficient food alone will give rise to scrofula in a child, not hereditarily affected, in particular instances; but usually it must be, and generally is, conjoined with several other depressing circumstances.

That mode of life and state of circumstances which force the parent to bring up her offspring on bad or deficient food, in nine cases out of ten, also involve deficient means of protection from cold, wet, and other climatorial changes; and to which, again, are often *unnecessarily* superadded long-continued confinement in infant and public schools or charities, vitiated, pent-up atmospheres, and noxious influences of a like kind.

In children hereditarily tainted, but yet not evincing any symptoms of tuberculous deposit, an attack of measles and smallpox frequently is followed by irruption, either of the inflammatory

form of the general disorder, its tubercular, or both. Some persons think so of hooping-cough too; but, in fact, any disorder which has been severe, and reduced the vital energies considerably, is liable to induce the often rapid evolution of scrofulous disease in children like the above. Such children might have escaped altogether unless these disorders had occurred. I have seen typhoid fever in several instances the pioneer to the scrofulous disease—a type of fever, let me tell you, more common in children than is generally supposed.* The constitution tainted with syphilis from the parents, and subjected to the vital depressors I mentioned to you before, will soon run into scrofula; and where the two are bestowed at once by the parent, woe be unto their children, for there is no lot worse.

There is one point I must not forget; it is this —can a sound constitution, suckled by a scrofulous wet-nurse, be so made scrofulous? I think it can, but not by the milk containing a scrofulous *germ* in it, and so given to the infant, but by its simply answering to the doctrine I have before laid down, that bad nourishment will bring about such a weak, defective state of body that, on the exposure of the latter to other vital depressors, the general malady will make its appearance. It is true that in those cases in which wet-nurses are employed the other depressors are not so likely to be added, because they occur in the better ranks of life; but, when the constitution is ruined so early in the child, it often requires little else to effect the purpose alluded to, save the fundamental one I speak of.

It may be asked also, is scrofula contagious—infectious? Neither, I believe, though I am not ignorant of some experiments made on the lower animals to prove it to be so. You may know, also, that it is not an uncommon belief that persons can "catch" consumption from another; and I remember to have remarked it was a very prevalent opinion in the north of Africa, when I was there some few years ago. They would not have allowed a tuberculous child to have slept with a healthy one, in case it might have imparted the disease. I believe, also, this notion is more prevalent in warm countries than in cold. But, however right it might be, and certainly is, to prevent such close contact, it is not from fear of *infection* of the particular malady.

Certain articles of diet—*pork*, for instance, has been said to induce scrofula. It may in this way: pork, in its various forms, is generally composed of as much fat as lean, which of course will make a bad article of food for any continuance, and the *lean* of pork itself is not the best meat to eat for any length of time; but whenever pork in its various forms is the *general* article of meat, in the greater number of cases some of the other depressors I have often spoken of are in operation too. A constant vegetable dietary has been considered very bad by one party, whilst another appeals to warm countries, and says it is the best. In high latitudes it is, in my opinion, detrimental in the extreme. In a cold, damp, variable climate like our own, the want of animal food is a constant exciting cause of the irruption of the various forms of scrofula.

I shall, having so long detained you on the pathology of scrofula, in my next lecture pass to its treatment, hygienic and therapeutic; and from what I have to say upon the former you will be able to glean something more as to the causes of this devastating malady.

ORIGINAL CONTRIBUTIONS.

A STATISTIC AND CRITICAL REPORT OF THE EFFECTS OF ETHERIC INHALATION, FROM CASES RECORDED IN THE HOSPITALS OF PARIS.

Translated from the Original of Dr. BURGUIÈRES.

(Continued from p. 198.)

The principal points we now propose to examine relate to the period of time during which the etheric inhalation has been continued; to psychologic phenomena; to the sensitive and motive powers; to the duration of the etheric intoxication; to the phenomena which occur at the time of waking; to the system of etherization hitherto applied to surgical operations, and their consequent phenomena.

DURATION OF ETHERIC INHALATION.

The time during which the etheric inhalation has been continued varies from a few seconds to thirty minutes. With some patients the collapse and most complete insensibility have been produced by five or six inspirations; in other cases the sleep has been imperfect after inhalation for half an hour. These differences may have resulted, particularly in the earlier experiments, from the method of operating; but many of them must unquestionably be attributed to the constitutional character of the patients, since the inhalation was made through the same apparatus and under similar circumstances.

Exclusion of these idiosyncrasies, the sex, the age, and certain habits, exercise a manifest influence.

Women, in general, are subdued much sooner than men: for while the average period of inhalation with the latter has been eight minutes, it has not with the former exceeded four.

Age establishes still greater differences; as we approach infancy the effects are still more rapid. M. Paul Guersant, who has operated on children under fourteen years of age, has never been obliged to continue inhalation more than two minutes, and in most cases five or six inspirations have been found sufficient to produce sleep with insensibility. This surgeon, having to perform the operation for stone on a child of only twenty-eight months old, considered it his duty to abstain from the use of etheric inhalation.

As regards habit, it is remarkable that in those individuals with whom it has been found necessary to continue for the greatest length of time the inspiration of ether, and in such instances occasionally without success, we have met with many confirmed drunkards. One patient, whom M. Blandin could not etherize, declared that he "*could drink* six bottles" without being "*fresh*" (*sans être en train*). Another defied the surgeon to inebriate him with ether: "It is a long time," said he, "since brandy has had any effect on me." Separate, however, from these cases, the number of impracticable patients has been small: since the employment of well-constructed apparatus we may estimate them at less than one per cent.

THE MOMENT AT WHICH THE INHALATION SHOULD BE STOPPED.

Surgeons are not yet uniform in their opinions as to the precise moment when the inhalation should be suspended. Some, M. Blandin for instance, think that we should stop at the second period—when the senses are lost, and the patient is no longer conscious of what is done to him, although the power of sensation is not totally destroyed.

M. Jobert goes somewhat farther—to the commencement of the third period, when the state of insensibilty is complete.

Some surgeons have even gone to the last stage of the third period, and we have seen many of their patients exhibit proofs of etheric stupefaction carried to the last degree—slackening of the pulse, coldness of the extremities, difficulty of breathing, &c. This is, according to our opinion, going too far, and incurring the risk of most serious accidents. We have already observed that asphyxia may result from a protracted inhalation of the vapour. For the same reason, although we have seen it done, we should not allow the patient to be in contact with the inhaling apparatus during the whole period of the operation. It is much safer to have again recourse to the ether, should there appear a too speedy revival of sensation. This practice, of which the foreign journals report numerous examples, in addition to the three cases which have occurred in our hospitals, we recommend as the proper one to follow.

PSYCHOLOGIC PHENOMENA.

The psychologic phenomena observed during etheric intoxication will be found worthy of a special and most profound study; although a suspension of the mental faculties is the general effect of other, we notice sometimes the integrity of all these faculties, or perhaps one alone of them. In this last case etherization may become a curious means of psychologic analysis.

We have seen some patients, notwithstanding the etheric influence, enjoy a free exercise of their intellectual faculties; converse with the operator, to a certain extent assist him, and, remarkable as the fact may appear, although they retained their intellectual faculties undisturbed, the powers of sensation were not less completely extinguished. These extraordinary phenomena have occurred three times to our observation.

But we more frequently discover a singular perversion of the intellect—sometimes, in fact, a perfect delirium. In this case the excitement which is usual during the first period continues or goes on increasing in proportion to the supply of etheric inhalation; nevertheless, the patients continue calm, and the disordered state of their ideas is developed by certain incoherent expressions. This delirium assumes in almost all cases a cheerful character: in two only has it presented the form of furious madness.

Patients do not betray the mental occupation during the time or period of *etheric intoxication; it is, in fact*, when the slumber ceases that they relate their dreams, and recognise those sentiments which an active imagination had created during the stupefaction of every other faculty. But the most remarkable occurrence we met with is this:—The imaginations of their delirium, whether accompanied or not by declaration—(a) their dreams, whether influenced by the pineal gland or the mind, have, in every instance, been perfectly unconnected with the operation.

If amongst those operated on there are any who complain, it is he who, because he is unfortunate, laments that he is born to sorrow; another, that his rights of participation are contested; this one, concerning some gambling dispute; or the jockey, because his horse has been stolen. There has not, however, been one instance in which these patients were not relieved from such an amount of moral anguish as the painful preparations of a surgical operation, and the different details of its accomplishment, do not ordinarily produce. As to dreams of an agreeable character, they have presented a diversity of form more or less vague: one patient contents himself by declaring that he was "perfectly easy;" another, when he revived, gave a poetical description of the enchanted countries he had traversed; a woman believed she had been with God and his angels. On two occasions only with women have we found revealed those (*erotiques*) dreams upon which M. Majendie has so much insisted; and in these two cases there did not transpire the slightest violation of modesty. If, however, the learned physiologist should find that these two facts justify his criticisms, what will he say upon, the case in which a mother, suffering from an immense inflammatory tumour of the breast, and being interrogated as to the satisfaction she had evinced at the moment when, under the influence of ether, several incisions were made by the knife, replied that she "experienced the delightful sensation of her infant relieving her swollen breast of the milk."

The examples we have recorded of dreams and delirious conceptions are sufficient to give some idea of the influence which ether may exercise over the intuitive phenomena by a momentary suspension of soul, without paralyzing its accessories.

Ether produces on the memory an impression the most certain and uniform. Whatever may

(a) This sentence in the original is curious, it runs thus:—"Quo les rêves aiente été sensoriaux ou psychiques."

have been the condition of the other faculties during the etheric sleep—to whatever degree the power of sensation has been affected—there is not on record one single instance where the patient has preserved any recollection of what has been done to him. As regards the question of memory, there has also been remarked a most singular evidence of the concentrated action of ether. It sometimes occurs that the operation itself, whatever relates to it, and the pain which it might occasion, are entirely unknown to the patient, although he remembers with precision every other circumstance which has passed around him—the thoughts which have occupied his mind, and the dreams which he has had; but in almost every instance, and even where sighs of sensibility have been given, he declares that "he has felt nothing—that he is unconscious of having been operated on."

THE STATE OF SENSIBILITY.

The extinction of sensibility constitutes the most important result of etheric inhalation; it is this property which has excited so much attention, and by its accessorial aid has been adapted to the performance of surgical operations. The sense of feeling is not always affected in the same manner or in the same degree. From the declaration made by the greater portion of those operated on, that they have not experienced any suffering, it is generally admitted that there is in reality a total absence of pain; nevertheless, in many cases, the patient is agitated, and cries out when the operator applies the knife. These are evidently signs of agony. It is true, however, as we have seen above, that no defined perception of the cause exists, and that the patient is totally unconscious of that which distresses him; it is true also that the memory preserves no trace of these impressions. Are we, then, to conclude with M. Moreau, of Tours, that "in reality there is no pain, because it is not perceived?" We freely admit that a certain modification of suffering takes place; but we think with MM. Blandin and Louget, that from the moment when an equivalent manifestation took place, the tremor communicated to the organic arrangement must have been the same as if the operation had been performed in the ordinary way. We must moreover observe, that those cases in which a total insensibility supervenes, are by far the most frequent, and that they occur, upon reconsideration of those cases where signs of suffering in different degrees have taken place, in the proportion of four to one.

In some instances, but very rarely, the sensibility, far from being blunted, has been refined to a very high degree by the ether. M. Vidal (de Cassis) has recorded three occurrences of this kind. The operations performed in these cases were on the generative organs. M. Ricord, who has operated under similar circumstances, met with the same results, and observes, that since the employment of ether they cry out a great deal more at the Hôpital du Midi. "Who knows," continues M. Vidal, "whether the ether, rendering insensible the greater part of the body, does not increase at the same time this vital property in some organs? Who can tell whether the generative sphere does not possess the faculty of withdrawing itself from the influence of ether?" It is our duty to observe that observations made in other hospitals do not in any degree approach to a support of this opinion.

We shall not quit the subject of sensation without referring to the strange and isolated action produced in certain cases more properly by ether. Some of those operated on have preserved their general sensibility, though unconscious of pain. They saw, they understood everything which passed around them, but manifested no appearance of suffering. One patient, operated on by M. Velpeau, for a tumour under the ear, "heard the crick-crack of the bistoury, but did not feel it." In short, the sensation of pain is not only in some cases extinguished or subdued, it undergoes a positive transformation and is changed into a sense of tickling, pressure, distention, &c.

(To be continued.)

MIDDLESEX HOSPITAL.*

CLINICAL NOTES.

By E. W. TUSON, F.R.S.,
Surgeon to the Hospital.

CASE I.—Strangulated inguinal hernia. Operation; inflammation; abscess; cure.

William Potter, aged forty-four, was admitted into the Middlesex Hospital on the 18th of March, under Mr. Tuson's care, with strangulated inguinal hernia. He stated that he had been ruptured for the last twenty years, that it came on whilst he was at work as a stable-man; but he did not wear a truss for twelve years afterwards, at which time he changed his employment, and became the driver of a coach, which calling he had followed ever since. About seven or eight years previously he found he could not return the swelling, and went to a surgeon, who reduced it, and adjusted a truss, which he had worn up to the time of the hernia becoming strangulated. In the night of the 15th of March, the patient had a violent cough, when he found the hernia down, and he could not return it. He sent for a surgeon, who employed the taxis without success, and, at the expiration of three days, he was brought to the hospital. When examined, a soft and moderate-sized inguinal hernia was discovered on the right side, which, from its being so soft, induced Mr. Tuson to believe it might be easily reduced, but he was unsuccessful in the application of the taxis. Having observed the beneficial effect of ether in producing muscular relaxation, he considered this a case that would at once yield to its influence, and consequently ether was employed. The patient was fairly under its effect, when the taxis was again resorted to, and continued for at least twenty minutes, but without producing the least satisfactory result. A consultation was, therefore, called, when it was determined that the operation should be performed without delay. Nothing particularly unfavourable presented itself during the several stages of the operation; the intestine was readily returned, and also a portion of omentum, after the division of the stricture. The edges of the wound were brought together by sutures, a compress and spica bandage applied. The patient was removed to the ward, and went on favourably for the two following days; had an alvine evacuation without an aperient.

March 21. The symptoms were all favourable, except that the patient was restless and wished to go home, saying he should have every care and attention at home; but in the afternoon his wife came to see him, when she informed the house-surgeon that she had no means of giving him any assistance or care at home, and begged that he might remain at the hospital. Soon after she had left he became more excited, persisting that he would leave; he then became delirious, so much so that it was necessary to remove him from the ward to a separate room, and use restraints. The apothecary was now requested to see him, who was induced to believe the attack delirium tremens; he ordered ten grains of calomel and three grains of opium to be given immediately, and repeated if necessary.

22. Had passed a restless night, little or no sleep, but he was more quiet and composed; the wound was dressed, it was much swollen and inflamed. The scrotum and penis were also much increased in size. The ligatures uniting the wound were removed. Pulse 100; tongue much furred; skin natural. A pint of porter was ordered. Solution of acetate of ammonia half an ounce; decoction of bark one ounce three times a day.

23. Had passed a better night; had some cold chills last evening; pulse 96; tongue furred. Bowels had acted twice. The scrotum and penis were more swollen and inflamed. There was a circumscribed swelling in the original seat of the hernia, which proved to be an abscess; some healthy pus made its escape when the scrotum was pressed. Poppy fomentation, with extract of hemlock to be applied over the swollen parts, and a small poultice over the abscess. The bandage was not again applied. To take decoction of bark two ounces, tincture of bark one drachm, three times a day; four ounces of wine, two pints of porter, one pint of strong beef-tea each day.

25. Had been progressing favourably. The abscess had discharged freely, and the swelling had diminished. At the lower part of the prepuce there was an irregular ulcerative surface which caused him some considerable pain.

27. Better in every respect; the abscess discharged freely, and the parts were less swollen. From this period he gradually improved, the abscess healed kindly, and after it had done so a small collection of pus discharged itself at the lower part of the scrotum, which afterwards healed, and also the ulcerated surface on the prepuce. He took three grains of disulphate of quinine every four hours; two pints of porter, twelve ounces of wine, two mutton chops, and two eggs, every day. He had been very low, but now began to rally, and went on improving until he was discharged from the hospital on the 16th of April, perfectly cured, and it was not necessary for him to wear a truss.

CASE II.—Compound comminuted fracture of the tibia and fibula, extending into the ankle-joint. Amputation; sloughing of the stump; cure.

Robert Hugkulstone, aged thirty-four, porter, admitted into the Middlesex Hospital on the morning of the 19th of March, under the care of Mr. Tuson, with compound comminuted fracture of the right leg. About half an hour before his admission, while cleaning a lamp, ten or twelve feet from the ground, the ladder slipped from under him, he fell; and a pail of water which hung on the ladder above him fell on his leg, causing the accident. The upper portion of the tibia was seen protruding through a hole in the stocking to the extent of two inches. Upon examination the fracture was found to be between three and four inches above the ankle, the lower end of the tibia being split down completely into the ankle-joint. A consultation was called, and it was deemed advisable to have recourse to immediate amputation, which was performed under the inhalation of ether.

In a few minutes the patient was perfectly under its influence, and the operation was commenced without any evidence of pain; the mouthpiece was then withdrawn, when, in consequence of the apparatus having been previously cracked, a portion of it fell in pieces and was rendered perfectly useless. The patient, before the completion of the dressing of the stump, becoming conscious for want of another inhaler, a saturated sponge was held before his mouth and nose, and after a few inspirations he was again perfectly under its influence. After the patient had been removed to the ward, he expressed his best thanks for the little pain he had felt during the operation. Upon dressing the stump for the first time on the 23rd, there was considerable discharge, which had an unhealthy appearance; sloughing then commenced and extended for some few days, until the whole of the under flap gradually sloughed away, as well as the integumentary covering on the upper surface of the limb to the extent of three inches above the end of the bone, exposing a portion of the tibia, which is dead and will exfoliate. With the exception of the exposed bone, the whole of the stump at the present time (April 20) appears healthy, and is granulating nicely. Although there has been profuse discharge the whole time, his general health does not appear to have suffered; he has been allowed daily since the commencement of the slough (March 24), up to the present period (May 8), porter one pint, wine twelve ounces, a mutton chop, a pint of strong beef-tea, and two eggs, and has been taking,

* "Mr. Tuson sends with the above the following note:—"I shall feel obliged by the insertion of the two following cases in an early number of your valuable journal, as I consider them interesting and instructive; they illustrate the influence of ether under different circumstances."

three times a day, three grains of disulphate of quinine, and an anodyne at night.

Under this treatment the stump has been gradually improving and is considerably healed, although the dead portion of bone has not yet come away. The patient sits up each day, moves about the ward with crutches, and is in every respect rapidly recovering.

74, Harley-street, Cavendish-square, May 8.

OF THE PREPARATION OF GLUTEN BREAD, AND OF THE ADVANTAGES WHICH IT PRESENTS IN THE TREATMENT OF DIABETES, AND OF SOME OTHER AFFECTIONS.

By M. BOUCHARDAT.

Translated for the MEDICAL TIMES by ALFRED MARKWICK, Esq., Surgeon to the Western German Dispensary, and formerly Externe to the Venereal Hospital, Paris, &c.

All works on chemistry contain a description of the process commonly employed for procuring gluten; but, as it cannot be had recourse to with economy for the object we have in view, I will describe that discovered by M. E. Martin, and of which an account is given in M. Dumas' work.

The new process of M. E. Martin, of Vervius, consists in forming a paste or dough of the substance from which the gluten is to be extracted, and then submitting this paste to a continued washing on a metallic sieve, No. 120. We thus obtain, in the liquid, the starch in suspension and the soluble matter; and in the sieve the gluten unaltered, provided we operate on wheaten flour of good quality.

The paste is formed in the same manner as in the making of bread, with this exception, that it is kept rather more firm. About 40 parts of water to 100 of flour are employed, and the paste is allowed to stand during half an hour in summer and an hour or two in winter, before washing it, in order that the gluten may be well hydrated.

Dough, made with the very best flour, may be washed in the summer time twenty minutes after it is formed; coarser flour requires a longer time, which may vary from two to six hours.

The dough is washed over a tub, conveniently arranged and proportioned in size to the number of washings that we wish to employ. On it is placed a metallic sieve, No. 120, lined, for the sake of greater solidity, with a plate of sheet iron, No. 15, having a border round it measuring about twenty centimètres. A tube perforated with holes, placed above the sieve, injects over nearly its whole surface numerous very fine streams of water, the flow being regulated at pleasure by means of a stopcock. In commencing the operation, the tub is filled with clear water, as fresh as possible in summer; the washer then takes a piece of dough, weighing about five kilogrammes, and holds it under the tube; he afterwards places it on the sieve, and kneads it with both his hands, at first gently, and subsequently, as the gluten forms into filaments, with greater force, until the water no longer passes though white.

The fresh gluten, obtained by washing the dough, forms generally rather more than a fourth part of the flour employed. This proportion, however, varies according to the nature of the corn: in that from the south of France it is somewhat greater, while in that from Sicily and Barbary it is often as much as one-third.

This gluten requires to be cleansed by washing from a little bran and some impurities. Having thus obtained the gluten, the following precautions require to be observed in converting it into bread. It is important to use it as fresh as possible, for when it has been prepared for several hours it begins to be impaired, and does not form well into bread. First, then, it is drained, and afterwards mixed, by long and repeated kneading, with one-fifth of flour of first-rate quality, a sufficient quantity of salt, and a little yeast. It is then allowed to ferment, and, when it has well risen, placed in a moderately hot oven, where it is left a sufficient time to drive off as much as possible of the moisture. We thus obtain a very light and rather elastic kind of bread, of a tolerably agreeable taste and smell, and which more resembles cracknels than any other kind of food.

To the dough of this bread, butter, eggs, cream, cheese, &c., may be added, to suit the taste of the patients.

We will now examine the properties of gluten bread, and in doing so we will begin by quoting the passage from the report of the commission on gelatine which relates to gluten.

"*Experiment on the Nutritive Properties of Gluten.*—After these very incomplete trials of the nutritive properties of the immediate principles taken from animals, we wished to examine those of the same principles taken from vegetables, and particularly the alimentary qualities of gluten and fecula.

"Gluten, separated either from wheaten flour or from that of Indian corn, presented to us a phenomenon we did not observe when experimenting with the immediate organic principles, which all occasion, more or less, repugnance in animals obliged to feed upon, or even to eat, them.

"The gluten, notwithstanding it had a faint and somewhat sickly smell, and nothing agreeable in its taste, was taken without difficulty from the very first day, and the animals continued to make use of it uninterruptedly for three months, without any disgust. The dose was from 120 to to 150 grammes per day, and the animals preserved all the appearance of excellent health. This fact was the more striking from its being in opposition to the rule which appears to result from the very numerous facts previously mentioned, namely—that an alimentary substance, especially if it is an isolated immediate principle, is not capable of supporting life beyond a time which is never very long.

"Here, on the contrary, is a substance, formerly considered as an azotized immediate principle, which, without either preparation or condiment, excites neither repugnance nor disgust, and which, uncombined, affords nourishment for a long time.

"Dr. Prout, a celebrated English chemist, resting on the well-established fact, that milk is sufficient of itself to constitute an excellent nutriment, has taken its composition for a type, and has reduced the general composition of the food of animals to the following form:—

"1. An azotized matter, casein.

"2. A fatty matter, butter.

"3. A non-azotized matter, neutral sugar of milk.

"4. Various alkaline and earthy salts.

"Still gluten itself affords nourishment, although more simple in its constitution than milk, or the aliments that are calculated from its composition."

Gluten bread is chiefly employed in cases of diabetes.

In conclusion, I may state that I consider gluten bread a very nourishing aliment, well adapted for persons debilitated either by age, by privation, or by long illness. Moreover, I consider it extremely useful for patients labouring under that affection of the stomach called dyspepsia, or gastralgia, in which saccharine, and sometimes even feculent, matters become rapidly acidified in the stomach, and which, in consequence of this exaggerated physiological result, cause pain often of a very acute character, and hinder the process of digestion.

CASE OF OSSIFICATION AND DILATATION OF THE ASCENDING AORTA—HYPERTROPHY AND DILATATION OF THE HEART—HYDROPERICARDIUM.

By H. EVANS, Esq., Pwllheli, North Wales.

HISTORY.—A married woman, aged thirty-five, the mother of several children, complained of pain in the right hypochondriac and umbilical regions, soon after her confinement. Upon examining the seat of pain, a large prominent tumour was detected, and supposed at the time to be scirrhous growths connected with the right lobe of the liver. The tumour presented no irregularities, but was very tender when touched; her complexion was sallow, and she complained of general weakness. She was lost sight of for six months, when she had, in addition, ascites, and anasarca of the lower extremities, the latter having had the priority; she had had hæmoptysis, and was then much harassed with a tearing cough. Upon auscultating the heart, an unusually loud bruit was audible along the sternum in front of the course of both carotids, and equally distinct on both sides; also behind, throughout the whole extent of the cervical region. Both sides, in front, sounded dull to percussion, the healthy breathing being limited to the upper regions, as she lay upon her back. Behind, there was bronchophony and gurgling over the left scapula, and over the right, small and large crepitation; she had then profuse hæmoptysis, which continued until her death, three days afterwards.

REMARKS.—In this instance a great error was committed in the diagnosis, owing, I may say, to the very unconnected account of the commencement and progress of her complaint; and for this reason only has it any claims for consideration, if any at all; fortunately, however, both for patient and surgeon, it was a case where medicine could have done but little, and art still less, for the patient's relief or cure. Upon inspection after death, the pericardium was found distended with clear serum; the aorta much dilated and extensively ossified, all its cavities much enlarged, the organ itself being three times the size of her fist; all the valves were entire but the aorta, these were prevented from performing their functions on account of the increased calibre of the artery; and their insufficiency as floodgates was very palpably seen by the fruitless attempts to fill the aorta with water. There had been no effusion into the pleura, as was surmised, but both lungs, especially the left, were so much encroached upon by the heart as to present, when sliced, a uniform pitch-like blackness, portions of them when put into water hardly floating; there were no traces of tubercles; the increased density of the lungs, together with the very profuse sanguineous effusion into the bronchial cells and tubes, being sufficient to produce the physical signs described. The liver was healthy, but much displaced during life by the diaphragm and heart; I say during life, for prior to the examination, in fact a few hours after death, the tumour could not be found, owing to the collapsed and rigid state of the diaphragm and adjacent parts.

FUNGOID DISEASE OF THE TESTICLE.

John Reay, aged two years and a half, was brought to me the beginning of December, 1846, with very considerable enlargement of the scrotum. I learned that it was first noticed eighteen months back, and that several physicians and surgeons had been consulted, who had prescribed various remedies without in any way staying the progress of the disease. Upon examination I found the right testicle nearly the size of a cricket-ball, of bony hardness, except one spot, which was soft, and the scrotum covering it thin; the child's health was suffering from hectic, and not doubting the nature of the disease, advised amputation as the only means likely to be of use; this was consented to, but the mother, who was near her confinement, wished it to be deferred until she was in a state to render the attention that would be required; shortly afterwards the skin gave way and hemorrhage of a considerable amount followed. Three days from this, I was about to examine the parts, when a second bleeding took place, and I had difficulty in staying it: the blood came *per saltem* and of a florid red; it was without doubt arterial: the child's countenance was ghastly, and I deemed

delay would prove fatal; therefore, assisted by Mr. Green, I removed the diseased testicle, which weighed over twelve ounces; the greater part of the scrotum was firmly adherent to the gland, which rendered the operation both painful and tedious. The wound healed within a fortnight, and the child's health has much improved.

Cambridge, Feb. 15. R. SOUTHEE.

CASE OF SEVERE WOUND OF THE PUDENDUM DURING PREGNANCY, ATTENDED BY ALARMING HEMORRHAGE, WITH OBSERVATIONS.

By ALFRED H. M'CLINTOCK, M.D.,
Fellow and Licentiate of the Royal College of Surgeons in Ireland; Ex-Assistant of the Dublin Lying-in-Hospital; Vice-President of the Dublin Obstetrical Society; Lecturer on Midwifery, &c., in the School of Medicine, Park-street, &c. &c.

(Communicated to the Dublin Obstetrical Society.)

The following case, which I saw in conjunction with my esteemed friend Dr. Brunker, surgeon to the Louth County Hospital, though possessing no claims to novelty, is nevertheless, I think, interesting and instructive. If not of importance in any other particular, it at least shows what an amount of shock and bodily injury may be sometimes sustained during pregnancy, with impunity to the process of gestation, and without any bad effect on the delicately-organized embryo. The subject of this case was a poor woman of healthy constitution, aged forty, and who at the time of the accident (April 23, 1847) was in the fifth month of her fifth pregnancy. It appeared, so far as we could elicit, that she fell from the eighth or tenth step of a ladder, which she was in the act of ascending, and in the fall the parts of generation forcibly struck against the edge of an open barrel, or water-cask. Immediately upon the receipt of the injury a profuse discharge of blood began to flow from the vagina, insomuch that when we saw her, about twenty minutes after, it was quite manifest she had sustained the loss of an enormous quantity of blood. Her lips and countenance were perfectly pallid and bloodless, and the pulse at the wrist so weak as to be scarcely perceptible. The bed on which she lay, as well as the floor of the room, gave strong evidence that the loss of blood must have been very considerable. On examination we found the entire of the left labium, and adjoining portions of the thigh and buttock, to be the seat of extensive swelling and ecchymosis; and the skin in parts was abraded. The vagina was occupied by a large clot, and when this was removed we ascertained that the meatus urinarius and anterior part of the vaginal orifice were a good deal cut and lacerated, so that in one situation the angle of the pubis was almost denuded to the periosteum. It was evident that this wound had been the source of the hemorrhage (which was not now going on), as there was none other from which it could have come, and the os uteri was perfectly closed, high up, and possessing the characters natural to it at this period of pregnancy. The catheter was with some difficulty introduced into the canal of the urethra; but, this done, it passed on readily without further interruption into the bladder. About half a pound of clear urine was evacuated. Before withdrawing the catheter we carefully examined the tract of the urethra with the finger, and in this way fully satisfied ourselves that, except at the meatus, its integrity was unimpaired. Having thus ascertained the nature and extent of the injury, we proceeded to put in practice the plan of treatment that seemed most advisable under all the circumstances of the case.

As no hemorrhage to any amount was at this moment going forward, some wine was first administered to her, and, so soon as the pulse indicated a return of strength, we introduced a large soft sponge completely into the vagina (which was unusually relaxed); this was accomplished without occasioning any great pain or annoyance. A second sponge was next placed within the vulva, so as to partially occupy the vaginal orifice—the remainder lying between the labia. This done, a T bandage was tightly plied, by means of which the sponges were effectually secured in their proper places. As soon as she was comfortably settled in bed a full opiate was given to her. On the following morning (the 4th instant) we found her greatly improved in every respect. The pulse, though weak, was steady and regular; she had taken some nourishment, and had felt no inconvenience from the vaginal plug, neither had there been any recurrence of hemorrhage. It was necessary, however, to draw off the urine with the catheter, which operation had to be repeated in the evening. Though the bowels had not been moved for two days, we thought it more prudent to abstain from giving any purgative medicine; nor did we meddle with the plug, but just left it as it was. At morning visit next day (5th inst.), she seemed to be going on favourably in every respect, but was complaining much of headache and weakness. She said she had felt the child moving frequently during the night, and as vigorously as before the accident. She did not express the least pain or distress from the presence of the sponges in the vagina; nevertheless, as it was now forty hours since their introduction, we removed them, and syringed the vagina with tepid water. There was no discharge of blood whatever from the wound, which seemed disposed to suppurate slightly; and the contused parts presented merely a swelled and ecchymosed appearance, such as might have been expected. During the week following there was a good deal of purulent discharge from the vagina, but this gradually disappeared. Within a fortnight from the date of the accident she was able to be up and walking about, and only suffered from the weakness and other constitutional effects produced by the enormous loss of blood she had sustained. I may just mention that, for several nights successively, she could not sleep without the assistance of a morphia draught; but after she got up this was no longer required.

It may perhaps be thought scarcely necessary to make any comments upon this case, whose history I have thus briefly detailed; nevertheless I would beg leave to offer a very few remarks. I conceive that the authentic history of every case of a grave nature, such as the foregoing, will furnish illustration of at least one or more points of practical importance, and on this account will possess some degree of interest, though in other respects it may be dry and unprofitable. In the instance before us the leading points deserving of attention are, I think, the following:—

1. The profuse loss of blood which took place from the wound of the vulva, even though it was by no means extensive, or of that particular kind which, by experience we know, is apt to bleed freely. This strikingly exemplifies a fact of considerable practical importance, and one not sufficiently recognised, namely, that the state of pregnancy has a marked effect in rendering the amount of hemorrhage from any wound of the generative apparatus more inordinate than it would be under opposite circumstances. This may, I think, be satisfactorily accounted for by the change which takes place in the vascular condition of these parts after the uterus has become gravid. In the first place we find that an increased quantity of blood is determined to the genital organs during gestation; and, secondly, that the return of this blood is very much impeded in consequence of the pressure exerted by the uterus upon the venous trunks emerging from the pelvic brim

In the second place, the favourable termination of this case holds out much encouragement to pursue the same plan of treatment under circumstances of a similar nature. I once saw a case where life was endangered from hemorrhage consequent on the tear of a large cicatrix in the vagina. It took place after the expulsion of the head, during labour, and the laceration extensively involved the recto-vaginal septum. Here it was necessary to tightly plug the vagina, and to compress the bleeding surfaces against the sacrum, in order to control the immoderate effusion of blood. To this measure there was the less objection as the uterus was well contracted.

Lastly, the case I have narrated shows us in a very striking manner what an amount of resistance is occasionally opposed by the constitution to the operation of causes whose tendency is to interfere with the process of utero-gestation.

I should not omit to mention that, at my desire, this woman was carefully examined with the stethoscope on the 27th instant (that is, exactly three weeks and three days after the accident), and the fœtal heart's pulsations were then strong and vigorous.

2, Gardiner's-place, Dublin.

ANEURISM OF THE ASCENDING AORTA.

By WILLIAM THOMPSON, Esq., Surgeon, Newark.

Daniel Lunn, aged thirty-five, a bricklayer, of lymphatic temperament, returned from his work between six and seven o'clock on the evening of the 1st of April. Sitting down in his house he complained of vertigo, fell back and became senseless. Mr. Dobbs, the medical attendant of the Odd Fellows' Club, to which he belonged, was sent for; in a short time his assistant came, and, finding him pulseless, applied what restorative measures were at hand, and the patient was carried up stairs to bed. Although he became restored to consciousness, yet the pulse could not be felt at the wrist; his countenance was pallid; lips and tongue of a livid colour. Mr. Dobbs saw him soon afterwards, exhibited sp. ammon. a. in camph. julep. every half hour, and ordered brandy.

Afterwards I was sent for on account of my attending his wife in her confinement. To appease her anxiety I sent my assistant, who found him with a livid countenance, cold hands and feet, and no perceptible pulse at the wrist. He gave a mustard emetic that caused him to vomit some undigested ham, and then applied mustard cataplasms to his feet. No symptoms of reaction appearing, he gave ℥ iij. of sp. ammon. a. in toast and water, which had a most beneficial effect; the pulse revived and gradually increased in vigour, and general warmth pervaded the system, the countenance and tongue becoming more natural.

I heard no more of the patient until one o'clock the next day, when his wife came to me, saying he was as bad as before; that his pulse could not be felt, and that Mr. Dobbs had seen him twice that morning, and she was afraid he would die. At her request I visited him immediately; not a pulsation could be felt in the wrist, neither could I distinguish it over the region of the heart. The patient was collected in his mind, and replied to the questions put with little apparent anxiety, although distress was depicted in his features. His lips were livid, the tongue congested, and the finger-nails dark. I gave him ext. capsici. gr. v. in a pill, which he got down with some difficulty mixed in soft bread, and drank after it ℨj. sp. ammon. a. in tepid water: the pulse in a few minutes beat tremulously at the wrist. In half an hour repeated gtt. xl. of ammon. a. with a table-spoonful of brandy in water, which was ejected immediately; it, however, tended to establish and strengthen his pulse, which became more regular, and he felt better. I desired the attendant to give him strong beef-tea, also gruel strongly seasoned with ginger, and keep him quiet. In an hour's time he took one of the following powders:—

℞. Hydr. c. cretâ pulv. opii., a. gr. j.; pulv. cinnam. c. gr. iij.; ft. pulv. 6ta hora sumend.

℞. Sp. terebinth, ℥ij; ol. lini, ℥j.; ft. linim. applicand abdomini ter in die.

In company with Mr. Dobbs I visited him on Saturday the 3rd, at ten o'clock. We found our patient with a tranquil, natural countenance; tongue white and furred; pulse 80, weak and irritable, but compressible; the abdomen rather

swollen and tender between umbilicus and epigastrium.

℞. Ol. ricin., ℥vj statim, as the bowels had not been moved since the first night. Repete pulv. 6ta hora.

4th. The bowels had been well opened five or six times the previous day; had passed a comfortable night; pulse soft and natural; the tongue covered with brown fur in centre, and red at the edge; his urine plentiful, with a flocculent red sediment. Mr. Dobbs and I considered he laboured now under slight dyspeptic symptoms, by having tenderness on pressure at the epigastrium.

℞. Liq. potass., ℨij.; Tr. hyoscyam., ℨiss.; inf. gent., ℥vss. *m.* ft. mist. cap. coch. ij. mag. ter in die.

℞. Hydr. c. cretâ, gr., ij; ext. hyoscyam., pil. aloes c. myrrh. a., gr. iv. *m.* ft. pil. ij. omni nocte cap. Allowed coffee and toast, rabbit and broth, with gruel *ad libit.*

On the 5th, Monday, he dressed and went down stairs for an hour. On the 6th, at a quarter to nine A.M., he suddenly died.

I considered this case exhibited symptoms before death of pulmonary apoplexy.

Post-mortem Examination 26 hours after Death.—The abdominal viscera were healthy, except an enlargement of both lobes of the liver: being incised, they displayed congestion and patulous distention of the biliary veins. On removing the sternum, the lungs were loose, except in the right side of the chest, where old adhesions were found at the upper part; half a pint of bloody serum was collected in each cavity of the pleura, and the lungs were much congested at their bases: being cut into, inflammatory action had been going forward from the obstruction during the few last days of his existence. The pericardium was much distended, and, on opening it, was full of coagulated blood; this was discovered to have escaped from the rupture of an aneurism of the ascending aorta, half an inch external to the semilunar valves, this opening being sufficiently large to admit the point of the little finger. Upon laying open the aorta into the heart, the vessel was in an unhealthy state from deposits within the lining membrane in small pasty patches; the semilunar valves more vascular than is usual. The size and substance of the heart were natural, only more blanched than usual.

MIDWIFERY.—BIRTH OF THE CHILD WITHOUT THE KNOWLEDGE OF THE MOTHER.

Communicated by H. G. KING, M.R.C.S., L.A.S.

Through a professional experience of more than twenty years, attended with almost every variety of circumstance, I remember nothing in my readings or practice that might offer as a parallel to the following cases. I shall abstain from making any comments more than necessary to their elucidation, leaving my readers to supply whatever importance they may think them worthy of. It has been denied that it is possible for the parturient mother to give birth to her offspring unconscious of the fact, unless in a state of coma: by this I mean that state of compression of the brain arising from physical causes. This I conceive to be a state of torpor consequent upon over-mental excitement.

E. T., aged thirty-six years, fair complexion, spare habit; light eyes, somewhat receding in their orbits; nervous temperament, lax muscular structure; the mother of nine children, six of whom are living; had barely reached the seventh month of gestation, when I was requested to pay her an immediate visit. I found her suffering under hysterical paroxysm, occasioned by seeing her husband in liquor—an unusual circumstance. After ordering her to bed, with strict injunctions that she should be kept quiet, I gave her a sedative draught and left her in the care of her nurse, not doubting that the excitement would wear off when the family alarm had somewhat subsided. About four o'clock the following morning I was again summoned to this patient, whose paroxysm had increased. She now presented the following appearance: she was lying on her back; there was a tremulous motion of the eyelids, her features otherwise calm and placid; her breathing natural; pulse 90; head cool; cold water dropped upon the face produced *no change in expression.* I was much astonished on my arrival that a living child had been born, and the placenta had passed; there was no hemorrhage, nor anything but what is common in natural labours. Fluids were swallowed with great difficulty; bottles of hot water, sinapisms, stimulants, &c., were tried without effect. I resolved to watch the case, to see her nature properly sustained, and to await the issue. A period of ten or twelve hours elapsed before any sign of sensibility, and this was manifested, after calling to the patient, by a partial cessation of the tremulous motion of the eyelids and effort made to respond to her name. This dawn of returning reason was not fully established for thirty hours after the attack. I should have observed, that in no instance could the state of the pupil be satisfactorily obtained. Both mother and child did well, and are living now, she having no recollection of the birth nor of any matters connected with the event, nor did she manifest any uneasiness or sign of pain during the expulsion of the child and placenta.

The second case was a female of about twenty-eight years of age, the mother of two children, both living; this was consequently the third accouchement, nothing particular occurring in the former labours. I was hastily summoned to this lady, who had expressed great uneasiness lest I should not be in time. On entering the room, I proceeded to the bedside to assure my patient I was at her service; she spoke and acknowledged the attention, and shortly relapsed into a state which appeared like sullenness; she was lying on the left side, but in a position I wished to improve, and to my repeated directions so to do she paid not the slightest attention. The uterine action continuing for about twenty minutes, a healthy infant was born, and shortly after the placenta came away. This event had scarcely happened, when my patient, looking up, expressed her astonishment at hearing the infant cry; she could hardly be persuaded that it was born, assuring me that she had no knowledge of the event. I had noticed her head huddled in the bedclothes, and supposed it intended to stifle any manifestation of pain; she became perfectly conscious, had no interruption to her recovery, and still declares that the birth of this child is a blank in her memory, and was quite unknown to her.

In neither of these cases is there any object in concealing the truth, both women being married and fond mothers, and had anticipated the event. In the first case the appearance of the patient left no doubt of her assertion; the second was a more transient suspension of the mental influence; but the same assurance is given by both. I was unable to account for the loss of sensorial power here, but after some months epilepsy supervened, and revealed the mystery.

7, Thurlow-place, Hackney-road, May 3.

ON OVARIAN DROPSY.

By J. B. BROWN, Esq.,
Consulting Surgeon to the Paddington Lying-in Charity.

In the report of the meeting of the Medico-Chirurgical Society, held March 23, where a paper was read from Mr. H. E. Burd, "On the Successful Removal of an Ovarian Tumour complicated with Pregnancy," I find some remarks respecting my plan of treatment which demand comment. In the observations made by Dr. Locock, after stating "that he had seen several cases in which pressure had been tried with the most favourable results," he goes on to say, "He thought that the cases treated by Mr. Brown deserved the attention of the profession, though he thought that Mr. Brown was wrong in giving mercury and diuretics, for they were not only useless, but did positive harm. In his (Dr. Locock's) cases Mr. Brown's plan was followed, but no mercury was given, and they went on well." I am glad to have this opportunity of stating that these remarks very much coincide with my present opinion, and I have for some time discontinued the use of mercury in treating patients for ovarian dropsy; and in the last case to which I was called by Dr. Locock, and which he alludes to on the above occasion in the following words, "Four months since, another case had occurred to him: the cyst was simple, the health good, eleven pints of fluid were drawn from the tumour, and firm pressure was applied, and had been kept up to the present time,". I did not use mercury in any form. I intend, very shortly, publishing more fully my reasons for altering the plan of treatment in this respect, and illustrating such reasons by unsuccessful cases. This leads me to the remarks made by Mr. Cæsar Hawkins at the same meeting:—"He had put a question to Dr. Locock respecting a patient of his, because he had doubts regarding the success of Mr. Brown's treatment. Thus two of the cases returned as cured Mr. Lee had discovered were dead, a third had died from suppuration in the sac, and he (Mr. Hawkins) had heard of a *fourth* case which was fatal." When I read this, knowing that *not one* of the cases I had published as *successful* had since died, I waited on Mr. C. Hawkins for an explanation, and he very politely referred me to Mr. Thomas Safford Lee's book, page 161, where I find the following words:—"This plan of treatment has been given to the profession, and apparently sanctioned by a number of successful cases; but I am bound to add that some of those cases, called and published as successful, have come into other hands; and I am authorized by a physician to state that two of Mr. Brown's cases have come under his charge: one died of ovarian dropsy, and, on a post-mortem examination, the cyst was found still to exist as large as before; the other is still ill—the cyst has refilled, and this gentleman has been obliged to have recourse to tapping. This fact reduces considerably the value of Mr. Brown's cases." After reading these remarks, which, although much modified from Mr. C. Hawkins's statement, were equally unfounded as far as regards any cases published by me, I also waited on Mr. Lee, who said that he was authorized by Dr. F. Bird to make the remarks he had made in his book. I then called on Dr. F. Bird, who assured me there was some mistake in the report of his observations as made by Mr. Lee, for that he did *not* say "any cases I had published as successful had since died," but that "several cases had come under his notice, after being *treated* by me, one or two of which had died in his hands, as he (Dr. F. Bird) believed from the effects of my treatment. I subsequently received the following note from Mr. Lee:—"I have communicated with Dr. F. Bird on the subject of your letter to me; who, at my request, has again read the passage of my work to which you refer, and he agrees with me in thinking that the word "published" does not necessarily apply to the observations contained in the lines 28 and 33, page 161; and Dr. F. Bird wishes me to allude to this point as explanatory of the want of correctness, he at first thought, I had permitted to escape me. Perhaps you will again peruse the passage referred to, and, if you are not fully satisfied, I will willingly publish a much more full explanation than may even seem necessary."

It will thus be seen that the whole statement which emanated from Mr. Cæsar Hawkins was founded in error, and, although unintentional on his part, is calculated very materially to damage the mode of treatment I advocate.

I take this opportunity of stating that the last case (that of Mrs. D.), which I published as successful in the *Medical Times*, has not proved so: the fluid returned, and a most malignant scirrhous disease of the uterus has developed itself, which renders it most improbable that she will live much longer.

In 1845 I published the case of Miss E. as successful, wherein it will be remembered there

were three cysts, and each cyst contained different-coloured fluids; this lady married a year afterwards, and became pregnant, and at the full time I delivered her of a healthy child, and then discovered that a fresh dropsy had returned, probably from the formation of a new cyst, because the fluid drawn off was of a different character from that drawn from either of the former ones. My plan of pressure was steadily persevered in, and no mercury was given. She has since continued to suckle her child, and when I last saw them, seven months after her confinement, both mother and child were well, and no appearance of a return of fluid was perceptible.

In concluding these hasty remarks I would wish to observe that all the other cases I have published as successful are still well, and not one has had any return of fluid in the cyst.

27, Oxford-square, Hyde-park.

PROGRESS OF MEDICAL SCIENCE.

France.

ACADEMY OF MEDICINE.

Meeting of May 4; M. Begin in the Chair.

M. Bricheteau read a report on a paper by M. Colles, on the pathogenic history of chronic disease. The author of the essay was of opinion that all chronic disorders had one origin, and when properly combated might in every instance be arrested The reporter could not agree with the essayist in his general views, which, however, he considered to be ingenious. The report, after a short and uninteresting debate, was adopted.

GENERAL PARALYSIS OF THE INSANE.

In a former communication we reported two cases of general paralysis, forwarded to the academy, with the *post-mortem* examination, by Dr. Bellhomme. M. Rochoux reported on these two cases, and the conclusions which were drawn therefrom by Dr. Belhomme. In all similar cases, the author referred the general paralysis to some anatomical change in the cerebral organs.

M. Prus remarked that the paralytical symptoms observed in the insane presented much interest in a pathological point of view, and constituted a question well deserving of the attention of the academy. Esquirol, whose ideas on the subject were in their fullest extent adopted by M. Calmeil, conceived that, although the paralysis was often accompanied with anatomical alterations of the cerebrum, still these were so variable and so numerous that the loss of voluntary power could not be connected with propriety with any one peculiar morbid change. In general, paralysis was looked upon as being constantly the result of a congestive state of the encephalon; this notion was undoubtedly erroneous, and M. Prus was certain that he had recently read the account of a case of paralysis which had been treated by antiphlogistic measures, whilst an opposite line of treatment was indicated, and might possibly have saved the patient.

M. Bouilland was of opinion that the employment of the word paralysis in the cases of insanity alluded to was an abuse, or rather an error, of language. These patients were not in reality paralyzed; no hemiplegia was present. They might, to a certain extent, be compared to those animals whose cerebellum had been more or less injured during physiological experiments.

M. Rochoux, in reply, said that he thought the denomination of general paralysis was perfectly applicable to the cases in question. Loss of power over the voluntary muscles was undoubtedly observed, and in all the cases in which a careful *post-mortem* examination of the brain had been made, alterations had been detected which accounted fully for the symptoms noticed during life.

The report was adopted.

The meeting adjourned at five o'clock.

SOCIETY OF SURGERY.

Meeting of April 21; M. Lenoir in the Chair.

Uterine Hemorrhage during Parturition.—Dr. Senn (of Geneva) remarked that one of the most anxious moments for the practitioner in a case of midwifery was that which follows expulsion of the fœtus—a moment frequently rendered perilous by sudden and abundant flooding. To obviate this accident, Dr. Senn proposed three measures which, although extremely simple, he thought worthy of the attention of the society. The first consisted, immediately after the birth of the child, in seizing the umbilical cord at two inches from its attachment to the belly, and forcing back by repeated pressure the blood into the placenta; the cord should then be tied and divided below the ligature, and no blood would be discharged. The second measure recommended by Dr. Senn consisted in gentle pressure on the abdomen, with a bandage. This plan rendered delivery much more prompt than usual, and it was, besides, assisted by the circumstance that the placenta, distended by the blood forced back into it by previous pressure of the cord, could not follow the retraction of the womb, and was consequently detached speedily and expelled into the vagina. Thirdly, M. Senn considered it extremely important to maintain the perfect immobility of the mother, during two or three hours after delivery, the slightest motion even of the head being in some instances sufficient to cause the separation of a protecting coagulum, and the recurrence of flooding.

LACERATION OF THE LUNG WITHOUT FRACTURE OF THE RIBS, BY DR. GOSSELIN.

This paper was divided into three parts. In the first, the author recorded two cases in which, after an external injury, the lung had been lacerated, without any appreciable fracture of the neighbouring ribs. The damage sustained by the lung was proved in the first case by the stethoscopic signs of a cavity containing a fluid; in the second, by hydro-pneumothorax; and in both by a sanguineous expectoration, which lasted several days. The second section of the paper was consecrated to historical researches on the subject, and the third to a description of the symptoms and to the appreciation of the mechanism by which the pulmonary laceration was produced, and which Dr. Gosselin conceived to be the closure of the glottis at the instant of the accident.

M. Malgaigne observed that the same accident was observed in other cavities—the abdomen, for instance—when, without any appreciable injury of the parietes, the intestine was sometimes lacerated. In such cases science was totally unable to explain the fact, and he was not satisfied that M. Gosselin's theory of the occurrence, as far as regarded the chest, was correct. With regard to the diagnosis, it was sometimes impossible to detect the existence of fracture of the ribs; and in M. Gosselin's cases, fracture might have existed, and caused all the internal mischief, without being recognised. As to the treatment, M. Malgaigne thought that a tight bandage round the chest was the application from which the patients derived the greatest relief.

M. Robert said that it was difficult to admit in M. Gosselin's first case the existence of a laceration of the lung, pneumothorax not having been observed. How could the lungs be torn without effusion of air taking place into the pleuræ? M. Robert could not agree in recommending the use of the bandage praised by M. Malgaigne, as it must, perforce, interfere more or less with the play of the respiratory powers.

Meeting adjourned at half-past five P.M.

At the meeting of the Academy of Sciences of May 5, only two communications were read which presented any connection with medical science. One was a letter from Professer Pirogoff of St. Petersburg, on the influence of ethereal vapours injected into the rectum. M. Pirogoff asserts that their effects are precisely similar to those of the inhaled ether, and confirms the remarks already made on the same subject some months since by an intermittent fever. The other communication was a statistical account of the diseases and deaths caused in the small towns of Bollwiller and Feldkirch by the transformation into marshes of excavations rendered necessary by the construction of the railway from Strasburg to Bâle. M. Doltus Ausset, the author of the letter, states that in Bollwiler, a city of 1446 souls, the gradually increasing proportion of ague has been the following, since the opening of the railway in 1841:—

1842,	36	cases of intermittent fever.
1844,	166	,,
1845,	743	,,
1846,	1866	,,

Within the same time, the yearly mortality increased from 36 to 54. The same results were observed in Feldkirch, where they were even more striking on account of the smaller number of inhabitants.

Epididymitis.—In a former number (see *Medical Times*, vol. 14, p. 342) we published M. Ricord's views with respect to the diagnosis of gonorrhœal epididymitis from orchitis. We have heard recently a clinical lecture by Professor Velpeau which induces us to return to the subject. The distinct crescentic hardness of the epididymis, the preservation of the natural resiliency of the testis, the freedom from adhesion with the skin of the scrotum, and the generally happy issue of the cases, are the leading features which characterize gonorrhœal testis, which must distinguish it from real orchitis. We cannot, therefore, possibly admit with the learned professor of La Charité, that between orchitis and epididymitis a difference of name is the only one which exists. Dr. Ricord points out in the diagnosis of hernia humoralis three causes of error which it may sometimes be difficult to avoid. The first is an anatomical condition frequently met with, and easily recognised, and consists in the epididymis being placed in front of the testis, instead of occupying its usual position behind the gland. In the second anamoly, an error may lead to the most serious consequences. It sometimes happens that the testis is retained above the abdominal ring in the inguinal passage, where it may become the seat of epididymitis and give rise to most of the symptoms of bubo. The region occupied by the tumour, the semi-fluctuation of the testis, the extreme pain on pressure, sometimes even a slight blush of the skin,—all these circumstances recurring together might certainly mislead the surgeon, and induce him to make an incision into the tumour—an unfortunate result which will readily be avoided by a glance at the scrotum. A third and analogous cause of error will be found in the possibility of the testis occupying the perineum, in consequence of elongation of the chord, or of other causes not clearly known. In this region, again, the presence of the painful gland, and its deceptive fluctuation, might induce the belief in the existence of peri-urethral abscess, and the performance of an uncalled-for and injurious incision. The frequency of effusion in the tunica vaginalis, in cases of epididymitis, has led Dr. Rochoux to consider this disease as constituted merely by the inflammation of that serous membrane, "vaginalitis." But the fluid secreted during hernia humoralis is transparent, and contains no fibrinous deposits; we cannot, therefore, look upon this opinion as correct. This liquid effusion seems to be entirely of the "passive" order, and its quantity varies from a few drops to several ounces. Its pressure on the inflamed organ is often productive of intense suffering, and its removal by a small puncture causes in these cases such instant and complete relief, that Professor Velpeau converts the practice into a precept, and a mode of treatment of gonorrhœal testis. In more than 150 cases, M. Velpeau has now employed the method with the most beneficial results, not only when serous effusion was present, and when its removal might be thought desirable, but even when no liquid existed in the tunica vaginalis, and when the puncture served only to withdraw a few drops of blood. The

pain of the incision, says M. Velpeau, is as nothing when compared to that consequent upon the application of leeches to the part, and the danger of wounding the tunica albuginea or the testis is unimportant. M. Ricord recommends, as prophylactic measures against the disease, the use of a suspending bandage during gonorrhœa, and the early treatment of all cerebral discharges and irritations, epididymitis seldom occurring before the third week of the existence of uretritis. For the actual treatment of hernia humoralis, Dr. Ricord advises leeches, poultices, and mercurial frictions, during the first period, and compression with strips of adhesive plaster during the second. As counter-indications of compression, M. Ricord mentions the acute stage of the malady—inflammation "en masse" of the spermatic cord, or abundant effusion not evacuated from the cavity of the tunica vaginalis.

HOPITAL COCHIN.

GANGRENE OF THE LUNG; CURE.—BY M. NONAT.

M., aged fifty-six, a man of weak constitution, was admitted into hospital on January 25. Since ten days he was suffering from general illness, chills, and loss of appetite; three days before admission an acute pain set in under the right breast—cough and a rusty expectoration appearing at the same time. On admission the pulse was found at 110; skin hot; cough frequent; bowels confined. Percussion and auscultation demonstrated the presence of hepatization of the two lower thirds of the right lung (dulness, souffle, &c.); twelve ounces of blood were immediately removed from the arm. On the morning of the 26th, respiration seemed somewhat more free, but the pulse remained at 116, and the physical signs were the same as the preceding evening. Venesection was again repeated morning and evening (twelve and eight ounces). The next day some improvement was noticed; the pulse had fallen to 98; the souffle was less intense, but no vascular murmur was distinguishable in the suprà spinal fossa. In the evening, the amendment not having increased, the venesection was again resorted to. During the two next days the symptoms underwent considerable amelioration, although the superior part of the right lung still remained dull on percussion, and impervious to air. In the other parts of the viscus the bronchial respiration had been replaced by the "crepitatis redux." The expectoration during the ensuing days acquired a characteristic fetidity, and all the physical signs of a cavity showed themselves in the superior lobe of the lung. The pulse descended to 92; the face was pale and earthy; wine and bark were prescribed. In the space of ten days the sputa lost their odour, and the patient recovered gradually up to February 18, when he was discharged, still presenting in the region corresponding to the spinous process of the scapula all the physical signs of a pulmonary excavation.

This case is considered by M. Nonat to have been one of gangrene of the lung; it seems to us that such a diagnosis rests only upon the formation of a cavity and the fetor of its contents, two circumstances which might be coupled with a more frequent and less fatal consequence of pneumonia than gangrene; we refer to acute abscess. The almost constantly fatal termination of gangrene of the lung induces us to imagine that such may have been really the case, the fetid expectoration so constant in gangrene of the respiratory organs not being confined to that disease, but appearing also under other circumstances. We are aware that in general the frequency of pulmonary abscess is not admitted; but we are supported in the contrary opinion by the authority of Gendrin and others. In the present instance the progress of the case, its rapidly favourable termination, the signs derived from auscultation, can leave no doubt whatever of the fatal termination of a circumscribed abscess. Was it a gangrenous cavity?—that is the only question, and we cannot think the fetor of the expectoration a sufficient or an absolute proof of the fact.

D. M'CARTHY, D.M.P.

The Use of Inoculation in Syphilitic Buboes.—Suppurating buboes, Mr. John Hamilton, surgeon to the Richmond Hospital, Dublin, observes, generally present themselves in two forms: either in an oblong tumour over the centre or inner third of Poupart's ligament, superficial and freely fluctuating from one end to the other; the integument red and thinned nearly equally over the whole swelling, with nothing like well-marked pointing. It is best to open this bubo through its whole length. The second form is rather more deep-seated, of a rounder shape, with a hard base, the fluctuation in the centre, and there is more decided pointing. Here the opening with caustic alkali is most beneficial, allowing, when the slough separates, a free exit to the matter, and setting up a change of action in the part which tends to the dissipation of the indurated basis. A superficial bubo often heals, after opening, in a few days, but in other cases the most anxious part of the treatment begins. After opening, the wound may assume a chancrous character, and, in order to ascertain its real nature, take a portion of matter for the purpose of inoculation. If this should produce a specific pustule and ulcer, the patient, besides careful local means, should be subjected to mercurial treatment, as the most effectual and rapid way of healing the sore, and ridding the constitution of the virus; but, if no specific ulcer follow inoculation, the bubo may be treated by simple local applications.—*Dublin Quarterly.*

Placenta Prævia.—Dr. Tyler recommends the following course of practice to be adopted in all cases of placental presentation, where the practitioner has been in attendance from the commencement of the hemorrhage:—In cases of partial presentation, to rupture the membranes immediately, and evacuate the uterus of all its fluid contents. After the escape of the liquor amnii, if vigorous uterine action should not ensue, to endeavour to promote it by friction over the fundus uteri, the application of a binder, the administration of the ergot of rye, or the use of galvanism. In complete placental presentation, when the os uteri is rigid and undilated, never to attempt extraction of the placenta through it in that state, but to plug the vagina carefully by means of a soft sponge, previously steeped in cold vinegar and water. As soon as the os uteri is sufficiently dilated to admit the hand, to seize a foot and deliver cautiously. Should there be no doubt of the death of the child, the head presenting, to deliver by the crotchet after lessening the head. The cessation of the hemorrhage after the extraction of the placenta being attributable to the entire escape of the fluid contents of the uterus, thus allowing the child to press against the bleeding orifices of the vessels, in certain cases the placenta might be pierced with a catheter to allow the waters to escape. This operation is applicable when the feet present, or when craniotomy is decided on.

Microscopical Observations on Icthyosis.—M. Nicolucci has made the following observations of this disease in a woman aged seventy, and who had been afflicted for five years. The scales which had detached themselves, seen with the naked eye, appeared to resemble shagreen; viewed on their adherent aspect, they appeared to be areolar; viewed on their perpendicular aspect, they appeared to consist of small columns, one extremity of which rested on the skin, the other forming the superficies of the eruption. Under the microscope, the same columns were observed to be tubular, and united by some inter mediate substance. The investing membrane appeared destitute both of cells and fibres. In the interior of the tubes were seen cells of 1-60th to 1-100th of a line in diameter, with nuclei of 1-240th of a line; each nucleus contained a nucleolus. Of these cells, some were oblong, others many-sided; each contained from one to five nuclei. The intertubular substance was composed of cellules of 1-100th to 1-160th of line in diameter, with nuclei, but no nucleoli. This substance, as well as the tubes, became transparent under acetic acid. The preceding results appear to show that the new production of icthyosis has a greater affinity to certain horny growths than the implication of the epidermis alone.

Chorea.—Dr. Graves asserts that, having tried the sulphate of zinc in certain spasmodic diseases, no other single remedy is so generally useful. The sulphate of zinc may be given simply dissolved in rose-water, in half-grain doses, repeated often in the day. When tolerance of the salt on the part of the stomach is obtained, it will be often borne to the amount of ten or fifteen grains in the day; but the effects must be studied, and the smallest quantity used that will insure a cure.

Psoriasis.—When this disease affects the scalp and ears, back of the neck, and forehead, Sir Philip Crampton adopted with success the following treatment:—A sixteenth of a grain of corrosive sublimate, dissolved in half a drachm of spirit of wine, is to be taken three times a day, in four ounces of a mixture composed of equal parts of infusion of yellow bark and decoction of sarsaparilla, together with Donovan's liquor cinchonæ and the fluid extract of sarsaparilla. With this internal treatment he applies to the part dilute citrine ointment, with the addition of one-third of ung. ceræ alba. The above internal remedies are often useful in scrofulous ophthalmia.

Cod-liver Oil in Struma.—Under the influence of this oil, according to Dr. Graves, the enlargement of the cervical glands in young persons of a scrofulous habit frequently disappears, and the tendency to the formation of phthisis and the recurrence of strumous hemoptysis is occasionally overcome.

Traumatic Tetanus: Administration of Ether.—Mr. Broughton, of Dobcross, near Manchester, amputated the arm of a man, below the elbow-joint, in consequence of a severe injury. One week after the operation, symptoms of tetanus manifested themselves, which for two days were treated with turpentine as an enema, calomel, opium, and belladonna, without any of the remission of opisthotonos. The inhalation of ether was then tried, which soon affected the system, and immediately all spasms ceased, and a comfortable sleep came on, which lasted ten minutes. When this terminated, the contraction returned, but with less violence; the ether again used with the same result; and, on the third application, he was left asleep, and could open his mouth better. The patient was most anxious to have it again, but a succession of spasms came, and before the ether could be used the man died.

Variola.—A common precursory symptom of this disease, and not met in rubeola or scarlatina, is lumbar pain. The first pustules are usually observed on the upper lip, cheeks, and forehead, frequently on the velum palati, before any other place. The palatine pustules run their course more rapidly than others, and arrive first at maturity.

Camphor in Incontinence of Urine.—M. Guerard has treated a case of incontinence of urine, apparently arising from phlogosis of the neck of the bladder, with enemata containing four grains of camphor dissolved in yolk of egg, and mixed with a little water, so that it might be retained in the rectum. This removed the disease for some time, but, it having returned again, it was once more removed by the same treatment, and the cure seems to be permanent.

Diagnosis of Tumours.—M. Küin, professor of physiology in Strasburg, has invented an instrument which seems likely to be very useful in the diagnosis of various kinds of tumours. It consists of an exploring needle, having at its extremity a small depression with cutting edges. The instrument, plunged into the tumour to any depth, extracts a minute portion of the tissue of which the various layers are composed. In this manner a microscopic examination of the tumour can be practised on the living subject, and its nature ascertained before having recourse to an operation.

Excision of the Head of the Femur.—Professor Textor, of Wurzburgh, has performed this operation with complete success on a boy ten

years of age, labouring under caries and spontaneous luxation of the hip-joint. Only two similar cases are on record: one by White, the other by Ferguson. Textor and Ferguson cut through the bone below the small trochanter. The patient of the former now walks without crutches.

White Oxide of Antimony in Pleuro-Pneumonia.—M. Rostan has treated a very severe case of this disease (in which bleeding was inapplicable, and tartar emetic caused violent vomiting) with white oxide of antimony, in doses of half an ounce daily. It was well tolerated by the stomach, and the disease under its influence conducted to a favourable termination.

Spontaneous Rupture of the Uterus in the third or fourth Month of Pregnancy; Absence of the Os Tincæ, &c.—A young female, aged seventeen, was seized with violent pain accompanied with vomiting and faintness; and after a short time expired. Upon a *post-mortem* examination, the abdomen was found filled with coagulated blood, which surrounded a fœtus of the third or fourth month; uterus ruptured along the right side, from the fundus to near the neck; left ovary and fallopian tube entirely wanting; the right fallopian tube entered the uterus near the neck, and the ovary was lower than natural. On examining the neck, there was no trace of an os tincæ, nor could any communication be discovered between the uterus and vagina. The preparation is placed in the Buffalo Medical College.

Aneurism spontaneously cured.—A man, after bleeding, had a tumour form over the place of puncture, which was soft, pulsating, subsiding on pressure, and filling again when the pressure was removed; which ceased to pulsate when the brachial artery was pressed, and in which the bellows sound was distinctly heard. The patient objected to an operation, and in three months from the injury, the tumour had spontaneously decreased to the size of a filbert, movable and incapable of diminution. This unexpected result is attributed to the quiescent state of the limb.

Condition of the Urine in the Insane.—Dr. Erlenmeyer observes that the urine may occur in two opposite conditions in insane persons: first, it may be pale, deficient in solid constituents, especially in uric acid and its combinations; secondly, exactly opposite to the former, being high-coloured, rich in solid constituents, especially in uric acid and the urates, and consequently of a high density in idiots and epileptics. Urine of the first variety has a great tendency to become alkaline, especially in maniacs. The tendency is less marked in melancholics. Decomposition of urea is the cause of this alkalinity: it occurs, therefore, more rapidly in summer than in winter. The more tendency there is in the urine of melancholics to become alkaline, without any organic disease of the spinal cord or brain to account for it, the greater liability is there of the case becoming worse, and passing into one of mania. In the second variety the urine has little tendency to become alkaline: indeed, it often retains the acidity for a considerable time longer than does the equally acid urine of healthy persons.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, April 27.—J. M. Arnott, Esq., F.R.S., President.

On the comparative weights of organs in natives of India, and Europeans.

By E. A. Parkes, M.D., Assistant-Physician to University College Hospital, and late Assistant-Surgeon to H.M. 84th Regiment.

The results contained in the paper are derived from twenty-three observations in male Asiatics, chiefly Hindoos, and thirty-eight European soldiers. The tables show a considerable preponderance of weight, on the part of the Europeans, in the following proportions (the weights in the Hindoos being taken as unity): of cerebrum, as 1 to 1 1-6th; the cerebellum, as 1 to 1½; the right lung, as 1 to 1 1-7th; the left lung, as 1 to 1 1-6th, nearly; the heart, as 1 to 1¼; the liver, as 1 to 1⅓; the spleen, as 1 to 1½; the pancreas, as 1 to 1⅓; the right kidney, as 1 to 1⅓; and the left kidney, as 1 to 1⅓.

As the weight of organs in the same race and sex varies according to the age and the height, it is necessary to reduce these conditions to the same standard. (Tables are given of these particulars.)

Age and height being equalized, the disproportion between the two races is reduced, but not entirely got rid of. Assuming the weights in the Asiatics to be as unity, they are, to the Europeans, as follows: of the cerebrum, as 1 to 1 1-9th; the cerebellum, as 1 to 1 1-11th; the right lung, as 1 to 1 1-9th; the left lung, as 1 to 1 2-11ths; the heart, as 1 to 1 1-6th; the liver, as 1 to 1 3-7ths; the spleen, as 1 to 1⅓; the pancreas, as 1 to 1 2-5ths; the right kidney, as 1 to 1⅓; and the left kidney, as 1 to 1⅓, nearly.

After considering these points at some length, and deciding that the differences between the weights in Europeans and Asiatics are not attributable to differences of height, age, or unfavourable hygienic conditions, on the part of the latter nation, the weights in the Asiatics are examined more in detail.

The author observes, that the numbers examined are so few that he should have hesitated to bring them before the society, but that, first, he was unaware of similar observations having been made, and he therefore hoped his cases might afford assistance to any one who had the opportunity of pursuing the subject; and secondly, that though the observations are on so limited a scale, he was struck by the great uniformity of result.

As from the tables given in the paper it appears the inferiority of the weights of the organs of Asiatics is not attributable to differences in age or height, the author thinks it a fair inference, that the form and general conformation of the body—such as the respective length of the trunk and extremities, &c.—are the circumstances which exert the greatest influence on the size and weight of the several organs, *i. e.*, the inferiority in weight is explained by reference to inherent differences of race and nation.

What, then, is the cause of the difference? Is it to be presumed (the author inquires) that this is acquired from the peculiar mode of living, the usual food, the accustomed occupations, and the several influences of climate and situation? These points are dwelt upon at some length, and the author concludes by expressing a hope that the medical officers of the army, whose field of observation lies within the tropics, will shortly supply us with additional means of deciding upon the correctness and importance of his few observations.

Dr. Parkes replied to the chief of the observations made. All the persons on whom he had made his inquiries were vegetable feeders; they were prisoners, and allowed only the gaol diet, which consisted entirely of vegetable matter. The majority of these persons, too, were of a high caste, and had, probably, never tasted animal food. He was aware that many of the lower classes in India did indulge in animal diet. It was to be remembered that the liver and kidneys in the persons he had examined were less in proportion to their size, whilst the cephalic and thoracic organs were not so.

On fracture of the lower extremity of the radius.

By Professor Fenger, of Copenhagen. [Translated from the Danish by H. M. Shaw, Esq., and communicated by Dr. Hodgkin.]

The author commences his paper by deprecating the love of display which he attributes to men of science in the present day, and which, he says, too often renders discoveries, in their estimation, secondary in importance to the notoriety of the discoverer. To this cause he assigns the want of interest with which the observations of Dupuytren and Malgaigne on fracture of the radius were first received. He then directs attention to a tabular view of 140 cases of fracture which came under his notice during nine months that he was on duty as surgeon to the Royal Frederick's Hos[illegible] which it appears that thirty-one were [illegible] of the radius, and only one of the ulna alone; and from this table he infers that the radius is more frequently fractured than any other bone, and more than twice as often as the fibula. [illegible] the difficulty attending the diagnosis the author attributes the long neglect of this fracture, [illegible] the frequency of its confusion with sprains of [illegible] wrist. Under the head of "Causes" of [illegible] peculiar fracture, the author gives another ta[illegible] of the thirty-nine cases which came under [illegible] notice, from which it appears that the accident was rather more frequent in men than in women, and that age predisposes to this lesion. In treating of the symptoms of fracture of the radius low down, the author associates great importance with the deformity, as a diagnostic sign [illegible] the injury in question may be disti[illegible] from sprain. The straight line extendin[illegible] the radius and metacarpal bone of the [illegible] appears to be broken in two places: first, closely over the styloid process of the radius; secondly, between the carpus and metacarpus. This line is hereby divided into three parts, of which the superior and inferior portions are parallel, and the centre and shortest one forms an angle with the other two, thus forming a figure something like the letter Z. Of these two angles the upper one is always present in this fracture, and remains unchanged by any position of the arm. Fracture of the lower extremity of the ulna, extravasation into the articulation, and luxation of the radius from the ulna, constitute the complications which Professor Fenger has met with in cases of fracture of the radius low down. In the greater number of the cases the author found that the fracture was oblique, beginning on the palmar side of the lower end of the radius, a little above the articulation, and proceeding upwards towards its dorsal aspect, where it terminated from an inch to an inch and a half above the joint. He believes, however, that the fracture is more often transverse than is generally supposed.

After commenting on the splints and treatment recommended by Dupuytren, Stromeyer, Velpeau, and Blandin, and stating his opinion of their insufficiency in difficult cases, the author proceeds to describe the plan of treatment he has found most successful. He states, that as the deviation occurs in a curve, with its centre upon the fracture, it is desirable to counteract the deformity by extension acting in a direction according to the tangent of that curve. This end he thinks is best attained by acting through the medium of the hand and of the capsular ligament which is attached to the lower end of the radius. The hand is first to be brought into a position of strong flexion, and the forearm is then placed on an oblique plane, with the carpus highest, the hand being permitted to hang freely down the perpendicular end of the plane. The tendons of the extensor muscles are thus brought into a position which enables them to assist in keeping the reduced fragments of the bone in proper relation. Where the deformity requires it, the displaced lower fragment is to be pressed into its position by the thumb of the operator, after sufficient extension has been made, and when the hand is bent on the forearm. The patient is to be kept in bed, but the hand is not confined, the seat of fracture being covered only by an evaporating lotion. Out of the thirty-nine cases under the professor's care at the Frederick's Hospital, he failed but in one in effecting a cure. He has found a similar plan of treatment equally successful in fractures of the radius higher up the arm.

Mr. Partridge presented a dissection of a fracture of the lower extremity of the radius, the fracture having passed obliquely through the lower end of the bone, cutting off the styloid process, and passing into the articulation. The

man had been admitted an out-patient in King's College Hospital, with comminuted fracture, which was treated on the usual principles, but in a few days after the accident he came into the hospital, abscesses having formed, and pieces of bone having come away, and he had ultimately been obliged to perform amputation of the arm. Mr. Partridge believed that the fracture was most frequently oblique, and considered it as one very difficult to treat satisfactorily.

Mr. Shaw was aware that this fracture had been termed in Dublin, Colles' fracture, having, many years ago, been described by that distinguished surgeon; but until the year 1834, its pathology had remained comparatively unknown. The frequency of its occurrence, and the difficulty attending the diagnosis, had been admitted. When existing in a slight degree, it was liable to be mistaken for a distortion or dislocation of the wrist, and when in a greater degree, for a luxation of the same. In the London Hospital, from which alone he had been able to procure statistical data for any lengthened period, the fractures of the radius, ulna, and of both bones together, were reckoned as fractures of the forearm, without distinguishing them from each other. Knowing, however, how very much the number of fractures of the radius predominated over those of the ulna, or of both bones together, the frequency of this fracture might be easily conceived. In 1812, there were treated at the London Hospital 810 fractures, of which 153 were of the forearm. In 1813, there were 899 fractures, and 156 of the forearm. In 1845, 952 fractures, 200 of which were of the forearm; and in 1846, there were 954 fractures, with 176 of the forearm. In the five months, from May to October, 1846, at the King's College Hospital, there were treated eighty-four fractures, fifteen of which were of the forearm, twelve of radius, and three of ulna. Acknowledging, then, the frequency of this fracture, and the repeated failures attending its treatment (Velpeau cures but thirty out of fifty), thus causing a partial, if not total, loss of the use of the hand and fingers to a great number of our fellow-beings, it will be readily conceded that any rational plan, by which a more favourable result may be attained, is worthy the notice of the profession. As it had been remarked by Mr. Busk that it would be no easy thing to keep patients so long in bed with this fracture, Mr. Shaw thought that a splint, in which the arm could be supported, permitting the hand, at the same time, to hang freely down, or rather, to be fastened down, might be used, and the patient could, under certain restrictions, be allowed greater liberty. To the other objection, that the patient would not be able to sustain the weight of the hand so long a time hanging down as would be necessary for the consolidation of the fracture, he remarked that this position seemed to him the most natural—at any rate, less constrained than in starch bandages, Dupuytren's splints, &c.; and that the patients, in the numerous trials made by Professor Fenger, had not experienced more difficulty than might be reasonably expected under such circumstances.

A CASE OF LARGE SECONDARY PROSTATIC CALCULUS REMOVED BY PERINEAL INCISION.

By T. HERBERT BARKER, M.B. (Lond.),

Fellow of the Royal Medical and Chirurgical Society; M.R.C.S.L.; formerly House-Surgeon of University College Hospital, London.

John M., of Harrowden, near Bedford, aged twenty-six, sent for me on the 25th of Oct., 1843. He was labouring under complete retention of urine, and complained of considerable pain in the urethra and perineum. On examination, the penis was found to be very œdematous, with a fistulous opening on its under surface towards the left side, about three inches from the extremity, from which a small quantity of purulent fluid was discharging. This opening first made its appearance four years ago, followed by the escape through it of a considerable quantity of urine; for the last twenty-four hours the flow had ceased through this opening.

The perineum presented some tumefaction and slight redness of the soft parts. By pressing the centre, near the anus, a deep-seated hardness could be felt; and on attempting to remove this hardened base from side to side, crepitation could be detected, as if produced by the limited movement of calculi firmly impacted together. On introducing the finger into the rectum, considerable enlargement was felt in the region of the prostate gland, and similar crepitation was also felt as far as the finger could reach in that direction. On introducing a probe into the fistulous opening, it passed readily about an inch and a half, backwards and inwards, towards the urethra, but it could not be brought into contact with any hard substance.

He had laboured under incontinence of urine since he was four years of age; had been a patient in the infirmary without any relief; had never suffered severe pain, and the urine had always flowed through the natural channel till the formation of the fistulous opening, four days ago.

He was directed to maintain the horizontal position, to use fomentations of warm water to the perineum, and to take simple aperients. Next day no improvement, and an attempt to pass the probe further backwards through the fistulous opening produced the same result.

Operation.—The patient was placed in the position for lithotomy; the perineal integuments were rendered tense, and an incision made through them, together with the superficial fascia, two or three lines to the left of the raphe, commencing about two inches and a half from the anterior margin of the anus, and terminating within half an inch of this margin. On introducing the point of the finger into the incision, the calculus could be readily felt, and was cut down upon with the point of the bistoury, and the intervening soft parts were divided upwards and downwards, to the entire extent of the first incision. The several portions of the calculus were firmly wedged together, and it was impossible from the size to remove it *en masse*. A lateral movement with the thumb and finger loosened the anterior narrower part of the calculus, which was removed, and some of the posterior and broader portion was disintegrated. Several portions were brought away with the finger, others with the forceps. After all were removed, the parts were sponged, three points of interrupted suture were introduced, the perineum covered with lint, and the patient put to bed. Ordered spare diet, with a mild opiate draught at bedtime.

Next day he was free from pain, but the urine accumulated in the cavity and escaped between the sutures. Very slight tumefaction of the perineum, and the œdema of the penis somewhat subsided.

The case having gone on favourably, on Nov. 13 a catheter was introduced into the bladder, and secured. Two needles were passed through the parietes of the unhealed parts of the incision, which were brought closely together by the twisted suture. On the 16th the urine dribbled through the urethra, and the needles were removed. From this period the wound healed soundly, but he could only retain about half an ounce of his water at a time, which passed, however, by the urethra. Eight weeks after the operation he went to work.

The calculi were twenty-nine in number, and weigh 1681 grains. They are of a whitish colour and porcelainous lustre and hardness. The chemical examination showed that they were identical in composition with the concretions occasionally found in glandular structures, consisting of phosphate of lime, with a rather larger proportion than usual of the ammoniaco-magnesian phosphates. Up to the present time the patient continues free from further calculous deposit.

REVIEWS.

A Treatise on Fractures in the Vicinity of the Joints, and on certain Forms of Accidental and Congenital Dislocations. By ROBERT W. SMITH, M.D., M.R.I.A. Dublin: Hodges and Smith. 1847; pp. 314.

The author, in his preface, states that the object which he had in view, in submitting his work to the profession, was not to present a systematic treatise upon the extensive subject of fractures and dislocations, but to direct attention to that most difficult portion of it—fractures in the vicinity of joints, especially those of which himself had most experience, and the differential diagnosis of which he had found to be attended with the greatest difficulty. It is no easy task for a surgeon to write upon some of the most obscure and difficult points of practice so as to afford information to his readers, and secure applause for himself; and very few there are who have talent and education so happily blended as to give them a permanent nobility in the republic of literature.

Dr. Smith has, in the work before us, proved himself a clever surgeon and a respectable author: for the difficult subjects on which he treats have evidently been well studied, and he has written in a style concise, neat, and devoid of obscurity. In the chapter "On the Diagnosis and Pathology of Fractures of the Neck of the Femur" he has some good remarks in reference to the general symptoms, the causes of the accident, and that which renders correct diagnosis very difficult. His remarks on impacted fracture are well worth particular consideration. He says in reference to this fracture, "In many cases the symptoms are so obscure, and so much at variance with those with which we are familiar as denoting the existence of the more common forms of fracture of the neck of the thigh-bone, that more than ordinary caution is requisite to enable us to avoid committing an error in diagnosis, and pronouncing that the injury which the joint has suffered is merely a severe contusion which will not be followed by a serious impairment of the functions of the limb; whereas the truth is, that shortening and lameness are the inevitable and permanent results of even the slightest degree of impaction of the broken cervix into the shaft of the femur. This particular form of fracture is the only one the diagnosis of which is attended with difficulty, for it rarely happens that the limb is shortened to the same extent as in the ordinary examples of extra-capsular fractures: in general the amount of retraction is nearly the same as in cases of fracture within the capsule. Between these two forms of injury, therefore, the shortening of the limb is not available as a means of differential diagnosis." Nor is there crepitus, "because of impaction of one part of the neck of the femur into the cancellated tissue of the shaft, and from the fibrous and tendinous structure which invests the whole of the region traversed by the second fracture, which is always present, that the detached portion of the trochanter in general moves with the shaft of the bone; and cases have occurred in which the patient has not only raised himself from the ground after the fall which caused the fracture, but has even walked a considerable distance, bearing his weight on the injured limb. In ordinary fractures of the neck of the femur there is no difficulty in ascertaining the nature of the injury; but in the particular form of fracture now alluded to, the whole expression of the limb is well calculated to deceive: it does not present a completely powerless aspect, there is some command over its motions, no very great degree of shortening, and sometimes the patient is seen to maintain the limb resting fairly on the heel, turned neither inwards nor outwards, and is able without much pain to flex the leg on the thigh, and the latter on the abdomen. "Here," observes the author, "we have a group of symptoms by no means characteristic of fracture of the femur, but such as would rather induce us to conclude

that the injury was merely a severe contusion." Afterwards he adds, "The evidence of the existence of an impacted fracture is of a negative rather than a positive character, and may be thus briefly stated :—1. Slight shortening of the limb; 2. Slight eversion of the foot; 3. Absence of crepitus; 4. Great difficulty in all cases, and in the majority of instances an impossibility of removing the shortening of the limb by extension; and, lastly, less loss of power than in other s of fracture of the the neck of the femur."

y chapter is replete with information to the surgeon, and there are nearly 200 illustrations, which are certainly very beautiful specimens of art. The work is a valuable addition to our professional literature, and a careful perusal of it will amply repay even veterans in the science, though they may differ concerning some matters of which the author treats.

Practical Remarks on some Exhausting Diseases, particularly those incident to Women. By Sir James Eyre, M.D. 12mo. London: John Churchill. 1845; pp. 75.

This little volume contains some very sensible reflections and observations upon various forms of hemorrhage from various organs; but its chief object is to bring prominently forward a remedy in these cases, which has heretofore had many advocates, but whose virtues are still not sufficiently understood. This remedy is the oxide of silver. For several years past, this substance has been in repute as a tonic, especially in certain painful affections of the stomach, in neuralgia, epilepsy, chorea, &c.; but it has only been within the last six or seven years that its anti-hemorrhagic properties appear to have been fully tested and proved. In the hands of our author, it seems to have more than realized all the good reports made of it by previous writers: for whilst, according to his experience, it possesses all the good qualities that belong to ergot, savine, tannin, turpentine, lead, *et hoc omne genus*; in hemorrhagic diatheses and discharges, it is divested of many unpleasant and even hazardous tendencies which we know attach to those medicines. If the oxide of silver be in reality all that our author says of it, it indeed deserves to be in much more general use than it is at present. Ourselves have often tried it as a tonic remedy, and have had every reason to be satisfied with its services; of its particular powers in arresting hemorrhages we have no experince, but we shall certainly give it an early trial.

The volume before us contains, in addition to general statements, a good selection of striking cases summarily related. With the exception of one or two of gastrodynia and pyrosis, in which the oxide of silver proved curative, the rest are mostly examples of various forms of hemorrhagy, in which it was not less successful. In particular, we may mention some of hemoptysis, in which its efficacy seems to have been very decided. Our author says, in conclusion—

"It will have been observed that the dose of the oxide of silver employed by the writer in the foregoing cases never exceeded three grains a day (from one quarter to one half a grain for a dose), instead of six, as given on its first introduction; and that its employment is not recommended where febrile action exists in any considerable degree. In addition to its value in gastrodynia, pyrosis, hemoptysis, hematemesis, and in the first and second classes of menorrhagia of Dr. Fleetwood Churchill, it will b found to be productive of infinite benefit in restraining, when absolutely necessary, hemorrhage proceeding from the intestinal canal, obstinate chronic diarrhœa, colliquative perspira tions, leucorrhœa, and other maladies, in the treatment of which the writer is at presen testing its efficacy."—(P. 75.)

Royal College of Surgeons.—Gentlemen admitted members on Friday, May 7:—S. Melasses, J. Rushforth, G. Davis, T. Littlejohn, J. Prowse, D. Hope, H. Hart, R. Capron, and G. Milburn.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d*

☞ *The* Medical Times *is sent on the day of publication, free by post, to all parts of the United Kingdom, and to most of the British colonies.*

Sir George Ballingall's unanswerable Lecture on Military Punishments, in last week's Medical Times, *was from the "Monthly Journal of Medical Science."*

Dr. J. C. Hall's *suggestion will be considered.*

Mr. A W. Close, Manchester, *is thanked for his communication.*

Mr. Evan Thomas, Carlisle.—*The paper has been received.*

A Thorough Reformer, Bradford—*The fears which are expressed are groundless, as the misrepresentation of public opinion will fail to accomplish the purposes intended.*

A Constant Reader.—*We have so many communications with this signature, that it will be really a favour if some of our correspondents would write under another name. We have a knowledge of the parties mentioned.*

Mr. A. Wear.—*A member of the Edinburgh College of Surgeons practising in England as an apothecary without a license is liable to a prosecution. The College of Surgeons, London, requires the candidate for a diploma to have been five years in the acquisition of professional knowledge; the Apothecaries' Society five years' apprenticeship.*

Inquirer.—*A correct report of the Hunterian Oration, delivered by Mr. Green, appeared in the* Medical Times.

Paul Pry.—*Diploma-mongering is not quite so fashionable as it was, and we are unable to say what is become of Dr. Bond. The Giessen parchment is at a discount.*

A Member of the National Institute.—*The deputations to the Secretary of State were all strongly opposed to the new Bill. We know of no members of the Institute favourable to it.*

Mr. B. Gough.—*The offer is respectfully declined. The article would not suit our pages.*

A Young Surgeon.—*Studying disease at the bedside will be a more dignified and useful employment than that referred to.*

A. B. C.—*Those who were in practice prior to 1815 are legally qualified, though they do not possess a diploma or license.*

Mr. Amos.—*Students are not now entirely excluded from certain institutions where they have opportunities of studying mental disease. There is provision made at Guy's for a certain number.*

Anti-humbug.—*We are obliged for the compliment, but "Timeo Danaos," &c.*

J. W. Stratford.—*We cannot engage to insert all the communications received. Certain things may interest special parties, but may be very unsuitable for a medical journal.*

M. D., Bristol.—*A new Pharmacopœia is necessary. The College of Physicians is preparing one.*

A Student, Glasgow.—*John Hunter was a general practitioner. His museum is in the College of Surgeons, London.*

Mr. Barron.—*The* Medical Times *is always sent regularly to the address.*

T. C. D. *will find his expectations answered at a very early period.*

Emigrant.—*The American colleges, we believe, will admit English medical men to an examination, on showing their diploma or license.*

If an Essex Surgeon *will favour us with his name, we may, perhaps, be more inclined to comply with his request.*

Mr. Walter Lewis, Oxford.—*The paper is under consideration.*

A Candidate *is a little too severe.*

Mr. Franz Thimm.—*The communication is received.*

Mr. J. Dixon *has our thanks.*

Mr. L. Rugg's *case will be considered.*

J. P. (Southall) *considers the case of Miss S., reported in last week's journal, as one to be ranked with the numerous instances we meet with, of injudicious administration of narcotics and sedatives.*

A Correspondent *sends us an analysis of the* Twelve." *But it would be ill applying the space to make it a "Registration Bill" of persons designated as "political tools," "illegal practitioners," and "paid servants."*

A Pupil.—*The* membership *of the College of Surgeons is undoubtedly a lower grade than it was a few years ago.*

M. D.—*There is really not a shadow of change for the new Bill. Ministers are pledged to oppose it.*

H. J., Bedford, *should apply directly to the Secretary.*

A General Practitioner *suggests (we think unwisely) that the meeting at the Freemasons' Tavern should be used as a model for other places against the Bill, viz.,—"each gentleman present contributing sixpence for the expenses, and thus allowing five shillings for the room and one shilling for the waiter." Whichever of the twelve carries the purse, there can be no fear of treason.*

We have received a Wakefield *series of resolutions. Surely the four or five gentlemen who appear to have joined in them have not lately been in the exercise of their customary discriminating faculties. We are sure Mr. Rogers would be sorry, on after reflection, at our compliance with his request. If he persist, the resolutions can be published as advertisements.*

Qualification.—*We have no time to work up the divisions of poor-law qualifications. They may be found in past numbers of the* Medical Times.

A General Practitioner *will do well with the work of Guy, and the last edition of Beck.*

We shall make early provision for the papers by Dr. Brown and Mr. Kay.

We propose to give a notice of Dr. Bushnan's work in our next.

We have received communications and letters from Mr. Norman, Mr. Thomas, Mr. J. Lloyd, Mr. M'Donogh, Mr. Wm. Smith, Dr. Brown, Mr. Kay; Mr. Thompson, Newark; a Constant Reader, York; Mr. Tuson, F.R.S.; Mr. Bulley, of the Royal Berkshire Hospital; Mr. M'Clintock; Mr. L. Rugg, Mr. Barron, a Pupil, Dr. J. C. Hall, Mr. A. W. Close, Mr. Evans, a Thorough Reformer; Mr. A. Wear, M.D.; J. W.; Mr. W. Lewis; H. J., Bedford; Mr. King; Dr. Wright, Birmingham; Mr. B. Gough, a Candidate, Inquirer, Mr. Amos, an Essex Surgeon, Anti-humbug, a Juror, Dr. Willshire, Mr. Isaac Brown.

THE MEDICAL TIMES' PRIZES FOR THE BEST REPORTS OF MEDICAL AND SURGICAL CASES.

The results of our last Prizes have been so far encouraging that we propose for Professional Competition, for the year 1847, the following Prizes:—

Twenty-five Guineas for the twelve best reports of original cases in hospital or dispensary practice.

Ten Guineas for the twelve reports of original cases, as above, second in merit.

Five Guineas for twelve reports of original cases, as above, third in merit.

In offering these prizes we repeat that our aim in this, as in other matters, is to promote the Science of our Profession. The groundwork of the best part of our *practical* science and of most of our subsequent Professional worth is laid down in our studentship; and the great and the only true teacher of the student must ever be—hospital practice. Lectures and books have their uses; but it is by the bed which holds a human being, with the joy of health or the pain of disease, the chance of life or the peril of death, depending on the aids of science, that we acquire our true knowledge. There is there for the student no listless ear, no dull eye of the lecture-room; it is not the memory alone that is appealed to, or some abstract love of a pedantic and inapplicable lore. Every power of his mind is engaged: he is forced by the sympathies of his nature to hear and see, to observe, to reason, to prognosticate, to be experienced: each patient's case is a volume of medical science in its most practical aspect, forced on his acquaintance for life!

The authors must be students who shall not have received any medical diplomas or licenses.

Six of the cases are to be medical, and six surgical,

The cases must have occurred during the year; and the names of the gentlemen under whose treatment they may have principally come must be faithfully mentioned.

Three arbitrators will be appointed—one surgeon, one physician, and one general practitioner—whose names will be duly announced. The decision will be on the 1st of July.

The Prize Reports will be published in succession in the "Medical Times," with the names of their authors.

They are to be sent to the Editor of the "Medical Times" on or before May 1, 1847, accompanied by a certificate from a surgeon or physician to a hospital, declaring that the writer is *bonâ fide* a medical student. A motto or device must be inscribed on each report, to identify the author, whose name, with a duplicate of the motto or device, must be mentioned in a private note, which will be opened when the award shall have been made.

THE MEDICAL TIMES.

SATURDAY, MAY 15, 1847.

PROFESSIONAL REFORMATION.

"Populus me sibilat."

MR. THOMAS WAKLEY, of Finsbury, persists in bearing his Promethean agony of political existence with a fortitude "unblenching" as hopeless. If he were not—what of course he is—that sight so dear to angels, a good man struggling with adversity—he would recal in an humble way, at least, the more touching incidents of the spectacle. What man supported by the probity of an Aristides could outface a small repute more unshrinkingly, or outbrave public opinion more pertinaciously? It is the stolen fox, concealed beneath the cloak, eating into the heart, no feature announcing torture till death discloses what political Spartans can endure even for indifferent causes! If there were not in it, as there is, a heroism unknown to the records of ages, we should find no name for the characteristic but—lunacy.

Under difficulties and disasters that might well oppress to the earth and to favourable obscurity a more sensitive character, the Finsbury member aspires to confer on us the favour of reforming legislation. Unasked, unsought, he has taken us under the shattered wing of his protection. In remembering, our position, he generously forgets his own, and is bountiful beyond measure with a political indigence without parallel. He squanders cheques to us on banks wherein he has no effects, and is prodigal of benefits over which he has no control. His charity, neither beginning at home nor returning thither, swells in the inverse ratio of his means, and we are overwhelmed by his legislative endowments at the very moment that he is pronounced A POLITICAL BANKRUPT. Lost as a public character, broken down, discomfited, *cut*, this is the precise moment that the defendant in the case of the Queen *v.* Wakley selects to play statesman for us in a senate of six hundred gentlemen, and to make statutes for citizens to whom an honest administration of the laws we have is the first necessity! How very droll! There is an anomaly about it for which a Sutherland, a Costello, or a Connolly alone could furnish explanations!

On the strength, however, of an axiom circulated for the benefit of such persons as the Finsbury member, "*measures, not men*," we will deign his new bill that single moment's attention which, possibly, could not be justifiably employed on its author. There are some people who will rather be kicked behind than look a gift-horse in the face before, and for their benefit we must deign a brief examination which we would otherwise gladly escape.

And, first. This bill of Mr. Thomas Wakley is *not* the bill of Mr. Thomas Wakley. There never was a clearer case of picking and stealing. It is Graham's bill, just enough disfigured, slit, and patched, to obscure the original proprietorship. Swift talks of gipsies stealing children, and, after sufficiently deforming them, passing them off as their own. The parallel case is before us. Graham's bill has been so far crippled and disfigured that it might easily be mistaken for the natural progeny of the Finsbury member. It wants nearly every feature that should commend it to an honest senate, or a learned profession. It is born in sin, and christened in fraud. First stigmatized as a monster—when Graham's—it is subsequently stolen, and then not only disfigured, but misnamed. In its very adoption there is the stamp of a legislative audacity, bronzed and matchless. A "*Registration*" Bill, it is virtually a bill for something else; and that something else, besides being a plagiarism, is defective, petty, bad. There is not one respectable quality about the measure. It is at least as base, as paltry, and as despicable in its now possessed characteristics as in its discreditable origin and birth. We look in vain throughout for a principle or an improvement—for originality, comprehensiveness, or even respectability: a few shabby, worthless clauses—made familiar by their appearance and reappearance, as inconsiderate *parts* of the bills of Hawes, Warburton, and Graham, constitute the whole bill—a bill which we do not hesitate to call the most singular and matchless in its history and qualities, from its denunciation in Graham's measure and cool adoption by this person, down to its last interpretation clause, of all the curiosities in the way of legislation that ever yet paid a few days' visit to the reformed House of Commons.

In *descending*—and we feel it *is* a downward movement—to the *details* of a bill that has, indeed, nothing else for consideration, we may, as least troublesome and most explicatory, fling them into three divisions—

1. What good, or rather, what *service* to Wakley?

2. What good to Sir George Grey?

And last and least, what good to the profession and public?

1. *Wakley* undoubtedly is in the political position where he can suffer by nothing. The bill, even if twice as discreditable and trumpery, can, therefore, do him no harm. Having lived by Medical Reform—or rather by talk *about* and *at* it—for a quarter of a century—having been in Parliament a decade of years—having opposed the bills of Warburton, Hawes, and Graham—the time is come in which he may show in how profound, how comprehensive, how *philosophical*, and how *statesmanlike* a fashion he can provide for the good government and reorganization of the medical profession! Hence the great measure of 1847! The agitation for his rickety, truncated plagiarism can do him no mischief—certainly not—if it fail; if it succeed, are there not, besides its success, *three registrarships* in the patronage of the Secretary of State?

2. The Secretary of State must be remarkably ungrateful—if the measure *should* pass—if he deny the author the possession or sale of at least one of the registrarships: for it is difficult to conceive anything finer than the munificence with which the bill showers patronage and power on that honoured functionary. He is to appoint three registrars, whom he may remove at his own discretion; nominate clerks and other officers *ad libitum*, who are to be removable under the same phenomena; he is arbitrarily to fix the curricula of collegiate education; at his own pleasure to dictate the amount of collegiate fees; establish his own educational regulations; nominate his own collegiate supervisors, and possess the power of practically repealing and abrogating all the statutes and charters by which the colleges examine and give licenses! For the future the Secretary of State is to be at once King, Lords, and Commons to the whole medical profession! If Sir George Grey, with such inducements, do not give the "shabby measure" a helping hand, he is less accessible to a vulgar bribe than the Finsbury representative seems to have imagined.

3. We should be the last to depreciate the advantages of *registration* if made, as it should be, a *subsidiary* portion of a complete measure of Medical Reform, and if not imposed at a higher cost than any utility that can arise from it. In the bill before us we have exactly the two defects that can alone vitiate it. The registration is not accompanied by what would give it value—and has the companionship of much that must make it a calamity.

At the best, registration is no *priceless* boon. The man who trafficks in it makes us these avowals:—

"*Are not the qualified medical practitioners of the United Kingdom registered or enrolled in the institutions to which they respectively belong? Such undoubtedly is the fact. Thus the proposal amounts to this—that there shall be three registers instead of seven or eight. What an improvement*" ! !

Again he says—

"*Can any system which directs the mere putting down the names of medical men in alphabetical order and in classes be attended with that relief from annoyance which has compelled them to present their petitions to the Legislature. In a word, the plan for registering the members of the medical profession in* THREE CLASSES *is objectionable in* principle, *and must operate painfully and injurious in* practice."

Without stopping to apply the language that so naturally presents itself—"Thou wicked servant—out of thy own mouth do I condemn thee"!—we may at least say, that if there be anything in these objections at any time against a registration measure, they were never so forcible as now, when the Medical Directories of Ireland and Great Britain, now annually published, give us, without cost, a fuller, better, and more accurate registration of the profession than any scheme of Parliament or the Government, however successful. It is absurd to fancy that a parliamentary register will ever, or can ever, be complete. Hundreds would never pay two pounds for an advantage which they would probably estimate as very equivocal; and thousands would never incur either the trouble or expense of the annual renewal. Certain are we that many of the most distinguished of the profession would be found out of the list, and that, as a conclusive authority, it would be found, if not null, something worse.

That the establishment of a register of this kind would be any protection against empiricism, it would be absurd to anticipate. The quack would ill appreciate the influence of the list, or the tendency of the public mind, and richly deserve "punishment" on the score of his *folly* alone, if he sought practice on the ground of being "registered." It is much to be feared that the distinction would run in another direction.

are several points, as regards the chemists and druggists, and the power sought to be given over us by the Secretary of State, which require to be dwelt on, but we must this week content ourselves with registering our protes against this "shabby measure" on the highes grounds the profession can take—its deadly injury to our educational interests. It is a legislative enactment of a low and bad order o doctorship. It is the establishment of a Lancasterian system of medical education. It is in fact a levelling measure of science—not raising the lowest, but depressing the highest. What has hitherto allowed the profession to maintain a decently scientific position in society, notwithstanding the evil tendencies and influences of that bad administrative system which this bill legalises and perpetuates? What but this? That the institutions which raised the standard of qualification secured for their members and themselves a more distinguished character before the public. But when this distinction is lost sight of—the Register being everything, and the College nothing—what is there to stimulate any examining body to keep high its test, notwithstanding the loss to the exchequer? The contest will then be, not for character, but funds; and that college will think itself best which has passed most candidates, and secured most money—"*Virtus post nummos.*" This influence, so exercised on the institutions, will reach the whole body of the coming profession. The question with each candidate will be, which college is easiest in its terms; and which one of the three or four medical designations can be got most easily. The Register covers a multitude of sins: his one title will serve him as well as a dozen: in the words of the bill, "medicine" for him shall mean "surgery," or "surgery" shall mean "medicine"; the whole uprising body ot the public (inclusive of chemists and druggists, and cuppers and dentists, and chiropodists) have only to get one title—from any quarter, under any circumstances—to stand in the Register in equal rank with the best general practitioner in the country!

We have here a question opened which concerns the existing profession in every way—in purse, in credit, in utility. There are already more pigs than teats: more practitioners than patients. Why lower the barrier and increase an already excessive and calamitous competition? We respectfully address this topic to the deliberate wisdom of the "twelve apostles" of the Freemasons' Tavern. We can understand that their sympathies are with the new system of medical education. Unquestionably the change would make them more at home in their profession. But then we can appeal to any vacuum in their breeches pockets: it is, we beg to assure them, powerfully on our side of the question. Messrs, Simpson and Hodson Rugg—aye, and even their Iscariot—have interests which may for once correct their judgments, and set right their sympathies. The inundation of a new set of underbred, under-educated practitioners, however agreeable otherwise, could do them no good, in a mercantile sense. It behoves them, as it behoves us also, to rest our individual hopes of elevation on the general elevation of the profession. Raise its science rather than depress it: exact more rather than fewer qualifications: reward rather than discourage a thorough knowledge of our whole calling: and you will tend as much to increase legitimate and diminish empirical practice as the measure before you tends in the opposite direction. Believe us, gentlemen—extraordinary as you may think it—the common weal is your weal; and, if one thing more than another can add to the grievances of which you so justly complain, it is that Lancasterian system of low education of which you have naturally been made the blind supporters.

THE GOVERNMENT, THE PROFESSION, AND THE PEOPLE.

The Registrar-General has published his report of the state of the public health in the first quarter of the year 1847. That report contains facts which are both interesting and alarming, and too much attention cannot be given to them, inasmuch as they have the most important bearing upon the health, the morals, and the happiness of the people. It is only within a very few years that correct returns have been made of the mortality which prevails amongst us, and that a proper arrangement has been effected of those several diseases which have hurried to the cities of the dead such numbers of the population. These investigations were begun, and have been carried on, by medical men, and without their hearty co-operation the Government would be incapable of arriving at any correct conclusions in reference to the health and mortality of the people. It is to the honour of the profession that it was the pioneer of the work, and that without prospect of any other reward than that which benevolent actions always bring to the bosom, it has furnished the Executive with such information concerning disease and death as will compel it to come forward to the help of a suffering people. Who else could have revealed so clearly the startling truth, that while the sword has slain its thousands, fever has destroyed its tens of thousands, and that the car of this bloody Jugernauth may yet be so retarded in its course as to save an infinite number of victims from being crushed beneath its weight? The profession has sought for no aggrandizement here: but has nobly showed the public the best means of bringing physic to a discount, and how every man may become his own doctor without being chargeable with quackery.

While the Government has been compelled to admit that the health of a people is a national concern, the public have scarcely yet been roused to a true sense of their danger. If the angel of death could be seen sweeping down myriads at a stroke, he would be greatly feared, and men's energies would be vigorously employed to check his triumphs; but as he strikes here and there, and attacks his victims through the length and breadth of the land, the population have awaited their fate, hitherto, with the meekness and silence of sheep brought to slaughter. Life is but a sorry blessing, unless it is combined with health; and it is no use for us to cry "Domine salve" when we cherish around us the very means of our destruction. The people have yet to be roused. "But who," asks the *Times*, "will set about this homely work? Who will agitate it, or agitate with success?" Who? why, the members of our profession, to be sure. They who have broken up the fallow ground—who have braved the contumelious reproaches of the champions of corruption—and who, at present, without thanks, are labouring to secure for the sons of toil that blessing which is the source of wealth to themselves and their country. It is only by showing the public the manifold evils which are induced by causes over which they have control—the mental distresses which arise from the loss of friends, the poverty which is brought upon families, the numbers of children which become burdensome to society from the loss of their parents—that their prejudices will be removed, and with them every barrier to sanatory reform. Providence has been too long blamed for evils which we inflict upon ourselves. The beautiful mechanism of the human frame has little original imperfection about it, and numberless disorders with which it is affected are induced by the ignorance and errors of man himself. Let him understand this, and let him know that, as the plague has been driven from our country by the improved condition of the people, so, by further advancements, typhus, that scourge of masses of the humble population, may be as effectually excommunicated.

The report tells us that *fifteen thousand two hundred and eighty-nine deaths* were registered in London during the first thirteen weeks of the year: a greater number than has been registered in any previous winter since the weekly table commenced. The district of Lewisham, and the subdistrict of Hampstead, have only added 171 to the deaths. It is observed, that in the country districts there is a fearful increase in the bills of mortality, ascribable in some places to the scarcity and dearness of provisions, want of employment, and imperfect protection which the dwellings and clothing of the poor afford from cold; in others, to Irish immigration—starving multitudes escaping from the horrors of famine in their own country, to find food, and, alas! many of them, a final resting-place—the grave.

But London, after all, seems to be the great focus of disease and death. "Instead," says the Registrar, "of its inhabitants measuring out the whole period of the present existence allotted to them—instead of death coming upon them like a sleep, when the faculties are dulled by age and slow decay—it convulses tender infancy, falls with burning fevers upon man in his prime, and snatches away the mother with the babe still at her breast." In the return, the thirty-six districts of the metropolis are arranged in the relative order of their insalubrity: the city of London *within the walls* stands *ninth* on the list, while the City *without the walls* stands, with Whitechapel, the last—the unhealthiest of the thirty-six. In this district alone, within the short space of seven years, 6000 individuals have been consigned to the silent grave, who, if it had not been for "houses saturated with pestilential vapours, and breezes fanning sewers and excremental matter," might yet have been living active beings. This great city may of a truth, then, be called the grave of its inhabitants, for it has within itself much that is injurious to health and fatal to life. And what can medical skill do against the direful influence of crowded dwellings, bad sewerage, improper ventilation, and deficient food and clothing for the poor? There is not a fair field for the exercise of its powers; and disease will laugh to scorn all doctors' potions so long as it can recruit its strength from its numerous and oftentimes invisible sources. On every moral and physical ground, it seems, from the Registrar's observations, some change is desirable; and yet the Parliament evinces an unaccountable indisposition to move in the matter. Only a few days ago, Lord Morpeth introduced the subject again to the House of Commons, and, after stating the items of a modified bill, he expressed a hope that the House would allow him to have it read a second time, when there was a cry of "No!" from a few of the august senators.

Monopoly, with some, is worth cherishing more by far than precious life, when surrounded by poverty and rags and filth. But the profession does not say "No!" to any efficient measures to promote the public health. It was the first to show their necessity, and it has been, down to the present time, perseveringly engaged in devising means to prevent the manifestation of disease, or in the skilful application of remedies when it makes its appearance. Scarcely has there been a medical practitioner throughout the kingdom who has refused to give to the appointed officers a correct certificate of the cause of death. Hence the statistics which the Government possesses of the various diseases that have exerted a fatal influence on human life have been furnished, without fee or reward, by the members of the profession. The public now having been so liberally assisted, have only to complete their own salvation, by demanding the immediate removal of those causes of disease which ignorance or error have brought into existence—the closing of all graveyards in the midst of densly populated localities, the proper construction of all drains and sewers, the free admission of the air and light of heaven to their dwellings, and such a supply of water as shall ensure cleanliness both in streets and houses. The Registrar's returns will not then tell of thousands prematurely slaughtered, but far greater numbers than have been hitherto known will arrive at the good old age of three score years and ten, while science will receive an unfading crown for achieving such triumphs.

THE CASE OF DR. WARREN AGAINST THE CORONER OF WEST MIDDLESEX.

We have not space this week to consider the important complaint which the respected surgeon to the 7th Hussars found it necessary to bring against a Middlesex coroner for his conduct to him and the public at the Hounslow inquest. The facts charged are too numerous, too serious, and too extraordinary to be cursorily disposed of; and we propose, therefore, going through the whole case in successive numbers. In our next we shall limit ourselves to three points: -

1. The suppression of the testimony of Lieutenant-Colonel Shirley and Private Rising; the character of that testimony; and the extraordinary circumstances accompanying the suppression.

2. The private colloquy between the coroner and his deputy, and the two privates, Matthewson and Ellsworth, during the inquest, with the evidence in support of the allegation.

3. The alleged instructions for a verdict to Mr. Peacock during the proceedings.

We shall fully consider all these points in our next.

THE MEDICAL TIMES.

We are able to announce that the important course of lectures on Materia Medica, by Dr. Roupell, the distinguished lecturer of St. Bartholomew's, will be commenced in our next number. We give this prior notice, because we know that our announcement of them excited very general interest, as evidenced by the many queries which have been addressed to us in reference to them, and in the belief that that portion of the profession who are not regular subscribers will avail themselves of this occasion to commence their subscriptions.

THE NATIONAL INSTITUTE.

The deputation from this voluntary incorporation were most courteously received by Sir G. Grey, who paid marked attention to their objections, to which he appeared to attach much weight. We shall notice the details of the interview more at large in our next number.

[To the Editor of the Medical Times.]

"'Tis pleasant, sure, to see one's name in print."—Byron.

Sir,—Having read an account of a meeting, which was held at the Freemasons' Tavern on the 3rd instant, to petition Parliament in favour of the Registration Bill of Mr. Wakley, allow me, through the assistance of your watchful journal, to state that many of those who attended the said meeting are only anxious for some bill like the one now before Parliament, to enable them to place their names on a Government register, as an easy security (they think) of evading any further examination, or subjecting themselves to any other test (save the diploma of the Royal College of Surgeons), as proof of their medical education, fearing, as many of them do, that the National Institute will require some test of the kind. There will be found among this self-elected committee some who do not possess the Apothecaries' diploma—the only one now-a-days to secure to the public an educated general practitioner.

Some members of the said committee have never opened a classical book—the first step towards a preliminary education, and the sure foundation of sterling medical knowledge.

As to the member of the National Institute, who claimed the privilege of being one, and in favour of the Registration Bill, *how is it that we do not find his name among the members or licentiates of the Apothecaries' Company, though some five or six years in practice as a general practitioner?*

I would urge the committee of the Institute to be alive and stirring; there is, I fear, some underhand work in the camp.

"Arise, awake, or be for ever fallen."

I am, Sir, your most obedient servant,

Veritas.

P.S.—You will confer an obligation by allowing this to appear in your next *Medical Times*.

London, May 10.

[To the Editor of the Medical Times.]

Sir,—There appeared in last week's *Medical Times* an account of the death of a young lady at Nice, who had been under the care of Dr. Henry Cecil Gurney, of that place; and, as the most absurd and grossly exaggerated reports of this case have appeared in the French journals and elsewhere, I trust you will allow me a space in the *Medical Times*, to put forward a candid statement of a few facts connected with the same.

The influence which a public journal exercises over the opinions of the public is powerful: it is, moreover, its privilege to expose the folly of the ignorant and to lay bare the artifices of the designing; when then, Sir, the character of an intelligent physician is undeservedly attacked, you will, I make no doubt, feel it your duty, as also will you make it your pleasure, to defend him against unfounded accusations. As the whole case, together with the opinions of the Court Medical, are at this moment in the hands of the printer, I can do little else than give you a brief outline. Should you, however, consider the case of sufficient importance, you can have it for next week's *Medical Times*.

An English physician commences practice on the Continent, and secures to himself a highly-respectable practice; he extends his connection far beyond even his own anticipations; the jealousy of certain persons is excited, and they await an opportunity of ridding themselves of one who stands so much in their way.

A case occurs of a young lady, aged twenty-four, who is taken ill; Dr. Gurney is sent for. She was in very delicate health, and, six months before the time of her present illness, had experienced a severe attack of a disease similar to that which I am about to describe. She was then given over by her medical attendants, but she recovered. Her present symptoms were vomiting of bilious matter, and spasms; her sickness increased in intensity, and became almost incessant; the spasm of the stomach and abdominal muscles became so great that nothing whatever could be retained in the stomach, either fluid or solid, not *even the medicine;* matters got gradually worse, and she died from exhaustion—collapse. *Post-mortem* examination discovered a tumour in the gall duct, which was allowed to have caused all the symptoms.

The remedies employed were prussic acid, opium, the warm bath, with brandy and soda-water. These were given in very minute doses, but however, whatever the dose was, she vomited it up immediately. It was stated in the *Medical Times* of last week that the doses were large, and that an acid containing fifteen per cent. of anhydrous acid was used; this is not the case, as an acid containing only one and a half per cent. was employed—a French preparation, made by a resident chemist at Nice, who was with Messrs. Savory and Moore, of Bond-street; the difference between these two strengths is sufficiently great to be remarked. Reports were spread by enemies, and Dr. Gurney was accused of poisoning his unfortunate patient, and arrested; but as soon as any investigation was established, Dr. Gurney was immediately released, and your journal contains Lord Palmerston's letter upon that subject. Dr. Gurney was not satisfied with his acquittal alone, and he determined on sending the case up to London to receive the opinion of higher authorities.

The friends of the family having requested me to obtain this opinion, I laid the case before Dr. Babington, Mr. Bransby Cooper, and Mr. Taylor of Guy's Hospital, to none of whom was Dr. Gurney known; and Dr. Leesom of St. Thomas's Hospital was also consulted.

These gentlemen most unhesitatingly gave it as their opinion, that there was quite sufficient found in the body in the *post-mortem* examination to account for her death; that Dr. Gurney had treated the case most judiciously and scientifically, and that nothing could have been done that would have saved her life. This testimonial is also in the hands of the printer.

A great deal has been said of Dr. Gurney's having left the place in consequence of all this; this is not true, as Dr. Gurney still remains at Nice, in the full confidence of his numerous friends, and is as actively engaged as ever in the practice of his profession.

And of those who sympathize with Dr. Gurney in this unfounded attack on his character, none do so more sincerely than the parents of the young lady whose death he was said to have caused.

I remain, Sir, yours, very obediently,

H. C. Brenchley.

ON SCURVY.

By THOMAS WILLIAMS, Esq., Pwllheli, North Wales.

Scurvy arises from want of fresh vegetables, or their preserved juices, as articles of food. That it should now show itself is not a matter for surprise, considering the great scarcity and high prices of potatoes, greens, &c.

During the last few months a great many cases have come under my notice, and all have occurred in patients above twenty years of age—children, though restricted to the same diet as their parents, being exempt from it.

The patients, if poor, without an exception, when questioned respecting their mode of living, tell the same tale—that they have lived, or, more correctly, subsisted, upon bread and butter, tea and coffee, without potatoes, or any other sort of vegetables, from eight to eighteen months.

The disease is not, however, confined to the very poor classes, but is as frequent in those who eat largely of fresh meat and bread: cold and damp localities favouring its development, in conjunction with the causes above enumerated. It generally begins with soreness of the gums; a feeling of weakness, especially of the legs, about the hams and calves—the knee-joints are swelled, stiff, and painful, and the leg bent and fixed at an obtuse angle with the thigh; subsequently, the lower extremities are observed to be speckled with petechiæ, so general in some cases as to occupy the whole of the thigh, surrounding the knees and calves, often accompanied with œdema of the extremities.

Dr. Budd, in "The Library of Medicine," maintains that scurvy, characterized by fetid breath, fungoid gums, sallow complexion, &c., is not identical with purpura, with which it has often been confounded, and gives valid reasons for coming to that conclusion; and, amongst others, "that the two diseases are met with under totally different circumstances; that they are essentially different, arising from different causes; they differ in the circumstances and mode of attack, and require different remedies. With due deference to the opinion of this distinguished physician, I have seen a good many instances of purpura and scurvy in individuals of the same age and habits, subsisting upon the same kind of food, both presenting essentially the same symptoms, with this exception, that the pathognomonic symptoms of the latter disease were absent, and that the discoloured integuments had a striking resemblance to tanned leather, forming a striking contrast with the black and blue colour observed in ecchymosed parts, under ordinary circumstances; the common integument was invariably found in both varieties, if such they be, glued as it were to the subjacent parts. Both were equally available to treatment, which consisted of antiscorbutic fruits, as lemons, oranges, and vegetables, potatoes and carrots.

QUARTERLY RETURN OF THE HEALTH AND MORTALITY IN 117 DISTRICTS OF ENGLAND,

For the Quarter ending March 31, 1847.

(Published by authority of the Registrar-General.)

STATE OF THE PUBLIC HEALTH IN THE FIRST QUARTER OF THE YEAR 1847.

The quarterly returns are obtained from 117 districts, subdivided into 582 subdistricts. Thirty-six districts are in the metropolis, and the remaining eighty-one comprise, with some agricultural districts, the principal towns and cities of England. The population was 6,612,800 in 1841.

Winter appears to be the season in which it is most natural for men to die. For many years the number of deaths in England has been highest in the winter and lowest in the summer quarter. In the summer quarter of 1846 the reverse was observed, the mortality was greater than it had been in any quarter of the seven preceding years; and in the last winter quarter, ending March 31, 1847, 56,105 persons died in the districts which make the returns: a number greater than has been registered in any corresponding quarter, and 6035 above the corrected average.

The annexed table shews that the mortality was considerably above the average in the winter quarters (ending March 31) of 1840, 1841, 1845, and 1847, and much below the average in the winter quarters of 1839, 1842, 1843, 1844, & 1846.

	1839	1840.	1841	1842	1843.	1844	1845.	1846.	1847.
Deaths registered in the March quarters of nine years	42,410	46,376	46,967	44,903	43,746	46,136	49,948	43,859	56,105
Deaths which would have been registered if the mortality had been uniform, and the numbers had increased from 1839 at the rate of 1.75 per cent. annually	43,581	44,341	45,120		46,713	47,531	48,362	49,209	50,070
UNHEALTHY SEASONS.									
Difference above the calculated number		2,032	1,847				1,587		6,035
HEALTHY SEASONS.									
Difference below the calculated number	1,171			1,007	2,965	1,395		5,359	

The temperature was below the average, and the severity of the weather was one cause of the increased mortality. It is, however, worthy of remark, that at Greenwich the temperature was lower in the winter quarter of 1845, when the deaths returned were 49,949, than in the past quarter of 1847, when the deaths were 56,105.

The registrars, in their notes, ascribe the increased mortality generally to inflammations of the lungs and air-tubes, to typhus, and other diseases, and the effects of cold on the aged. The high price of provisions is also mentioned.

GOSSIP OF THE WEEK.

ST. BARTHOLOMEW'S HOSPITAL AND MEDICAL COLLEGE.

The annual distribution of prizes, at the conclusion of the winter session, took place on Wednesday, the 5th inst., in the hall of the hospital, in the presence of his Royal Highness the Duke of Cambridge, the Right Hon. the Lord Mayor, the Duke and Duchess of St. Alban's, the President of the Royal College of Physicians, the President of the Royal College of Surgeons, the Master of the Society of Apothecaries, and a distinguished body of governors and visitors. The President, Alderman Lucas, having taken the chair, Dr. Baly delivered a suitable address, mentioning the success of the arrangements recently made by the governors and the Rev. the Hospitaller for the improvement of the Medical School, and the moral and religious culture of the students, by the formation of the collegiate establishment and the institution of daily service in the church attached to the hospital. The number of students was stated to have greatly increased, and the habits of study and the general conduct of the students to be much improved.

Prizes were then presented, with appropriate observations, to the following gentlemen:—

Wix Prize.—Presented by the President: Joseph Eld, Coventry. Absent from illness.

Bentley Prize.—Presented by his Royal Highness the Duke of Cambridge: Joseph Eld, Coventry.

Surgery.—Presented by his Royal Highness the Duke of Cambridge: 1. C. C. Piper, Guildford; 2. A. D. Dunstan, St. Columb; 3. J. P. Badley, Dudley.

Medicine.—Presented by the President of the College of Physicians: 1. T. Sympson, Lincoln; 2. T. W. Crosse, Norwich, and W. H. Slade, Frome—equal; 3. J. Harvey, Derby.

Anatomy.—Presented by the Right Hon. the Lord Mayor. Senior Class: F. C. Maldon, Worcester, and H. Rogers, London—equal. Junior Class: H. Ludlow.

Physiology.—Presented by Mr. Sheriff Kennard. Senior Class: H. Rogers, London. Junior Class: Harvey Ludlow, Hereford.

Materia Medica.—Presented by the Master of the Society of Apothecaries: 1. G. H. Griffiths; 2. J. B. Sheppard, Oxford.

Chemistry.—Presented by Sir R. H. Inglis: 1. F. Pratt; 2. M. C. Funnell, London, and H. Shellard, London—equal.

Midwifery.—Presented by Mr. J. W. Freshfield: 1. T. W. Aldred, London; 2. A. D. Dunstan St. Columb.

Practical Midwifery.—Presented by Mr. J. W. Freshfield: J. T. Campion, Exeter.

Botany.—Presented by Dr. Wallich: H. R Hoskins, London.

Medical Jurisprudence.—Presented by Mr. H. Pownall: 1. Joseph Eld, Coventry; 2. W. J. Waterland, Thealby.

Clinical Surgery.—Presented by the President of the College of Surgeons: J. P. Badley, Dudley.

Collegiate Prize.—Presented by the Rev. J. Russell, D.D.: H. Rogers, London.

The annual general view of the hospital took place on Wednesday; upon which occasion the treasurer, accompanied by the governors, almoners, and surgeons and other officers of the hospital, made their annual visit of inspection through its wards.

The Treasurer's prizes of £5 each to two sisters, and £2 each to five nurses, of the hospital, for exemplary conduct to the patients during the past year, having been awarded, the governors and friends of the hospital assembled in the hall of the hospital, and sat down to a sumptuous repast. Among the company were his Grace the Duke of St. Alban's; Mr. C. B. Baldwin, M.P.; Dr. Paris, President of the College of Physicians, and the medical officers of the hospital, with Dr. Conolly, the Master of the Apothecaries' Company, &c. &c. The company were afterwards addressed by Dr. Paris (who congratulated, the governors and the medical profession on the intention of the Government to oppose the Medical Registration Bill), Mr. Lawrence, Dr. Conolly, and other speakers.

Naval Appointments.—Surgeons: James Carmichael, M.D., to the Howe; John Davidson, to the Dragon.—Assistant-Surgeons: James Peters and Henry Piers, to the Poictiers; Thomas Kincaid, Frederick Joseph Brown, M.D., and W. B. Dalty, to the Howe; Nicholas Littleton, to Greenwich Hospital; J. T. Trousdell, to Plymouth Hospital; John G. Campbell, to the Dragon.

University College.—The students of this college have presented to Dr. John Taylor (on his retirement from the professor's chair of clinical medicine, and the duties of physician to the hospital, in consequence of his ill state of health) a splendid service of plate, consisting of a very elegant teapot, cream-jug, and sugar-basin, with a richly chased salver, bearing the following inscription:—"Presented, with the accompanying service of plate, to John Taylor, M.D., late professor of clinical medicine in University College, London, and physician to University College Hospital, by the former and present students of the college, in testimony of their high estimation of his character as a man, of his zeal and learning as a professor, and of his distinguished abilities as a physician.—March, 1847." The testimonial was accompanied by an appropriate address, and was acknowledged by a very affectionate letter from the learned Doctor.

Apothecaries' Hall.—Gentlemen admitted members May 6:—Richard Scott Boley, John Rogers, Edward John ap Ellis Eyton, William Butler, Henry Chawner, Robert Martin Craven, James Graham Nichol, and George Frederick Burroughs.

Madras Presidency.—Assistant-Surgeon T. S. Bell to be Garrison Surgeon of Fort St. George. Surgeon Kellie to the charge of the vaccine depot. Assistant-Surgeon T. C. Jerdon appointed Civil Surgeon of Tellicherry. Assistant-Surgeon M. Rogers appointed Zillah Surgeon at Chicale. Assistant-Surgeons Fitzgerald, Wilson, and Mackenzie, to do duty in the northern division. Assistant-Surgeon C. Barclay to do duty in Malabar and Canara. Assistant Surgeon E. M. Jackson to do duty with the Sappers and Miners at Aden. Assistant-Surgeon W. Forester to do duty in the centre division. Assistant-Surgeon J. W. Firminger, in the ceded districts. Assistant-Surgeons E. Dixon and C. Kevin are at Madras on leave. Assistant-Surgeon J. Hichen to be Surgeon, vice Desormeaux, deceased. Surgeon A. E. Blest, M.D., has leave to Bombay, and has retired upon a pension of £250 per annum. Surgeon J. Morton has retired upon a pension of £300 per annum. Surgeon J. Cooper to the 4th battalion of Artillery. Surgeon J. Kellie to the 1st European Regiment, Fusiliers. Surgeon E. Smith, to the 2nd Native Veteran Battalion. Assistant-Surgeon G. Smith, M.D., to join the northern division. Superintending-Surgeon G. Macdonnell to the Hydrabad subsidiary force, vice Desormeaux, deceased. Surgeon J. G. Coleman to be Superintending-Surgeon, ceded districts, vice Macdonnell. Assistant-Surgeons H. Goodall and J. Forbes to be Surgeons, vice Morton and Blest,

retired. Superintending-Surgeon Coleman has retired on a pension of £300 per annum. Surgeon J. Innes has sick furlough to the Cape. Assistant-Surgeons J. E. Mayer and W. Lloyd have leave to Europe, on medical certificate. Surgeon D. S. Young to the 17th Native Infantry. Surgeon W. R. Smith to the 23rd Native Infantry. Surgeon G. Pearse to the 30th Native Infantry. Surgeon De B. Biach to the 12th Native Infantry. Surgeon J. Hichens to the 27th Native Infantry. Surgeon H. Goodall to the 19th Native Infantry. Surgeon J. Forbes to the 38th Native Infantry. Assistant-Surgeon Morton to the 18th Native Infantry. Surgeon A. H. Ashley to the 9th Native Infantry. Assistant-Surgeon W. Kirkwood to the 16th Native Infantry. Assistant-Surgeon H. Smith to the 26th Native Infantry. Assistant-Surgeon A. H. Howe to 46th Native Infantry.

Bombay Presidency.—Assistant-Surgeon G. M. Ogilvie has a furlough to Europe for three years on medical certificate. Assistant-Surgeon M'Alister is attached to the 23rd Regiment Native Light Infantry at Bombay. Assistant-Surgeon J. H. Wilmot, ordered on duty to Bombay. Assistant-Surgeons A. R. Fraser, C. C. Mead, and E. De Crespigny, ordered for duty in Scinde. Surgeon P. W. Hockin removed to the 11th Regiment Native Infantry, at Kolapore. Surgeon W. B. Barrington, posted to the 9th Regiment Native Infantry, at Tannah. Assistant-Surgeon J. Vaughan has passed a vernacular examination. Surgeon B. A. R. Nicholson is on sick leave at Bombay. Assistant-Surgeon Stocks has been appointed a vaccinator in Scinde. Assistant-Surgeon R. Miller is sick at Bombay. Assistant-Surgeon R. Nuttall is on duty at Salsette. Assistant-Surgeon Maitland has passed a colloquial examination. Assistant-Surgeon R. C. Coles to be Assistant Garrison Surgeon at Bombay, vice Ogilvie. Assistant-Surgeon D. A. Carnegie to act as Civil Surgeon at Bombay.

Bengal Presidency.—Assistant-Surgeon J. G. Kemp, M.D., is with the 66th Regiment Native Infantry at Dinapore, and posted to the second troop first brigade of Artillery at Hosheyapore. Assistant-Surgeon W. A. Green, to be Surgeon, vice Lees, retired. Assistant-Surgeon A. Reed has returned from furlough, and been posted to the 46th Regiment Native Infantry, at Jullundur. Veterinary Surgeon J. Booth is with the 9th Light Cavalry, at Cawnpore. Veterinary Surgeon J. Ford has a furlough to Europe on private affairs. Surgeon W. Gordon, M.D., has leave to Calcutta, preparatory to applying for furlough to Europe on private affairs. Assistant-Surgeon J. Harrison, M D., apointed to the 3rd Regiment Irregular Cavalry at Saharunpore, vice Handyside, promoted. Assistant-Surgeon G. F. Thomson, M.D., transferred to the 2nd troop 3rd brigade, at Ferozepore, vice Harrison. Assistant-Surgeon R. W. Macauley, M.D., posted to the 1st troop 2nd brigade Horse Artillery, at Meerut, vice Thomson. Assistant-Surgeon C. D. Davidson has passed a vernacular examination. Assistant-Surgeon J. C. Smith to be Civil Assistant-Surgeon to the Salt Agent at Poorie. Surgeon G. G. Brown, M.D., appointed to the Artillery division, at Lahore. Surgeon H. J. Thornton, posted to the 13th Regiment Native Infantry, at Cawnpore. Assistant-Surgeon T. Stott, posted to the 53rd Regiment Native Infantry, at Cawnpore. Veterinary Surgeon J. Booth, posted to the 7th Regiment Light Cavalry, at Muttra. Assistant-Surgeon S. Winbolt has leave to Landour a Calcutta for seven months, preparatory to applying for permission to retire from the service.

A deputation, consisting of Mr. Lawrence, President of the Royal College of Surgeons of England, and Messrs. Travers and Stanley, Vice-Presidents of the College, had an interview on Saturday with Sir George Grey.

A deputation, consisting of Mr. Ridout, Master of the Society of Apothecaries; Messrs. Bean and Callander, Wardens of the Society; Mr Bacot, Deputy Master of the Society; and Mr Upton, the Clerk to the Society, had an interview with Sir George Grey on Saturday, at the Home-office.

Dr. Paris, President of the Royal College of Physicians, Dr. Burrows (Senior Censor), Dr. Budd (Censor), Dr. Francis Hawkins (Registrar of the College), and Dr. Nairne, had an interview with Sir George Grey on Saturday.

Mr. Macord has sent us samples of his extract of opium. Glad at all times to recognise the improvements introduced by our scientific pharmaceutists, we have given it the trial he has invited from us, and are enabled to pronounce it a very superior preparation.

Hasty Interment.—The French journals abound in instances of a too hasty interment after apparent death. *Le Rhone*, a provincial journal, announces a case of hasty burial at Clurey. A stonecutter had been buried alive, and the sound of the earth, as it fell on his coffin, awoke him from his lethargic sleep. The impression produced by this event was so great as to overturn the reason of the sufferer, who, animated by a supernatural strength, burst open the coffin lid and fled from the cemetery. He was overtaken only with great difficulty, after having been pursued a considerable distance. The *Journal de Bordeaux* announces a similar occurrence a few days before the above. The wife of a rich farmer of Laurac, after a short illness and apparent death, had been buried with the accustomed formality. A few hours after the sexton, passing through the graveyard, imagined he heard groans coming from under the earth. He hastened to inform the curate, who ordered the grave to be opened. The woman gave signs of life, but did not recover her consciousness, and owing to the brutality or the superstition of the neighbouring inhabitants, who refused to have her admitted into their houses, she perished before medical assistance could be rendered.

Obituary.—On Wednesday, the 5th inst., of No. 2, Circus, Bath, Stewart Crawford, Esq., M.D.—On the 4th inst., J. P. Simon, M.D., formerly of Dublin, at 5, Tavistock-row, Covent-garden, aged 52.

Magneto-Electricity in Narcotic Poisoning.—A gentleman swallowed what he purchased as half an ounce of powder of cubebs. He retired to rest, but almost immediately felt a dizziness, with inclination to sleep. He was not discovered till the next day at twelve o'clock, when he had the most urgent symptoms of narcotic poisoning. Emetics of sulphate of zinc, mustard and water, were employed, the feet immersed in a bath of mustard and water almost to boiling. The patient appeared, notwithstanding, to be fast sinking, and, though remedies were perseveringly employed, nothing seemed capable of arousing him. At this juncture Dr. Page resolved to try the effects of magneto-electricity. While an assistant rapidly rotated the wheel, the balls were applied at first to each side of the neck, and then down behind the clavicles. This produced convulsive movements of the arms and body, without consciousness. On applying a ball over the region of the heart, and one to a corresponding point on the right side, the eyes opened widely in an instant, the head and body moved convulsively, and, after three or four applications, reaction was so positively established that there was no further use for the machine. On the following morning the patient was pretty well.

Spontaneous Evolution.—Dr. Simpson observes—1st. That spontaneous evolution in transverse presentations was not so rare as some authors averred, and that it would probably occur oftener if proper and timely assistance were not rendered. 2nd. That, under some circumstances, arm and shoulder cases should probably be left to be expelled by the mechanism of spontaneous evolution, assisting, if necessary, this mechanism by art. 3rd. That this ought to be our practice if, in an arm or shoulder case, the chest and trunk of the child be already thrust down into the cavity of the pelvis; for to turn under such a complication, and, with that object, attempt to push back the body of the child from the cavity of the pelvis into the cavity of the contracted uterus, would necessitate the redilatation of the uterus, and hence, in all probability, produce a rupture of its coats. 4th. That if the process of spontaneous evolution failed, two operations had been recommended to effect delivery, viz., evisceration and decapitation; and they had always been described as applicable to the same set of cases; but they were, in reality, individually applicable in two different sets. 5th. That evisceration was only applicable to cases of pelvic spontaneous evolution, demanding operative interference; and decapitation only applicable to cases of cephalic spontaneous evolution. 6th. Of course in all common transverse presentations seen before the body and bulk of the infant was doubled and thrust down into the cavity of the pelvis, and was still, in fact, in the cavity of the uterus, turning was the proper practice, and to wait for the prospect of spontaneous evolution would be utterly wrong. And, 7th, a child of the common size could never, in a transverse presentation, be forced and doubled down into the cavity of the pelvis, unless the pelvis were large in its dimensions, and hence, when the process of spontaneous evolution is found in an advanced stage, it is almost a certain sign that the pelvis is of such measurements as to give a chance of its completion.

Analysis of the Blood after Inhalation of Ether.—M. Lassaigne, from experiments, has found that blood taken before and after inhalation did not differ sensibly in colour, nor as to coagulation; afterwards it exhaled a strong odour of ether. The serum and clot in two specimens differed as follows:—

Before inhaling	Clot	65·46
	Serum	34·54
		100·00
After ditto	Clot	59·69
	Serum	40·31
		100·00

After inhalation the serum acquires a slight reddish tinge; the clot appears less consistent before than after; the globules, fibrine, and albumen preserve the same proportions after as before; the quantity of ether absorbed about 0·0008 of the quantity of the venous blood.

MORTALITY TABLE.

For the Week ending Saturday, May 8, 1847.

Causes of Death.	Total.	Average of 5 Winters.
All Causes	987	914
Specified Causes	985	909
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	137	166
Sporadic Diseases.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	113	99
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	167	158
Diseases of the Lungs, and of the other Organs of Respiration	314	275
Diseases of the Heart and Blood-vessels	45	29
Diseases of the Stomach, Liver, and other organs of Digestion	91	70
Diseases of the Kidneys, &c.	12	8
Childbirth, Diseases of the Uterus, &c.	22	10
Rheumatism, Diseases of the Bones, Joints, &c.	12	
Diseases of the Skin, Cellular Tissue, &c.	4	2
Old Age	54	57
Violence, Privation, Cold, and Intemperance	14	28

No. 399. SUMMARY. MAY 22.

A

COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the THEATRE of QUEEN'S COLLEGE, Birmingham.

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Feigned and imaginary diseases; importance of knowing them, difficulty of discovering and treating them; most common amongst females; probable reason of this; reflections upon it; sometimes met with in men; explanation of the division, feigned and imaginary; case of the former in full detail, and comments upon it; another case somewhat similar; circumstances under which deception of this kind is generally practised; exceptions to the rule, illustration; various motives to the feigning of illness; examples; various assumptions of disease, particularly that of diabetes, detection of this imposture; applications to physicians for certificates of ill health after their refusal by surgeons, cautions respecting the giving of these; further illustrations of feigned disease; imaginary diseases; examples.

GENTLEMEN,—I will take the present occasion to offer a few observations upon the subject of feigned and imaginary diseases. This subject you will hereafter find of not trifling significance, for it will meet with many illustrations in your career of practice. *Realities*, in the shape of troublesome or intractable ailments, are what you will chiefly have, professionally, to contend with; but *idealities*, and of these not a few, will frequently come before you for correction. You will find them not very easy of management or mastery. The morbid fears and fancies of patients are strange besetments, and the ingenuity and judgment of the practitioner are often severely taxed in treating them. For detection and defeat, they require a nicety of discrimination, and great decision of purpose, on the part of the medical man: to err in diagnosis, or to waver in determination, in such cases, is sometimes to incur the risk of personal ridicule—it has even incurred the more serious risk of professional ruin. These are grave reasons, then, why the subject should be brought before you in the shape of a clinical discourse; it becomes your teachers to make you acquainted with it—by none other means can you learn it so easily or so well as by practical illustration.

Examples of the subject I am alluding to are usually met with amongst females, especially of the delicate, sensitive, hysterical, and idle classes. Women, as a rule, have minds less vigorous and thoughtful than those of men; their reflective faculties are less developed; to use a plain simile, they carry more intellectual sail than ballast, and are therefore more easily affected by casual circumstances. Hence their tendency to fears and fancies; and hence the necessity, in treating these, to ever bear in mind the fact, that they have their origin in weakness, and to let the firmness of your discipline be tempered with that politeness and delicacy which are constantly due from our own sex to the other.

Sometimes the peculiarities in question are found amongst *men* — amongst those sighing, sentimental, languishing somebodies—a sort of breeched Mrs. Wittiterlies—who are a libel upon the sex whose name they carry. For myself, I must confess that bare civility to subjects like these is as great an act of favour as my charitable feeling enables me to offer.

The division which I have made of these ailments is into *feigned* and *imaginary*: the former are assumed for some deceptive purpose or other; the latter exist only in the patient's disordered imagination: those are much more common than these, and happily, also, are much more easily curable.

The first case I will call your attention to is that of Harriett ——, known, I believe, pretty well to all of you, for she has scarcely ever been off the hospital books since they were first opened. She boasts the acquaintance of nearly all the leading professional men in the town, who have variously but vainly essayed her cure—for charity's sake! I had not been attached to the hospital a fortnight, before she procured a home-patient's ticket, and desired my attendance, as she lived in my district. Knowing well her history, and suspecting her scheme, I did not visit her immediately, as I had been requested, but put her upon my list for the following day. In the morning, however, another messenger came, with the admonition that, if she were not directly seen and succoured, it was doubtful how much longer her valuable life might last. Of course I posted off instantly, fearing that she might possibly be really ill. I arrived in time to see her go through the finishing scene of a most substantial repast, in the business of which I curiously avoided interrupting her, for it was quite a treat to see an excellent appetite so generously supplied. After having appropriated the eatables, she disposed, at a draught, of a fair quantity of ale, and then proceeded to tell me how very ill she was. I had more than once before heard her tale of personal troubles, when calling to see her as a curiosity, with different professional friends who were at times in attendance upon her; but, as though hearing it for the first time, I sat most attentively while she went over the old story of aches, and pains, and palpitations, and sickness, and sleeplessness, and the many other items that constitute the protean infirmities of those who have inwardly resolved never to be well. She further entertained me by going back to the commencement of her illness, when she was fifteen years of age, which is about five-and-twenty years ago, and enumerating the different attacks she had had between that time and the present. She vowed that she had suffered from gall-stones, stone in the bladder (one physician, I know, gave her up as incorrigible, when she showed him a quartz pebble, which she declared she had passed *per urethram*), tumour of the liver and of the uterus, heart disease, spinal affection, frequent cough, and constant indigestion. The time I spent in hearing this absurdity was really not wasted, for the suggestiveness of the woman was quite a study. She lives but little more than a stone's throw off the hospital, so I inquired if she could not make it convenient to come to me there as an out-patient? She assured me this was impossible, as she caught cold directly she went out of doors, and to walk the length of the street was martyrdom to her. The gentleman from whom she obtained her ticket lives about two miles from her: I asked if she went for it herself? She said yes, and walked both ways, but "found herself very much done over, as it rained very hard, and the ground was deeply covered with melting snow." After further inquiry and examination, I plainly told her that I thought she had swallowed physic enough, and had better see how long she could contrive to live without it. This suggestion she met with a distinct denial of the possibility of her lasting much longer, unless medical aid were constantly afforded. I was then obliged to assure her that I had no doubt whatever about her case, and that I did not intend her to waste my time, or the hospital's drugs. Judging from my manner that imposition would not be very practicable, nor the process of it very pleasant, she wished to know if I could not turn her over to the surgeon of the district. She had been under his care two or three times. I told her that my intention was to send the note back to its donor, with an assurance from me that he might easily find other objects more deserving of it than herself. Of course she was very indignant, but that was of no consequence.

In this woman's case I suspect there are two causes which will account for her love of being

constantly on the sick-list. She is somewhat fat, and obviously very idle. She shares, or rather ought to share, with her mother, in the management of an infant school. Now, the duties of this are somewhat more irksome than she likes, and she therefore contrives to throw the greater part of the weight on her parent's shoulders, by assuming herself to be too delicate to encounter it. To be constantly complaining of inability to work might lead to suspicion, were not some of the unities of indisposition perpetually presenting themselves. These she supplies in all sorts of affected pains, in periodical doctor's visits, and in the disposal of as many pills and potions as may be sent to her. There may be another motive than this: she may love, and I think she does, to be considered an invalid, and to be honoured in the constant attendance of a medical man, even though he receive no remuneration for his trouble. The feeling may lie deeper, and be less delicate. One of her attendants applied the *speculum uteri*. She fancied she had disease of the uterus ever after! Whatever might be the cause, there was no doubt of the imposition, or attempt at it; and it was a duty I owed, as well to the hospital as to myself, to prevent the infliction.

Some time ago I had a patient—a fanciful young girl of sixteen years of age—whose parents were too poor to feed and clothe her after the fashion she desired, and herself was too idle to help them in any way. After affecting various ailments to no purpose, she persuaded her mother that there must be a communication between her bowels and her bladder; having eaten plentifully of cherry-pudding one day, and swallowed most of the stones, she afterwards showed these to her credulous parent, declaring that they had passed *per urethram*. The poor old woman came to me in an agony with them, and imploringly asked what could be done? My advice was, that she should for the future pay no attention to her daughter's ailments, but lock up her fine clothes and keep her on low diet until she recovered. It was not long before I learned that the suggestion had been perfectly successful.

You will generally find that deception is chiefly attempted to be practised upon you by those who solicit your gratuitous aid. The physic costing them but little, and the advice costing them less, they are scarcely encumbered by their efforts of artifice. Again, people of this class are usually those upon whom the benefits of education have operated but sparingly, and they are consequently unguided and uncontrolled by moral causes that upon others, better trained, have a stronger influence. There are exceptions, however, to this rule. Many an alliance, honourable and dishonourable, even in respectable families, has been formed over a bed of assumed sickness. During my apprenticeship a joke was rife in the town, concerning a lady of some intellectual and family pretensions, who betook herself to bed for a whole twelvemonth, and for no obvious reason other than that of encouraging the visits of a quack doctor, who, amongst other delicate stories with which he was wont to amuse his patients, used to relate the execrable adventure of having stolen a dead body from the spot sacred to its burial.

Illness is sometimes feigned by the indigent in the hope of making it a source of improved subsistence. In connection with the General Dispensary, we have a fund which enables us to provide the necessaries of life for those of our patients who may happen to be destitute of them. Excellent as this privilege is, there is often required some circumspection to prevent the abuse of it. I have frequently found my patients obtaining a renewal of their notes, not because they wanted much physic, as they said, but because the tickets for meat and bread were so very acceptable. One old Irishwoman in particular completely exhausted my patience, and I suppose also the recommendations of her friends, for I lost sight of her at the dispensary for several weeks. One morning, however, she made her appearance, as an out-patient at the hospital. There was nothing amiss with her worth a mention; but you remember her asking me if I could bestow a few relief tickets upon her, at the same time assuring me of her ardent love for me, and her profound regard for the boundless benevolence which she was sure I possessed. She was vastly astonished when I told her we did not keep relief tickets; and her estimate of my prescription and her need of it were pretty well shown in the fact that she never came near the hospital again.

Men who are out of employ, and belong to sick societies, frequently feign illness for the sake of obtaining relief from the "box." The tricks resorted to in these cases are sometimes very ingenious, and require some sagacity to detect them. Those who happen to have learned the deceptive art in the army are exceedingly difficult to unmask. They can produce superficial inflammation, swelling, or eruption, at pleasure; establish a slough which no human ingenuity can heal, until they choose to let it; go into fits that look as natural as though they could not be helped; be paralyzed all over, or in part, for any length of time they like; vomit as if they had cirrhus of the pylorus; cough as if they were consumptive; purge like cholera; and urinate like diabetes. This last is an old trick, and was often a very successful one when the only diagnostic process consisted in tasting or fermenting the secretion. If the patient clandestinely added sugar to it, of course its taste would be proportionately saccharine, and carbonic acid, corresponding to the quantity of sugar present, would be produced by fermentation. The potash or milk of lime test, however, enables us to detect the imposture: for it is with *grape*, not *cane, sugar* that they produce the characteristic brown colour on boiling.

Impostors of the class I am now mentioning, if detected and exposed by their club surgeon, often seek to retaliate upon him by applying to a physician for gratuitous advice, and persuading him to certify to their indisposition and unfitness for labour. In this manner they bid fair to disturb the harmony, good feeling, and good fellowship, which should ever extend themselves between one professional man and another. This is one of the many things which often interfere with the right continuance of brotherly regard amongst us. The general practitioner feels, and very properly, that his opinion, perhaps the result of long and cautious observation, has been unjustly set aside by a certificate given by a physician, after a single and, perhaps, only a short interview with the patient. It may have been, and most likely, that the physician intended no wrong; but in cases like these there is nothing like caution. Let me advise those of you who hereafter intend to practise medicine exclusively to be mindful how you act under such circumstances. Certificate, like testimonial, giving ought to be considered a serious thing. If a case like that I have mentioned come before you, advise the man to go to his surgeon for the warranty—depend upon it, his regular medical man will be the best judge. If this do not answer, see the surgeon yourself, and determine *together* what may be best to be done. To do this, will be to save yourselves and others frequent unpleasantness.

Imposition of the kind I am speaking of is frequently met with amongst the in-patients of hospitals. In the course of my professional lifetime I have met with many examples of it, and yourselves have lately seen not a few in the Queen's Hospital here. At one time, as I have before told you, there were no less than five girls, all under my care in one ward, who were attempting to practise deception. The first that I dismissed burst into tears on being told that she must go, and assured us that there was no home to receive her. This was a painful thing to hear; but, with the hospital quite full, and urgent cases refused daily for want of room, it was quite out of the question to keep those who were bodily well, merely because they had no settled place of residence. On the day of this girl's departure, I requested her to call upon me, as an out-patient, in three days. She did so, comely enough dressed, and I then found that she was staying with an aunt, who was glad to find her shelter when she discovered that the hospital would keep her no longer. An Irishwoman, you remember, I dismissed about three weeks ago, who abused the nurse right well before the committee, as the cause of her ejection. I was satisfied of her cheat for a week before I parted with her. She gravely told me she had no means of getting a bit of bread, unless she got employment; and I replied, that I thought that was the case with most of us. Stout, hearty, and an excellent eater, she begged emphatically for another week's idleness; but, finding entreaties unavailing, she coolly packed up for departure, leaving a polite benediction for the nurse as she went away. Another girl, Unwin, in the same ward, I had some difficulty in dismissing. She liked her residence so well that there seemed some improbability as to the time when she might take a fancy to leave it. When a necessity for her departure was hinted, she referred the authorities to her father, who could command tickets, she said, to keep her in as long as he might choose. The father, hearing this, demanded an audience of me, and, not being at the hospital at the time, the nurse referred him to my house. He came accordingly, wishing to know, why his daughter was to be discharged? I answered, interrogatively, why did he wish her to be kept in? I told him she had a good pulse, a clean tongue, a bright eye, a clear complexion, an excellent appetite, and, as he could testify, she was not wanting in strength, for most days she walked three miles in paying a visit to her paternal residence. He then plainly told me that he could not maintain her, and could not induce her to work, and had sent her into the hospital as a last chance. I suggested to him that the hospital was not a workhouse, and that he ought not to attempt to abuse its charity. I gave him further advice about managing his intractable representative, which I hope would have the effect of curing her of idleness and schemes of imposition.

In all cases of this kind, once fully detected, firmness should be your principle of treatment. It may be that there are inducements to lead you to yield to the artifices of the tricksters; but it will mostly be that there are higher motives than these, directing you another way: let the latter guide you. Always merge lesser considerations into larger ones—do what a conscientious judgment tells you is your *duty*, and you will do right!

Upon the subject of imaginary diseases I have little to say: if I said more, I must of necessity say a great deal. Whole books, you know, have been written upon this most prolific theme; and no doubt whole books have yet to appear on the same subject. These ailments are generally difficult of cure—often they defy it. My business, however, is not with those cases that depend upon a constitutionally-disordered mind; or upon other causes than general weakness, or sympathy between the brain and some remote suffering organ. General nervous debility has a great tendency, in certain people, to show itself in some hallucination or other. If in the person of a girl, she may become merely hysterical, or fancy some of the ten thousand absurdities that attach to the weaker sex at a delicate age; if in a boy in his teens, he will fall in love, fancy himself a man, and despise the authority of his master—his *ultimatum* is the stage, or the sea, or, if strong enough, he may fancy the army; if in the person of a married woman, according to the circumstances of her domestic treatment, will she be liable to weep over her husband and children, and quietly take to drinking, or to rave about the infidelity of her inferior half, and vow, if it were not for the little ones, she would drown or poison herself; if in the person of a married man, he fancies himself overwhelmed with debt, foresees his family in ruin, and, by way of helping them thereto, absconds from them, or makes the public-house his home, or cuts his throat.

It has often occurred to me to think, and often

indeed to know, that many of the acts of people, which in our cool calculating moments we are disposed to judge harshly of, really deserve our pity, from the artificial circumstances which have suggested them. I am inclined to believe that rational man is not generally disposed to belie his nature; but there are certain occasions when he rather rejoices in doing it. Depend upon it, if there be no radical mental defect, these occasions are when some of his more important animal processes are going wrong. Of these, none are more influential than the functions of the stomach and liver, and (in the female) uterus. Fairly derange these, and it will be a wonder if the brain have not some participation in their error. Wrong ideas and weak judgment are amongst the most common symptoms of amenorrhœa. You remember a case of this kind we had some six months ago: all the hallucination vanished directly that the catamenia appeared The man in the middle ward, whose dusky complexion and clayey stools I directed your attention to a few weeks ago (I forget his name at this moment), had extraordinary dreams when asleep, and still more extraordinary imaginings when awake, as you will recollect. I was half afraid, at one time, that his brain was something more than disordered sympathetically with his liver. All these extravagancies, however, left him directly that the biliary secretion became restored, and passed off by the bowels. The out-patient, with the pale face, sunken cheeks, and hollow eyes, whose case I particularly adverted to last Wednesday, is the subject of general nervous debility; but this is chiefly shown in his gastric functions. With the state of his stomach his brain sympathizes, and the poor imbecile creature is barely fit for the common purposes of life. He has improved somewhat under stimulating and tonic treatment, but still his fears and fancies are of a painful and most pitiful nature. Mrs. Frost, who is still in the hospital, we thought, from her strange wildness and incoherency, added to other indications, was the subject of brain disease when she first came in. I am now inclined to think that all her anomalies arose, primitively, from the condition of her stomach. At least she has gradually but substantially improved, under the use of regular purgatives, tonics, and diffusible stimulants. You remember how the calomel purge, followed by generous diet, wine, and ammonia, quieted the turbulent brain of the poor woman in the top ward, three months ago, who fancied she was possessed of the devil.

I could dwell upon many such cases did our time permit; but I have not space for detail. In treating patients of this class, considerable discrimination and tact are generally required. Your first object, of course, is to find out, if possible, the origin of the malady. If it appear to you, on examination and deliberate reflection, that the patient is only fit for an asylum, lose no time in sending him thither. But be cautious how you come to this conclusion: much may hang upon it.

If remedial treatment, within your own scope, be wanted, administer it without harshness or severity. People whose fancies are morbid are on no subject more so than on that of personal kindness or cruelty.

If their passions are roused, soothe them; if their spirits are depressed, cheer and sustain them. It may be that moral causes, only recent, are in play, which "a word spoken in due season" may go far to rectify.

If you can trace the derangement to organic causes, capable of rectification, proceed unhesitatingly in your work of improvement until you have completed it.

Much Cry and Little Wool.—We see by the Parliamentary return, that, though fifty-five petitions have presented *for* the Registration Bill, they possessed but 147 signatures—less than three each! For the new bill of the druggists there have been thirty-four petitions, with 462 signatures.

A COURSE

OF

LECTURES ON SURGERY,

BY

SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London; Consulting Surgeon to London University Hospital, &c.

Lecture VI.

At the conclusion of the last lecture, gentlemen, I entered on the consideration of the causes of inflammation; and I mentioned excesses in diet, accompanied by indolence, and especially the propensity for stimulating drinks, as calculated to produce a strong disposition to inflammatory affections. Such habits not only predispose to inflammation, but they also induce a peculiar state of the system which renders the party unable to bear up against its ravages. Such persons are, indeed, bad subjects for all kinds of disease, and they usually succumb to it in a very short time. Operations are more frequently fatal to such persons, unless they are previously prepared for them by antiphlogistic measures—such as bleeding, low diet, and a proper regimen. Unless such preparatory treatment be enforced, operations are very commonly unsuccessful. Unfortunately, it is not always possible to submit the patient to this preparatory regimen, as in cases where accidents, such as compound fracture, demand immediate amputation, and the limbs are so shattered as to leave amputation as the only chance for saving life. Sedentary, studious habits, accompanied by indulgence in the luxuries of the table, always induce a tendency to inflammation, and sometimes produce the gouty diathesis, or call it into action where there is already an hereditary predisposition. We should always bear in mind, among the predisposing causes of inflammation, peculiarities of constitution, or idiosyncrasies, because these explain to us why some individuals are the subjects of gouty, others of rheumatic, and others, again, of scrofulous inflammation; although all may be living in nearly the same manner, and indulging in the same habits.

We now arrive, gentlemen, at the exciting causes of inflammation, among which I may enumerate mechanical injuries of different kinds—wounds, fractures, sprains, bruises, friction, pressure, or irritation caused by extraneous bodies lodged in the body, such as bullets, splinters of wood, fragments of glass, and a variety of other substances. Stimulating applications and other matters which exercise a chemical action on the texture of the part may be mentioned as exciting causes, by far the most frequent of which are caustics, fire, and heated substances. Among the most common of the exciting causes, is the application of cold, which sometimes acts directly on the part, as in frost-bites, inflammations of the larynx, trachea, or lungs, excited by the entrance of cold air; at others indirectly, as when the action of cold on the skin suddenly suppresses the cutaneous transpiration, and produces fever and inflammation of some part not exposed to the direct influence of cold. The locality in which inflammation excited indirectly by cold shows itself is different in different persons. Thus, the application of cold to the feet will cause inflammation of the lungs in one person, sore throat in another, inflammation of the bowels in a third, and shall produce no injurious influence on a fourth. In all these cases cold must act as an indirect rather than a direct exciting cause of the disease. The sudden warming of a part which has been long exposed to cold generally produces a violent inflammation which is checked and controlled with great difficulty; and here again cold acts in an indirect manner. Chilblains are instances of the action of cold in exciting inflammation, but it is by no means uncommon to see a part or the whole of a limb destroyed by mortification resulting from the inflammation induced by cold. The sudden application of heat, or rather the sudden change of temperature, is here the true exciting cause of the inflammation, which may be avoided by a slow restoration of the natural heat of the part. Inflammation, again, may be produced by the sympathy of the part attacked by inflammation with some other part to which the causes of irritation are applied. Particular kinds of food and medicine introduced into the stomach may produce peculiar inflammation of the skin. In some states of the system mercury produces an inflammatory redness of the skin which is called mercurial erythema, and nettle-rash sometimes follows the eating of shellfish. Abscesses in remote parts of the body are sometimes the result of injuries of very distant parts. Mr. Rose gives examples of death from such abscesses resulting from gun-shot wounds, although the patients had recovered from the direct injury. These remote or sympathetic abscesses are frequently seen in the lungs, the liver, the pericardium, and serous membranes, but they may take place in other tissues. Injuries of the head were observed by Bertrandi to be occasionally followed by abscess of the liver. Similar deposits of pus in different parts have been not uncommonly noticed as results of phlebitis. These abscesses are now referred to the absorption of pus or some other injurious matters into the system, which, circulating with the blood, excite inflammation, which is followed by abscess, and not to the sympathy of older authors. Among the predisposing causes of inflammation we must reckon fevers. Patients often recover from these, but are afterwards tormented by the inflammations and abscesses which occur as *sequelæ*. But abscesses are frequently formed during the course of the fever, as in plague; and, as the older practitioners often observed that the patients recovered rapidly after the evacuation of the abscess, they called them critical abscesses. I now, gentlemen, arrive at the most difficult and uncertain part of this subject—the consideration of the proximate causes of inflammation, or, in reality, the nature of the disease. The nature of inflammation, I may venture to say, has puzzled all physicians and surgeons, from the earliest period of the study of medicine to the present day, and will probably remain in a great measure inscrutable to future generations. The proximate cause of inflammation may be said to be that on which the characteristic and essential phenomena of the disease depend—that peculiar action or change which, commencing with the commencement of inflammation, accompanies it through all its stages. It is, therefore, the essence or nature of the disease itself. Many and various have been the opinions formed to account for the phenomena of the disease. The older physicians, and the celebrated Boerhaave among the number, following the humoral pathology, indicated a lentor or viscidity of the blood as the immediate cause, supposing at the same time that the globules took a wrong course, and were forced into vessels not intended to contain them. Even were these circumstances proved to be true, they could not constitute the proximate cause of inflammation, and could only be considered as the predisposing or exciting causes. No change in the condition of the blood must be looked upon as the proximate cause of inflammation, whatever effect it may have on the phenomena of the disease: for, if inflammation essentially depended on an altered condition of the whole mass of the blood, the whole of the body should be inflamed; but this is not the case, for the inflammation is restricted to some particular part. There can be no doubt that more blood is sent to inflamed parts than natural, and this, I believe, is universally admitted. You will observe that a much more copious flow of blood follows an incision of an inflamed than a similar incision of a healthy part. Such an increased hemorrhage cannot be attributed to the action of the heart, because this organ propels the blood equally to all parts; but must depend on increase in the

diameter of the vessels leading to the inflamed part, or to some new power of propelling a larger quantity of blood to the inflamed parts in which they are distributed. That an increased determination of blood to parts affected with inflammation exists, is shown by many circumstances in addition to those I have already cited. It is observed in amputation of the thigh, for disease of the knee-joint where inflammation and large abscesses have previously existed, and also in cases where the limb is removed in consequence of bad compound fractures accompanied by severe inflammation and profuse suppuration, that the flow of blood is much greater than under ordinary circumstances, and that the number of vessels that require ligature is much increased. In such cases many of the small vessels are greatly increased in size.

The phenomena of inflammation, by which I wish to be understood the increased heat and redness; the effusion of coagulable lymph within the texture or on its surface; the swelling and suppuration, are produced by the altered condition of the capillary vessels of the part. The diameter of their canals is increased, so that they are capable of admitting a larger number of red globules than in their natural state. Thus, in the inflammation of the tendons, of which I showed you an injected specimen in a former lecture, numerous red vessels were visible which would not have been seen in a similar injected preparation of a sound tendon. But the question may now be asked, is not something more than dilatation and turgescence of the vessels implied in the action by which the redness, heat, swelling, and pain of inflammation are produced? We are not to suppose that these vessels undergo alternate contractions and dilatations, for we can see with the naked eye sufficient to prove that the phenomena may be the result of dilatation alone; nor are we to suppose that there is constantly increased velocity in the circulation through the capillaries, for we have evidence from the experiments of Drs. Thompson, Wilson, and Hastings, to show that there is diminution of velocity in the capillary circulation as soon as inflammation is set up. In these experiments some stimulants were found to increase the velocity of the circulation in the minute vessels, while others retarded it. The opinion of Dr. Wilson Phillip was, that the proximate cause of inflammation is a debilitated state of the capillaries conjoined with an increased action of the arteries leading to them. We may safely say, then, that in inflammation the velocity of the capillary circulation is not always increased, and, if we can place full reliance on microscopical observation, it should generally, if not invariably, be diminished. We must not suppose that determination of blood to a particular part alone constitutes the proximate cause of inflammation, for such determinations of blood to particular organs are sometimes perfectly natural, and do not induce it; as in animals who copulate at a particular season, the spermatic arteries are found much enlarged, and then there is an increased determination of blood to the organs of generation. The carotid arteries of the stag are much enlarged during the growth of the horns, yet no inflammation is produced. When there is merely an increased flow of blood dilating the vessels, congestion may be said to exist; and this is often a predisposing cause of inflammation, but does not constitute the disease. We may safely conclude that inflammation is accompanied by a greater determination of blood to the affected parts; that the diameter of the vessels leading to the part is increased; and that the blood does not always pass with increased velocity through the capillaries, although it may be increased in those that terminate directly in the veins; for when we take blood from the arm of a patient in whom the hand is inflamed it flows with greater rapidity than under ordinary circumstances. You will perceive from what I have said that the proximate cause of inflammation is still imperfectly understood. The remarks I have now made apply only to acute inflammation, from which I shall now pass to the chronic form of the disease. Here we have little of the turgescence, and redness which characterize acute inflammation. Chronic inflammation would seem rather to be a perverted action of the capillaries, or a disordered state of nutrition. Frequently we discover a deposit of new matter in the part, or augmented secretion from its surface, especially in the case of a mucous membrane. Thickening and enlargement of parts are common consequences of chronic inflammation, which may be considered as a process requiring an increased flow of blood. The spermatic artery is sometimes enlarged to the size of the brachial in chronic diseases of the testicle, as I have several times had occasion to observe.

Surgeons recognise several terminations of inflammation. These terminations are not to be considered as absolute terminations of the inflammation, but as a change in the circumstances of the case, in which the inflammation subsides to a considerable extent, leaving some other form of disease.

After having continued for some time, the inflammation either subsides entirely, and the part returns to a healthy condition, which may be considered a natural and absolute termination; or is succeeded by such a change in the action of the capillary vessels as to produce a secretion of pus. Suppuration, or the formation of pus, is usually set down as one of the terminations of inflammation; but this is by no means the case, forasmuch as inflammation does not always cease when suppuration takes place, although it may be much diminished or modified. Another termination of inflammation, where it ends in the total destruction of the part, is mortification or sphacelus. When inflammation is about to terminate in resolution, the pain is diminished; the effused lymph and serum are absorbed; the swelling, tension, and throbbing subside; the fever and other constitutional symptoms decrease or disappear, and the part returns to its natural state. This is not only the best, but the most common termination of inflammation; and therefore most desired by the surgeon, whose aim is to effect it in all cases where this is practicable.

The French surgeons use the term delitescence to represent a very sudden termination of inflammation in resolution. Under such circumstances there is a sudden decrease of pain and disappearance of all the local symptoms, followed by a rapid shrinking and shrivelling of the inflamed parts.

Suppuration is another of the so-called terminations of inflammation, but which would be properly designated as a consequence than a termination. In the process of suppuration the vessels produce pus, which collects in the tissue or substance of the inflamed part, and forms what is called an abscess, or exudes from the surfaces of wounds, ulcers, and the mucous membranes as a discharge. It must be considered as a modification rather than a cessation of inflammatory action: for the parts surrounding a collection of matter are still violently inflamed, and throw out coagulable lymph, which obliterates the surrounding cellular tissue, and prevents further diffusion of the matter.

Another mode in which inflammation is said to terminate is that in which the blood ceases to circulate, and the part becomes cold, insensible, black, and deprived of vitality. This is mortification, which is at the same time the most unfavourable and dangerous mode in which inflammation can terminate. Mortification only occurs when the inflammation has been excessively violent or peculiar in its nature, or has taken place in an unfavourable condition of the system. The influence of the constitutional state, in producing sloughing or mortification, is seen in carbuncles and boils. In carbuncle we have an extensive destruction of the subcutaneous cellular tissue, and a similar slough or core is found in the centre of boils.

Induration was classed by the older surgeons under the term scirrhus, and was said to be a termination of inflammation; but you will readily perceive, from what I have already told you, that induration cannot be properly looked upon as a termination of inflammation. A certain amount of hardness is a common consequence of acute inflammation, as this may sometimes continue for a long time after the cessation of the inflammation.

Another of these so-called terminations of inflammation is when it changes from the acute to the chronic state. When this is the case the symptoms become milder, the redness, swelling, heat and pain subside or diminish. In these cases the vessels continue dilated from simple relaxation and want of tone, so that we might be almost tempted to adopt the opinion of Dr. W. Phillip, that inflammation depends on a debilitated state of the capillary vessels.

In inflammation of the eye, for example, the patient is able after a time to bear the light, and feels little pain, but the relaxation and redness of the conjunctiva may continue. When parts have once been the subjects of inflammation they are ever after more disposed to that diseased action, so that repeated attacks of inflammation of some particular organ are commonly observed. Some persons are subject to inflammation of the throat, others to inflammation of the eyes; other, again, to inflammation of the lungs, &c.

Having reviewed the causes and chief phenomena of inflammation, I now turn to a part of the subject of the highest importance and interest—the treatment of the disease—which I must defer until our next meeting.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), M.B.S., Physician to the Royal Infirmary for Children, &c. &c.

(Continued from p. 230.)

I have now, gentlemen, to pass on to a very important and extensive subject—the treatment of scrofula; and here I may remark that it was principally the scope that the consideration of this common malady would afford me, of attending to the great and leading principles of hygiene and therapeutics applicable to *many* disorders of the infantile and youthful frame, that induced me to bring it so early before your notice. You will not be surprised, then, that I enter into some detail in relation to certain points on which I shall not have hereafter, I think, so fit an opportunity of touching. Many of them will bear quite as intimate a connection with other diseases as they do with scrofula; and, although I lay them before you in connection with this decimator of our race, yet I must beg you to consider them as bearing general import.

I would impress upon you, that if the attempt to *cure* disease after it has invaded the body be a prominent aim of the medical practitioner, and one to which his knowledge of pathology should be considered as always tending, that of endeavouring to *prevent* its appearance—to protect the body from such invasion—is, or should be, equally as paramount. I am sorry to say, however, that this attempt at *prevention* of disease is an element of medicine too often lost sight of, and the advice of the professors of our art is but rarely sought for by the public, as either requisite or necessary to be confided in, to point out how it may shun danger, in comparison as to how it may get out of it when it is fairly in.

But, to the philosophical practitioner of medicine, the study of those great principles, of those laws of existence under whose influence the growth, maturity, and welfare of our frame maintained in station of prosperity, according as the body swerves the *less* from these principles, is equally important and necessary, as the study of those by whose guidance we may restore health to a body which has swerved, or is in fact suffering under disease. The more important, also, will it appear to you, when you recollect that the former study will enable you to preserve a constitution naturally unhealthy, weak, and having peculiar morbid tendencies, from

falling into most serious evils, and which it in many cases *most certainly* would do upon its departure from the observance of those laws, by attention to which even the most healthy body can in most instances alone maintain its proper balance.

In applying these views to practice—which after all would be of very little purpose were they not so made use of—you will see that a disease may be regarded in two points of light: first, learning its exact nature when fully developed, and how to *cure* it; secondly, striving to discover its more general causes, and how to *prevent* it. The grand aim and result of practical medicine are seen, then, as exhibited in Preventive and Curative Therapeutics. Under these two heads I shall discuss separately what I have to say of the therapeia of scrofula.

When you call to mind that this malady arises from a disorder of the fundamental constitutional powers—that its local evidences are but external manifestations of what we may term a diseased nature of the formative and assimilative functions—it is very plain that great stress must be laid upon an observance of those hygienic laws which, embracing the theories of diet, clothing, and climatorial influences, are the main elements by due attention to which we may hope to alter this diseased tendency, or preserve a healthy one from becoming impressed with it. Even in the removal of the local signs of the scrofulous constitution, or the cure of special scrofulous disorders, you must never forget that much of your curative therapeutics will be made up of the principle of hygiene that, without your paying attention to these, much of your treatment will be but useless attempts at removing that whose more general causes you are refusing to pay attention to.

Now, suppose a child is brought to you evincing the artistic characters of the scrofulous diathesis, and perhaps with these some of the slighter grades of local disorder, eczema, lymphaditis, or conjunctivitis, &c., according to age and other circumstances. Your duty, of course, is to try as far as possible to preserve this child as healthy as you can, to prevent a more severe irruption of inflammatory or tuberculous forms of disorder. The first grand point for you to bear in mind is—that a healthy process of *nutrition* shall go on in the patient: for without this, any attempt at prevention or cure will be alike useless. In order that this shall take place, the child must be made to live under three great conditions—proper diet, as regard both nature and quantity; preservation of a due amount of animal heat, or proper degree of warmth afforded by external clothing, &c.; proper atmospheric or climatorial influences, involving exposure to solar light, exercise, and personal occupations, &c. There are other hygienic principles, of great importance too, but these are the most fundamental.

To begin from the begining, gentlemen, I shall consider this question—A child is born of a female decidedly scrofulous, is it to be suckled by her? And this question, let me tell you, is by no means so very easy to answer—or rather, it may still be a debatable point. You must excuse me here bringing before you some authorities.

According to Smith, "Where the mother herself is strongly marked by the strumous diathesis, it is the recommendation of the best authorities, that a wet nurse (with the rich) should be procured; with the poor, the child must perforce be brought up by hand." According to Ranking, "The mother ought not to suckle her child, however much she may be prepared to do so, if she or her family exhibit the scrofulous diathesis." Cummin says, "If the child of a scrofulous father is born, unless the mother is free from all traces of the disease, it ought to be consigned to a wet nurse." Evanson and Maunsell state that "Women who labour under any mental or weakening disease, or phthisis, &c., are thoroughly disqualified for the office of nurse." These authorities are sufficient for my purpose, but I might quote others of the same way of thinking too.

Now, if the question be put thus—Should a female who has betrayed marked evidences of the scrofulous diathesis suckle her child, should she be able to procure a good breast of milk for it from a healthier female?—the answer, of course, must be, that she should not. But if it be asked—Should she suckle it if she cannot obtain a wet-nurse, or rather bring it up by hand?—the answer requires considerable reflection ere it be given.

You must recollect, that although—as it is stated—the milk of a tuberculous cow—an animal very subject to such disease, when confined in stables and stall-fed—has been found to contain *seven* times as much phosphate of lime (a main ingredient of tubercle) as that of a healthy animal, it has not been proved, so far as I am aware at least, the milk of a scrofulous female contains the same; much less are we satisfied that such milk can bestow scrofula on the offspring through the medium of a particular form or contagious principle, although such milk will be a bad article of diet—not so good a milk—not so nutritious a fluid to live upon as that afforded by a woman not scrofulous. The question, then, becomes resolved into this—Will the inferior and less nutritious milk of a scrofulous woman be better for her offspring than bringing it up by hand?—will the chances for the continuance of its life be greater under the former circumstances than under the latter? My opinion is, that unless the mother is what I may justly call *very scrofulous*, or undoubtedly suffering under tuberculous disease of the lungs, her offspring will stand a better chance of surviving if she, having quantity enough of milk, perform for the first six months the office of lactation. To lay down the law, that under no consideration is a mother who betrays signs of the scrofulous diathesis to suckle her off-spring, is not only an impracticable theory to carry out, but an unnecessary if not a bad one. Indeed it has been asked by a reviewer, in the "Medico-Chirurgical Review," "where are the wet-nurses to be found for every child of every woman in whom or in whose family there is a scrofulous taint? And what, pray, is to become of the nurses' own poor children, deprived of their natural food, and thereby rendered subject to that very disease sought to be eradicated in others?"

While I give it you as my opinion, then, that it is preferable in the greater number of cases that a child be nursed by a scrofulous mother (under the limitations I before laid down, mind) for the first six months, instead of being brought up by hand, it is also my opinion that at that period she should cease to suckle it, or even before, if the milk become scanty in quantity, or the child dwindle away. And now I may also state another opinion I hold to be true, viz., that one of the main causes of a scrofulous outbreak is not only *undue* or over-lactation by a scrofulous mother, but even by a healthy one.

I have laid down six months as the period at which a scrofulous mother should cease to suckle her child. I would lay down sixteen months as the general period at which a healthy mother should begin to wean the child of a scrofulous father. Of course you must bear in mind there are exceptions to all rules, and that a poor, weak, little thing, almost toothless at this age, may be brought before you, and to whom the good milk of a very sound and healthy mother will be for a longer period of time the best food it can have. There is considerable limit to be allowed, then, as to the continuance or not of nursing such a child.

I must tell you, however, that I do not think there has been advanced in late years a doctrine more tending to increase scrofula and render the life of the woman more precarious and liable to diseases of great debility, and at the same time a more disgusting one, than that promulgated by M. Loudon in his work entitled "Solution du Problem de la Population et du Substance." M. Loudon, amongst other things, would render it a stringent law with women that they should suckle their offspring for *three years*, as by this means the number of children will be diminished, because, as the doctor says, pregnancy does not occur during lactation; and he might have added also, because many of the other children will die of scrofula. I will leave entirely out of the question the theory of triennial lactation *preventing conception*, though I would not have you forget that, according to Mr. Robertson, fifty per cent. of the labouring classes of Manchester become pregnant while suckling. But I must put it to the candid judgment of all who are acquainted with the effects of prolonged lactation in this climate, and ask what would be generally the result of three years' suckling upon the present and future health both of the child and the mother?

Whenever I have seen a case of prolonged lactation, the health of the parent has been seriously hurt. But a few weeks ago a female came to me at the dispensary suffering under profuse leucorrhœa and great general debility, loss of appetite, &c. She was a pale, leucophlegmatic person, very much broken down, complaining of all those signs which women do who suckle more or longer than they ought. I inquired if she was nursing. She answered that she had been suckling for three years. Weaning the child, quinine, alum injections, with porter at dinner, has made this woman quite a different thing.

I shall now suppose, from some particular circumstance, a child is to be brought up by hand—in such a case what is it to have? Milk, gentlemen; nothing but milk in most cases; eschew, by all means, sago, arrow-root, semolina, tops and bottoms, biscuit-powder, baked flour, and the whole list of vegetable aliments often so much in vogue. There is not a more fallacious piece of reasoning than that which deduces that such starchy ingredients are either to be given in lieu of, or constantly superadded to, a milk diet. The natural food of a child until it has cut the four central incisor teeth, or is from six to nine months old, is the mother's milk alone; and, if it cannot get that, it should have that which most nearly approximates to it. It is just as bad, also, to give it *solid* food of animal origin before that time; you might as well give it *marbles* to digest. Not very long ago I was requested to see a child, of a very delicate constitution, who at more than a year old had not a tooth in its head. This child was pining, dwindling away, marasmus daily progressing. I learned it was being fed upon all sorts of things, and at my second visit requested to see the napkin. The dejection chiefly consisted of a few solid hard lumps, of the size of horsebeans, covered with soft white matter. On inquiry, I found that nothing pleased the proud father so much as to make it *sit up* at breakfast and give it bits of bacon to *eat*. These undigested lumps were the bits of bacon. When I ordered the child nothing but country milk and isinglass, it caused some astonishment, as doubts seemed to be held as from whence it could receive nourishment. To enforce this diet I had considerable difficulty. I have lately seen it stated that an experiment of the following kind was made by a distinguished agriculturist, Mr Smith, of Deanston. At a time when sago was universally recommended as a cheap material for feeding cattle, he purchased a quantity of it, and employed it for fattening a number of calves, substituting the sago for a certain amount of milk. The animals appeared to thrive and grow fat, but in the course of the following year every animal so fed died—some from inflammation, and others from incidental diseases, the accession of which he attributed to the use of sago; the calves fed on milk alone exhibiting no symptoms of unhealthiness. I recommend to your perusal upon this point a review of Liebig and Thompson "On the Food of Animals," in the April number of "Dr. Forbes' Journal." Now, it may be asked, what is the nearest approximating milk to that of the mother? This is an important point to consider, because, you know, not only should the child's food contain certain ingredients, but these ingredients should be present in the proper proportion. I think, taking all things into consideration, we may place the following milks in this pro-

gression:—Those of *woman*, ass, goat, cow, ewe. You know, perhaps, that the grand characteristic of woman's milk is, that it contains but little *caseine*, or cheesy matter, but much sugar; and in these two important points the milk of the ass most nearly approximates. But, of course, it is but comparatively few persons who can afford to go on buying ass's milk for a long period. But every person can procure cow's milk; and, such being the case, you must endeavour to make that *artificially* approximate, which does not *naturally*. So to the best, of country cow milk, that can be obtained, about one-third of tepid water should be added to dilute it (for it is too strong in cheese), and also sugar, for in this it is naturally deficient. In administering this food, if *two* sucking-bottles can be procured, so as to prevent accumulations and acidity in a constantly-employed *one*, they will be found a better medium than the spoon. Sometimes you will find that, if diarrhœa comes on, the milk *boiled* will be best; at other times it will not suit at all, but isinglass-pap will be of avail. Often you may have to dilute the milk much more than is usual at other times not. I cannot agree with those who recommend, under *ordinary* circumstances, at a very early age, "light beef or chicken tea;" and it has fallen to my lot to bring back a child to health by simply reverting to a milk diet alone, which was progressing in disease, subjected to another now and then. Of course you may meet with cases in which *strong* beef tea or gravy, with the fat skimmed off after it has been allowed to cool, is a useful resource; but such are exceptions to the general rule, mind. As a child gets more teeth, lateral as well as incisor, indication is given that variety will be proper in the food, and various vegetable aliments are now to be superadded with those of animal origin. Of course, in such a disease as scrofula, the diet is to be good, at the same time time that the stomach has not given to it to do what it cannot accomplish, either in quantity or quality. If, however, complete mastication can be performed, meat is to be given before that time; very often a piece of soft meat may be offered to the child to suck. As the child gets older the chief indications are, that the diet be substantial and in proper quantity; whilst the array of puddings, pie-crusts, and confectionery be entirely abrogated, as well as sloppy, thin vegetable makeshifts. Eggs and milk are always good; but a scrofulous diathesis always needs meat, and it is a very good plan to let it have some at breakfast. Corned or salt beef, *ham*, and the like, are difficult of digestion, and otherwise improper; the lean of pork may be used occasionally; but fat bacon, which is so frequently used, and in some agricultural districts to the exclusion of every other kind of meat, is detrimental in the extreme. It may appear to you that advice about the necessity of substantial food such as meat is not necessary, save with the inferior class of society, whose means too often prohibit them from its employment. But this is by no means the case, for there is a middle, and what is called a better, class of society, in which animal food forms a diminished article of diet, and this also for economy. Nay, you will find in the better-educated links of the social chain, as in the families of professional men of all kinds, of men working more with the head than with the hand, where there are large families and not an extensive means, but where still appearances must be kept up, that it is not uncommon for the mother to "make up" the dinner with puddings, pies, &c., and hence, if the children get but little meat at dinner, they get it at no other time of the day; it is not seen by them at breakfast, and if old enough to get supper, if supper be had instead of *late* tea, they get bread and cheese With respect to the female children of this class of society, this holds good more than with the boys, especially as the latter get older: they are sent out to an office or other employment even at fourteen, if not before, and dine at an eating-house; but the sisters are at home eating puddings and bread and butter, and perhaps, to preserve a due degree of fashionability, their diluent is water at the one meal, at the others washy tea. I mentioned *cheese* just now: I should have told you, *en passant*, that if the stomach can digest cheese it is highly nutritious as a *secondary* or condimentary article of diet, and may as such be allowed. I have not alluded *specially* to diluents. The chief things you have to take care of is, that children do not get things like wine, spirits and water, and stimulating cordials; such things are only to be given under your own or other medical advice. In a great many cases common table-beer, if not acid, will be proper to be taken at dinner; but in most, when the child is not weak, milk or toast and water will be sufficient. There are other cases, however, when at a very early age good porter is to be allowed; I have several such, between two and three years of age, to whom I order porter with the best results. I have even given it with advantage to a child only fifteen months old, not as a temporary stimulant, but as a prolonged article of diet. These of course are cases of considerable debility, and the children thin and pallid. At breakfast and the evening meal, &c., milk is to be taken, by no means *tea*.

DUMAS ON ORGANIC CHEMISTRY.
No. XX.

(Continued from page 213.)

ON THE DIGESTION AND ITS PRODUCTS.

The phenomena of respiration, by destroying the materials rendered unfit for life, necessarily lead to losses in the organism which the nutritive functions are called on incessantly to repair. The blood conveys into the economy the destroying element—oxygen; but at the same time it carries the reparative materials in exchange for those which the vital processes have withdrawn. In the normal state, the elements with which the blood is charged, and which ought at the same time to suffice for the wants of respiration and for those of the nutritive functions, are furnished to it by the aliments. But the varied substances entering into the composition of the food ordinarily pass into the blood only after having undergone, in the interior of the economy, certain modifications which render them fit for the office they are called upon to perform. These changes are accomplished in the digestive apparatus, where the masticated aliments are retained for a certain time, and where they become impregnated with the liquids capable of dissolving or dividing them. These liquids are—the saliva, the gastric juice, the bile, the pancreatic juice, and the intestinal secretion. The action which these fluids exercise on the alimentary substances is a purely chemical one The constitution of these different products becomes, therefore, a consideration of great importance in the investigation of the phenomena of digestion. We are already acquainted with the composition of the bile; it remains for us, then, that we may be enabled fully to comprehend the chemical phenomena of digestion, to study the nature of the other liquids which we have just named.

Saliva.—The saliva is the product secreted by the salivary glands. It is a viscous, ropy liquid, generally somewhat thickened by mucus, which separates from it by repose. In the normal state it is always alkaline—a property which it owes to a small proportion of soda which it contains. In certain pathological states, especially in some gastric affections, the saliva become acid. When the salivary secretion is copious, it always possesses an alkaline reaction; when, on the contrary, it is sparing, it becomes acid, and produces in the mouth a peculiar sensation of dryness and harshness familiar to most people. From the foregoing, it is evident that the saliva, in the state in which we meet with it, is the result of two secretions, the one of which, being acid, is supersaturated by the other, which is alkaline. Its reaction on litmus-paper depends on the predominance of the one or the other of these two secretions. Supposing such to be the case, the formation of the deposit known by the name of tartar, and which is constituted by a mixture of the insoluble phosphates and mucus, may be readily explained. We know, in fact, that all the acid liquids of the economy contain phosphates in solution; but so soon as the free acid is saturated, these phosphates are deposited in an insoluble form.

The density of saliva varies between 1·004 and 1·009. It leaves, after evaporation, a solid residue, mounting as high as 8 or 12 per 1000.

The following is the analysis of this fluid, made by Berzélius:—

Water	992·9
Ptyaline	2·9
Mucus	1·4
Animal matter and alkaline lactates ..	0·9
Chloride of sodium	1·7
Soda	0·2
	1000 0

MM. Tiedemann and Gmelin analyzed some human saliva which had been collected during smoking. They found in it the following principles:—

Matter soluble in alcohol and insoluble in water: phosphorated fatty matter; matter soluble in alcohol and in water: animal matter, chloride of potassium, lactate of soda, sulpho-cyanide of potassium	31·25
Matter deposited on cooling from boiling alcohol, with a little sulphate of potass and chloride of potassium	1·25
Matters soluble in water: ptyaline with a large proportion of alkaline phosphates, and a little sulphate and chloride of potassium	20·00
Matters insoluble in alcohol and water: mucus, probably a little albumen, with alkaline phosphates and carbonates ..	40·00
	92·50

The loss appears to be owing to the water which the matter had retained.

M. C. G. Mitscherlich analyzed some saliva collected directly from a fistula of the Stenonian duct. He observed that the secretion of the saliva was more abundant at the commencement of a repast than towards its close; that during meals it had an alkaline reaction, but that in the intervals it reddened litmus-paper. The density of the saliva thus collected varied from 1·006 to 1·0088; by evaporation, it left a solid residue averaging from 1·47 to 1·63 per cent. in weight; 66·5 grammes of saliva were found to contain 0·061 gramme of insoluble matter, or about one-tenth per cent. This quantity of saliva, evaporated in vacuo, left a residue of 1·121 gramme, of which 0·281 gramme was insoluble in water and in alcohol, 0·352 soluble in water and insoluble in alcohol at 0·800, and lastly 0·192 soluble in water and in alcohol.

One hundred parts of this saliva required, for its neutralization, from 0·196 to 0·223 of sulphuric acid, which corresponds to 0·153 and 0·174 per cent. of soda. By incineration, it left about one-half per cent. of ashes, containing:—

Chloride of calcium	0·180
Potass combined with lactic acid ..	0·095
Soda	—
Soda very probably combined with mucus	0·164
Phosphate of lime	0·017
Silica	0·015

The filtered saliva, when cold, is rendered cloudy by alcohol and tannin; this muddiness is removed by heat, but reappears so soon as the liquid becomes cold again.

Among the saline products which disappear during the process of incineration of the saliva, we may reckon the sulpho-cyanide of potassium. Treviranus was the first to observe that the saliva possesses the property of turning red with the solutions of the salts of the peroxide of iron. MM. Tiedemann and Gmelin have proved that this property depends on the presence of a sulpho-cyanide.

The peculiar organic matter to which the saliva

owes its viscosity has received from M. Berzélius, who was the first to isolate and study this substance, the name of *ptyaline*. The following is the process used for extracting it:—We evaporate the saliva to dryness; the colourless and gummy residue is treated by alcohol, which removes from it a small quantity of soluble animal matter, some salts, and a little fatty principle, in which the presence of cholesterine is at times discovered; the insoluble alkaline residue is treated by acetic acid, evaporated to dryness, and then acted on again by alcohol. The residue from this second treatment consists of some mucus, which constitutes nearly a third of the whole mass, and ptyaline. The latter is to be isolated by dissolving it in water and then evaporating the solution to dryness.

When brought into contact with water, ptyaline is at first whitened, and subsequently it becomes completely dissolved, at the same time communicating to the water that ropy appearance peculiar to saliva. This solution is not thickened by heat, by the acids, or by the basic bodies. None of the salts precipitate it. Alcohol alone renders it cloudy, when not too much diluted.

The saliva has been but very little examined in animals. Gmelin and Tiedemann have found the saliva of the dog richer in solid materials than that of man: it yielded 2·58 per cent. of fixed matters and salts, analogous to those which have been found in the human saliva; they also discovered in it a small quantity of phosphates and of earthy carbonates.

The saliva of the horse, again, appears to be a little more concentrated. F. Simon states that he has found in it a considerable quantity of caseine. C. H. Schultz has made a similar observation.

The following is M. Simon's analysis:—

Water	982·0
Fatty matty, containing cholesterine	0·1
Ptyaline and extractive matter ..	4·1
Caseine	5·4
Albumen	0·6
Extractive matter and salts	7·2

The saliva of the sheep has been analyzed by MM. Tiedemann and Gmelin, who found it to possess a composition very analogous to that of man: it contained 1·68 per cent. of solid residue. MM. Leuret and Lassaigne have arrived at similar results.

We have already spoken of the deposit which is sometimes formed on the teeth, and which is known under the name of *tartar*. Annexed are some analyses of this matter, made by MM. Berzélius, Vauquelin, and Laugier:—

	Berzélius.
Ptyaline	1·0
Mucus	12·5
Earthy phosphates	79·0
Animal matter, dissolved by hydrochloric acid	7·5
	100·0

	Vauquelin and Laugier.
Water	0·07
Mucus insoluble in water and acids .	0·13
Phosphate of lime, trace of magnesia .	0·66
Carbonate of lime	0·09
Organic matter, dissolved in hydrochloric acid	0·05
	1·00

The salivary glands sometimes contain concretions. We here give some analyses of these bodies:—

	Caventou. The ass.	Lassaigne. The horse.	Henry. The horse.
Carbonate of lime ..	91·6	84	85·5
Carbonate of magnesia	—	—	7·6
Phosphate of lime ..	4·8	3	4·4
Animal matter. ..	3·6	9	2·4
Water	—	3	—

According to M. Wurzer, the salivary concretion of the horse contained:—

Carbonate of lime	80·50	87·5
Phosphate of lime	2·75	3·5
Soluble animal matter ..	8·60	7·0
Insoluble animal matter ..	4·40	—
Oxides of iron and of manganese	1.00	—
Chloride of sodium	1·00	0·5
Carbonate of soda	1·75	0·9

Gastric Juice.—The gastric juice is an acid liquid which is secreted in abundance by the stomach during the act of digestion. In the normal state, it is colourless and inodorous; it possesses a salt and manifestly acid taste. It putrefies with great difficulty, and preserves for a long time animal matters which are impregnated with it. The liquid which bathes the walls of the stomach, during the intervals of digestion, does not appear to be gastric juice; at least it is neutral to litmus-paper. Various opinions have been formed as to the chemical nature of the gastric juice. There is, however, no doubt but that it contains a principle analogous to diastase, and which has been already described under the name of *pepsine*, *chymosine*, or *gasterase*.

With regard to the acid reaction possessed by the gastric juice, it is easy to prove that it is not exclusively due to biphosphate of lime, as was recently advanced by M. Blondlot, but rather to the presence of a free acid. In fact, if we adopt the experiment of M. Melsens, by placing gastric juice, for twenty-four hours, in contact with Iceland spar in a well-stoppered bottle, shaking it up from time to time, we shall see the crystals of carbonate of lime, while being corroded by the acid, become opaque and lose a portion of their substance. Biphosphate of lime could not give rise to this phenomenon, which can be due only to the presence of a free acid.

Numerous and contradictory data have been formed relative to the chemical nature of this acid. Prout, who was the first to analyze the gastric juice of different animals, asserted that it contained hydrochloric acid. His observation has been confirmed by Tiedemann and Gmelin, who, moreover, pointed out the presence of acetic acid in the gastric juice of the dog, and of acetic and butyric acids in that of the horse. M. Schultz has also demonstrated the existence of a volatile acid in the chyme of different anamals, which he distilled over with water; but, according to his experiments, this was not hydrochloric, but acetic, acid. Very recently, MM. Bernard and Barreswill have repeated these experiments, but they arrived at results altogether different. According to these chemists, the gastric juice contains neither free acetic acid nor acetates; and the hydrochloric acid, which we obtain as a consequence of distillation, is formed merely by the action of a fixed acid on the alkaline chlorides existing in the liquids of the economy. MM. Bernard and Barreswill believe that they may conclude from their experiments, that the gastric juice contains lactic acid and some phosphoric acid in a state of liberty. The first of these acids had been previously pointed out by M. Chevreul, as well as by MM. Leuret and Lassaigne. The presence of butyric acid in the gastric juice has not been confirmed.

Pancreatic Juice.—The pancreatic juice is secreted by a large gland, situated behind the stomach, between the spleen and the duodenum. It is a viscous liquid, transparent and slightly opaline; it possesses a saltish taste, and has a similar consistence to that of the serum of the blood.

MM. Tiedemann and Gmelin collected the pancreatic juice of a large dog, by placing a glass tube in the pancreatic canal. The first few drops which escaped were feebly acid, whilst the latter portion had an alkaline reaction. These chemists discovered the same properties in the pancreatic juice of a sheep. On the other hand, MM. Mayer, Magendie, Leuret, and Lassaigne always found it to possess an alkaline character: an observation which has since been confirmed by MM. Bouchardat and Sandras.

The pancreatic juice appears to contain a certain quantity of albumen; at least, it is partly coagulated by heat. It contains eight per cent. of solid residue. Annexed are two analyses of the pancreatic juice of the dog and of the sheep, made by MM. Tiedemann and Gmelin:—

	Dog.	Sheep.
Water	917·2	968·5
Extractive matter and salts soluble in alcohol	36·8	15·5
Caseous matters soluble in water, and salts	15·3	2·8
Albumen and salts	35·5	22·4

MM. Leuret and Lassaigne found that the pancreatic juice of the horse had the same composition as the human saliva. It is very probable, in fact, that, like this liquid, it contains an azotized principle analogous to diastase. MM. Bouchardat and Sandras have proved that the pancreatic juice of the hen rapidly transforms starch into dextrine and glucose. Lastly, we should add that no sulpho-cyanide has yet been found in this liquid.

According to MM. Bernard and Barreswill, the pancreatic juice is analogous to the saliva, but richer in active principles. When rendered acid, it is capable of acting like the gastric juice, and would be able not only to replace it, but it becomes even still more energetic in character.

Intestinal Juice.—The numerous follicles of the intestine secrete a liquid which appears to have a composition and properties analogous to those of the gastric juice. It is impossible to collect the intestinal juice in a state of purity: it is always mixed with mucosities, bile, and pancreatic juice. MM. Tiedemann and Gmelin have found in it a little free acid, albumen, a matter analogous to caseine, a substance precipitable by protochloride of tin which they regard as analogous to ptyaline, a little biliary resin, some salts, and undetermined animal matters. The intestinal juice collected in the lower half of the intestine has a neutral reaction. The mucosities of the cæcum always present an acid character in dogs. Bicarbonate of soda has been found in the cæcum of the horse. In that of the rabbit, M. Viridet has observed an acid reaction similar to that in the stomach.

ORIGINAL CONTRIBUTIONS.

A STATISTIC AND CRITICAL REPORT OF THE EFFECTS OF ETHERIC INHALATION, FROM CASES RECORDED IN THE HOSPITALS OF PARIS.

Translated from the Original of Dr. BURGUIERES.

(Continued from p. 231.)

THE MOTIVE STATE.

The faculty of motion under the influence of ether appears to be in many cases very irregular and incomplete. The disordered movements of the body, which usually take place during the first period, may continue during the second and the third, although the etherization shall produce its other effects. In some cases these movements are suddenly brought into action, although the patient appeared to be in a profound sleep. On many occasions they have assumed a convulsive character, and M. Jobert records one in which it took the form of tetanus. Besides the grave importance of such accidents in themselves, we must consider the embarrassed position into which the operator may be thrown. It is for this reason desirable that the influence of etherization should be previously tried on the susceptibility of the invalid. We should also adopt every precaution to assure ourselves of the perfect stillness of the patient. In reference to this subject, unforeseen accidents have been spoken of, where patients have escaped, streaming with blood, from the hands of the operator. We think an avowal of these accidents will be sufficient to prevent all fear of their recurrence. Whatever may occur, if the motive power be not as completely extinguished as the sensibility, the evident and alarming difficulties which may result from motion are met with only as the rarest exceptions.

We shall here relate two facts, noticed by M. Velpeau, in which the powers of motion were differently affected by ether in the two sides of

one body: although the muscular relaxation existed in one side, the other presented contraction, and the relaxed limbs were those on which M. Velpeau had to operate—in the one case to reduce a luxated limb, and in the other a fracture.

DURATION OF ETHERIC INTOXICATION.

The etheric slumber has lasted, with its different characteristics, from two minutes to forty; the ordinary duration is from four to ten. M. Roux thinks he has remarked that in general the sleep lasts in proportion to the time it has been found necessary to administer the vapour. This rule, however, suffers by numerous objections.

PHENOMENA WHICH OCCUR AT THE TIME OF WAKING.

As soon as the ether which has been absorbed begins to lose its influence, the power of sensibility is the first which usually reassumes its normal character. It has frequently occurred that patients, who were at first in a state of perfect insensibility, have exhibited symptoms of pain during the last part of the operation, on applying ligatures to the vessels, or at the time of dressing, and before the powers of recognition were restored. The waking of the intellectual faculties, which is not long delayed, is often marked by certain phenomena analogous to those of excitement, and occur at the commencement of etherization. That of the cheerful kind is here again the most common; but sometimes we have witnessed considerable irritation. This light delirium is never of long continuance.

It sometimes happens that the intellectual power is the first to be re-established, although the insensible state is continued for a greater or less period. It is now that the patient finds himself in that singular position already alluded to, in which we discover the mind entirely undisturbed, while the powers of sensation are totally extinguished.

In most cases a perfect calm succeeds the phenomena of etheric intoxication. In one instance only has there occurred a case of syncope, which lasted for some minutes. Sometimes there has appeared a slight pain or heaviness of the head, excitement, cough, and a disagreeable taste of ether. These appearances were of no importance, except in one case, noticed by M. Jobert, which will presently be considered in connection with the subject of consecutive accidents.

OPERATIONS IN WHICH THE EFFECTS OF ETHER HAVE BEEN USED TO ADVANTAGE.

The following table, in which the facts are arranged according to the nature of the operations, will afford some idea of the different applications to which the etheric sleep has been directed:—

Amputation of the thigh	10
Amputation of the leg	8
Amputation of the arm	4
Amputation of the forearm	1
Partial amputation of the foot	2
Partial amputation of the hand	1
Amputation of fingers and toes	19
Total and partial amputation of the breast	8
Extirpation of important tumours in different regions	12
Extirpation of tumour in the eye	1
Sarcocele	
Strangulated hernia	
Stone	
Lithotrity	
Hydrocele	
Varicocele	2
Phimosis	4
Fistula, or fissure in ano	8
Reducing luxations or fractures	5
Reducing hernia	1
Removing nails	4
Extirpating glands of the throat	1
Polypus of the nose	3
Cataract	1
Fistula lachrymalis	1
Strabismus	2
Aversion of tendo Achillis	2
Actual cautery	12
Application of moxas	2
Opening abscesses, incisions, excisions, &c.	91
	211

It is for the amputation of limbs that etheric inhalation has been most frequently employed, and with the greatest success. These amputations are in effect very painful operations: they disturb the whole system to a considerable extent, and the mind of a patient who sees himself deprived of a portion of himself is always subjected to a severe shock. The advantages, therefore, which are obtained in these operations by the sleep and insensibility produced from etheric inhalation may be readily understood; let us also add that amputations are rapidly performed, and are consequently disposed of under one inhalation. It has, however, been supposed that the muscular relaxation produced by ether might oppose itself to the regularity and proper conformation of the stump. This apprehension cannot be justified by experience: a loss of muscular tension is not a permanent consequence of etheric inhalation; besides which it is well known that relaxation does not prevent the regular conformation of stumps. It is not easy to produce on the dead subject the hollow conic stump in perfect accordance with the rules of science.

We have easily been able, during the process of amputation, to examine the qualities of blood, which some physiologists declare to be profoundly altered by the ether. M. Amussat, amongst others, concludes from experiments made on animals, that the arterial blood becomes black, and presents the ordinary appearance of venous blood. On the other hand, experiments made at Alfort, by M. Renaut, have produced results different to those of M. Amussat. Does not this modification of arterial blood, discovered by this last experimentalist, belong more to asphyxia, under which these animals expired, than to the direct action of ether upon the blood? Whatever the fact may be in this respect, the greater part of our surgeons agree in stating that the blood which flows from the vessels in consequence of amputation presents no change worthy of consideration. This alteration, if any can be proved, does not belong to the surgical period. We are bound, however, to notice that M. Jobert has found in some cases that the arterial blood, without being positively black, was less crimson red. May not this have been caused by the extent to which the etherization had been carried?

The eight total and partial amputations of the breasts—the twelve extirpations of tumours, important from their size—produce, together with the removal of the eye, and the operation for sarcocele by M. Velpeau, results similar to those of limb amputations.

Of those operations which are the most painful, if not the most serious, we must particularly notice that of forcibly removing the finger-nail: this has been performed four times without producing the slightest pain. Twelve times has the actual cautery—that painful and frightful resource of the invalid—been employed without one shock upon the nervous system.

The operations to which we are now proceeding to refer are simple and quick of execution; and here the etherization presents itself with every advantage. The possibility of its application under some circumstances has been questioned—whether arising from the difficulties of manual operation, whether in consequence of the duration being necessarily prolonged, or from the seat of the disease. M. Robert, on application of the ligature to the carotid artery, did not think it necessary to resort to etherization; M. Paul Guersant also abstained from its use in a case of strangulated hernia; and M. Roux did not have recourse to it for operation in a case of cataract. For this last operation an experiment made by M. Gerdy holds out no encouragement to the surgeon; having etherized a patient whom he proposed to operate on for cataract by the method of extraction, he was obliged to interrupt the operation already commenced in consequence of a convulsive movement which affected the globe of the eye. M. Langier met with the same accident while removing a staphyloma from the cornea. On the other hand, however, some operations performed upon the eye and its connected parts have perfectly succeeded. M. Roux has performed without accident the operation for fistula lachrymalis; MM. Bouvier and Vidal, that for strabismus.

Some difficult and delicate operations have been successfully performed on other parts. M. P. Guersant has removed the stone with perfect success from a child of eight years old. M. Michon has performed lithotrity, for which M. Leroy d'Etoiles had already used etherization. Finally, M. Langier has performed an operation for strangulated hernia which has perfectly succeeded, although the strangulation had continued for sixty hours, and the patient was reduced to a very dangerous state.

For all the preceding facts we are specially indebted to the state of insensibility and sleep. The muscular relaxation which ether sometimes produces can be advantageously brought into use. By this means the reduction of fractures and dislocations have been five times accomplished. The case in which this result has proved the most remarkable is that reported by M. Velpeau. He succeeded on a powerful young man suffering under dislocation of the left hip. It was impossible to touch the thigh of this youth without his yielding to the loudest cries of agony; many attempts were made without success to reduce the luxated joint; the unfortunate man, yielding to the agony of his torments, implored to be supplied with ether. The inhalation was accordingly effected, and in two minutes, by a succession of methodical pulls, much less forcible than those used in ordinary cases, the dislocation was reduced with the greatest ease.

As spasmodic contraction of the muscles occurs sometimes in strangulated hernia, it has been suggested that etheric stupefaction should be applied in such cases. The only fact of this kind noticed in the hospitals belongs to M. Gerdy, who etherized a patient to return a rupture that had been operated on some few days previous, but had fallen out again. The case is far from being so conclusive as that reported in the *Augsburg Gazette*, and copied out of a letter from Venice. A man suffering from hernia was to have been operated on at the hospital; an incision of the abdomen was considered necessary, and, to place the patient in a complete state of repose, he was made to inhale the ether about ten minutes. At the moment when the operator took the diseased part to show his assistant in what position he was to hold it, the *gut* returned spontaneously to its proper place, and the patient was cured without an operation.

In our table of recapitulation will be seen a considerable list of simple incisions and very light operations. We have already observed that this fact should be attributed in a great degree to the anxiety which nearly all our patients exhibit to secure the privilege of being etherized; nevertheless we are of opinion that, however rare and inconsiderable the inconveniences may be which result from etherization pushed to a certain limit, we ought not to concede without some reluctance to the wishes of the sick when operations of trifling importance are required.

PHENOMENA CONSECUTIVE AND THE RESULT OF OPERATIONS PERFORMED UNDER THE INFLUENCE OF ETHER.

The point which now remains to be examined is one of the last importance. It is in fact necessary to ascertain, as some of the adversaries to ether have presumed, whether the perturbation produced in the system by this substance can compromise effects of operation or aggravate the consequences. The first expedient for resolving this question which presents itself naturally to our mind consists in an investigation of what are the cases in which the operations have been followed by death, and to compare the proportion of deaths which have followed operations performed under the influence of ether with those furnished by the same operations made under ordinary circumstances. Let us interrogate for this purpose our statistics.

In the first place, then, the following is a table

of operations which have been followed by the death of those invalids submitted to the inhalation of ether:—

Amputation of the thigh	... ...	4
Ditto leg	... ...	3
Ditto arm	... ...	2
Ditto forearm	...	2
Ditto toe	... ...	1
Ditto finger	... ...	1
Ditto breast	... ...	2
Extirpation of tumours	... ...	2
		17

Let us compare these results with those we find in an interesting work published in 1842, by M. Malgaigne, in the "Archives de Médecine," and having for its title, "Etudes Statistiques sur les Résultats des Grandes Opérations dans les Hôpitaux de Paris." We learn by this work that from the 1st of January, 1836, to the 1st of January, 1841, there were performed in the hospitals 858 amputations of limbs, from the disinarticulation of the thigh to amputations of the finger and toe. The mortality was 332, or about two in five.

On amputations of the same kind performed under the influence of ether, we find, after subtracting those deaths resulting from amputation of the breast and the removal of tumours, that our table gives twelve deaths in forty-five cases, being upon an average of one in four—a proportion very much in favour of the ether.

But, as M. Malgaigne remarks, these generalities are not satisfactory, it is necessary to distinguish the greater from the less important amputations. If, then, we take the total amputations of the thigh, the leg, the arm, and forearm, we find the number of operations, which have resulted in ten deaths, to be twenty-five, the aggregate being about two in five. The calculation made, however, by M. Malgaigne, gives, on the contrary, 512 amputations of the same kind, and 281 deaths, or nearly three in five. Here we again find that our investigation is by no means unfavourable to the use of ether.

Our trials are not as yet sufficiently numerous to admit a similar calculation on every kind of operation. We must, nevertheless, notice that out of ten amputations of the thigh, there have followed four deaths, being two in five; while the preceding statistics of the hospitals furnish 126 deaths on 201, or three in five.

We shall not draw from these numbers, which are of only small consideration, the ultimate conclusions anticipated in favour of ether. They disturb, however, in no degree the following truths proclaimed by M. Velpeau, "that ether, by preventing pain, does not deprive operations of their dangerous consequences, and that the means of operating without pain to the invalid cannot justify the expedient without the aid of necessity."

If, however, we pay careful attention to these observations, we shall discover that of the consecutive phenomena very few can be traced to the effects of ether. M. Jobert attributes, nevertheless, some accidents to the use of this substance. He has observed severe bronchitis in several cases of persons operated on; indeed, he noticed in one case a spasmodic convulsion of the stump, followed by tetanous contraction of the whole body. This patient died, and "it is evident" observes M. Jobert, "that the ether was not a stranger to his death."

After what M. Majendie has said concerning the fluidizing action which ether exercises on the blood, there might be some reason to fear a development of those consecutive hemorrhages which sometimes occur through exhalation to the surface of wounds, although the vessels may have been most securely tied. Observation does not justify our apprehension. In one case only have we noticed hemorrhage, and this was sufficiently accounted for by the weakness of the patient and the nature of his disease, which had produced a considerable derangement in the vascular system.

Many surgeons, particularly MM. Velpeau, Jobert, and Malgaigne, have remarked that in general there has been less reaction on those who have been operated on with ether. The fever which is called *traumatique* is, with them less violent than in ordinary cases. The local inflammation of the wound has also proved, in many instances, less considerable under the observation of M. Jobert, which appears to this surgeon a reason why the union of wounds by the first intention has in some cases been opposed. Those observations which relate to the influences ether may exercise over the *traumatismes* require proofs; but, as they have been made by several surgeons, we have considered it our duty to record them. We shall now direct our attention to the most important peculiarities which etherie action has produced by its application to surgical operations. It will be seen that practice is very far from justifying the fears expressed by some persons, that the employment of this accessory would be attended with danger. It has, no doubt, its inconvenience; but it must not be denied that, employed with caution, its action watched and carefully directed, it has been called into existence for the purpose of rendering vast services to the science of surgery.

It only remains for us to allude to the employment of etheric inhalation in childbirth, and in the treatment of some diseases; this we shall do in some future article.

(Signed) DR. BURGUIERES.

ROYAL BERKSHIRE HOSPITAL.

SURGICAL REPORTS AND OBSERVATIONS.

By F. A. BULLEY, Esq., F.R.C.S., Surgeon to the Hospital.

There are no accidents to which the human frame is liable, the treatment of which has been so various or undeterminate, as that of injuries by fire. In one class of cases it has been recommended that stimulating applications should be used; in another, that they should be of a sedative nature; while in many cases the exclusion of the air from the burnt surface has been supposed to be of the first importance; but, whatever may have been the means suggested for their relief, they do not appear to have been formed upon any fixed principle, and every medical practitioner must at times have found a difficulty in determining which of the many different methods would be the best to be adopted in an emergency of this kind.

I shall, therefore, be excused for relating a few cases illustrative of a simple mode of treatment which, as far as I am capable of judging, is applicable to burns of every degree of intensity, and which I have been in the habit of employing for several years past, both in hospital and private practice, with the most satisfactory results.

The remedy in question consists in the application of treacle and water, in the proportion of one part of the former to three of the latter, over the burnt surfaces, at a temperature of 98°, by means of lint soaked in the solution and laid over the whole of the injured parts. This dressing is to be changed night and morning, the lint having been kept moist during the day by occasional saturation with the mixture of the same temperature, most readily done by soaking a sponge in the fluid, and at intervals squeezing its contents over the lint while still in contact with the surface. The constitutional means to be adopted will be best understood from a perusal of the accompanying cases.

CASE I.—Martha H., aged sixteen, was admitted into the hospital, Oct. 7, 1846, on account of a burn which she had received by the explosion of a box of gunpowder, that had been left in a cupboard, to which she had inadvertently gone with a lighted candle. Half an hour had elapsed since the occurrence of the accident before I saw her, when the following appearances of injury presented themselves:—Her face, which was of a much darker colour than natural, and enormously puffed and swelled, was in the most agonizing pain, and it would have been impossible for her most intimate friend to have recognised a single feature, so great was the disfigurement of her countenance. Her eyes were deeply sunk in the surrounding swelling, with great puffing of the lids, so that it was impossible by any means to ascertain whether the eyeballs had been injured or not, by the fire; the whole skin of the face and eyelids were in a state of active inflammation, which appeared to have been increasing during the short time which had elapsed since the occurrence of the accident; the forehead, and at least one half of the hairy-scalp, were in the same swelled and puffy state, the hair having been burnt off close to the skin. On the fore part of the neck the injury extended from just below the angle of the jaw on the left side, down towards the left mamma; and in a large portion of this burnt surface the skin and subjacent cellular tissue were destroyed, the former having assumed the dark brown hue indicative of its complete disorganization. Both arms, from the shoulders downwards, and in the whole circumference of the limbs, were burnt in the same degree as the face, but without abrasion of the surface; the whole of the integuments with the exception of a patch on the upper part of of the arm, near the left shoulder, which had been more deeply injured, being in the same reddened, swelled, and violently inflamed state. The skin of the hands and fingers had been completely rubbed off, owing to her having hastily laid hold of the handle of a pump, in her endeavour to get some water to assuage the pain. There were several large and deep burns over the fore part of the chest, where the skin and cellular membrane had been entirely destroyed.

The treatment immediately adopted was the application of lint, saturated with the mixture of treacle and water warmed, over the whole of the injured surface, with the exception of the hands, which were carefully dressed with simple cerate, to prevent adhesion of the raw surfaces between the fingers. The direct effect of the application was a slight increase of the pain, which lasted for a few minutes, and then subsided, leaving her comparatively free from the intense and burning heat from which she had just previously been suffering. After the first day or two she felt no pain on the application, but only its soothing effect, which every day became more and more apparent. Sometimes the dressing, though not painful, was very fatiguing, so that it was necessary to give her a little wine, which was more necessary when the extensive surfaces began to discharge pus.

Altogether, the treacle dressing was employed for six weeks, using it morning and evening in the same manner as when first applied. For the first fortnight she was much troubled with a feverish thirst, which left her, however, at the end of that period; but she never had any particular rigors, or, with the exception of occasional slight pains in the chest, any such internal uneasiness as would indicate a disposition to metastatic inflammation of any kind.

At the end of six weeks the inflammation, which had more or less affected the whole of the injured parts, had nearly subsided, and the skin of the arms, after having been covered with a purulent incrustation, which had once or twice exfoliated and reappeared, had assumed in a great measure its natural appearance, with the exception that in the upper parts, where it had been more deeply burnt, the hollows formed by the loss of the integument and cellular tissue still exposed a large granulating surface, but perfectly smooth and level.

The skin of the face and head had undergone the same change as that of the arms, having become covered once or twice with the same kind of purulent crust, which had afterwards exfoliated, leaving the cuticle smooth and unaltered, with the exception of its having assumed a brownish colour, which remained for some time after her discharge.

After this period (six weeks from the date of the accident) simple cerates only was applied to the granulating surfaces, the carbonized skin having become wholly exfoliated; and the treacle

dressing was used to the sound integument surrounding them, with a view to soften it and give it an additional extensibility, and allow of its being drawn more evenly towards the centre of the wounds in the progress of healing, which in some cases it seems capable of effecting, and to which in some measure I attribute the smoothness of the cicatrices, and the absence of puckering in the neighbouring integument, which I have reason to believe is occasionally obtained by this mode of treatment.

The cure was, as is usual in such cases, somewhat tedious and protracted; but on her discharge from the hospital, at the end of four months and a half, all the wounds had healed, and, notwithstanding the original amount of injury (considerably more than a fifth part of the body having suffered from its effects), little or no contraction was perceptible at any part—a result, from the apparently hopeless nature of the accident, at first scarcely to be anticipated. The internal remedies had consisted of small doses of syrup of poppies, frequently repeated, with, as circumstances required, more powerful opiates, also occasional doses of castor oil, as the most unirritating aperient, and as least calculated to favour the occurrence of metastatic intestinal irritation, which saline and drastic purgatives would appear in some cases to do. It is a remarkable circumstance that, during the whole period of treatment, there was an entire absence of any odour of putrescence, as accompanying the putrefactive decomposition which usually follows the destruction of living parts by fire.

CASE II.—Alice A., aged nine years, admitted Dec. 8, 1846. She had been left by her mother, with another child, while she went to work, in a room with a fire, when by some accident her clothes ignited, occasioning a burn, which on her admission was found to occupy the greater part of the upper arm, the axilla, and a considerable portion of the back part of the body on the left side. On these parts the skin had been completely destroyed, but in other parts, as in the forearm of the same side, the injury had not been so severe, the integument not being actually disorganized, although intensely reddened and inflamed by the action of the fire. On the hand there were several large vesications filled with a transparent fluid, which had collected before I saw her. She suffered intense pain, especially in the inflamed portion of the skin of the forearm and hand, where it had not been destroyed; the parts that were actually destroyed were, as is usual, not so painful. Lint soaked in the warm mixture of treacle and water was applied over the whole of the injured surface, with the effect of almost immediately relieving the pain, and appearing to put a stop to any further extension of the inflammation beyond what had been originally occasioned by the burn. The internal treatment was precisely the same as in the last case, with the exception that no other opiate was necessary besides the syrup of poppies, and that she took small doses of castor oil more frequently.

The effect of the external application in this instance appeared to be, as in other similar cases, slightly stimulating at first, but afterwards of a decidedly sedative character, it also seemed to possess the power of checking or preventing the putrefactive decomposition which often takes place in these cases, rendering the patient very offensive to the other inmates of the hospital: for instead of softening and sloughing, and coming away in putrefied masses with the dressings, as it usually does, the skin became hard, black, and shrivelled, gradually separating from the surface of the granulations at the margin by a kind of exfoliation, until, at the end of a fortnight the whole of it had been removed. She was discharged March 23, 1847, the wound in the axilla not having completely healed, with a very slight disposition to contraction, which, owing to the peculiar situation of the burnt wound, although it seemed to moderate it a little, the remedy was not capable of preventing.

CASE III.—Charlotte L., aged six years, admitted Dec. 31, 1846. From the same cause as in the last case, her clothes had caught fire, occasioning a burn, which occupied a large space on the upper part of the back, on the left side, extending into the axilla and for some distance down the upper arm; over the whole of the burnt surface the skin had been destroyed, as well as the cellular membrane underneath, and had the soft quaggy feel of complete disorganization. There was no difference in the intensity of the burn in any part, the integument having been destroyed wherever it had been touched by the fire. Owing to the complete destruction of this part, she did not seem to suffer any considerable pain, but, as she had only partially recovered from a protracted typhus fever, was a very unfavourable subject for so severe an accident. She had a feverish appearance, and complained of some slight pain in the bowels, but had no rigors. The same external remedy was applied as in the last case, but with a larger proportion of treacle, as the parts were not particularly painful. Internally she took syrup of poppies two or three times daily, with occasional doses of castor oil. At the end of a fortnight the whole of the destroyed integument had separated from the granulating surface underneath, having become previously converted into a dry and dark brown substance, which was removed as it became separated at its edges, by cutting it off with scissors, to allow of the application of the cerate dressing to the granulations, when the treacle could no longer be of service. The denuded surface suppurated freely, so that, as well as from her previously enfeebled condition, it was found necessary to support her strength, by giving her port wine and tonic medicines; but at the date of her discharge, March 23, 1847, the wounds had nearly healed, and as far as I could judge, notwithstanding their unfavourable situation, with but little danger of contraction. She had also recovered from the debilitating effects of the fever, from which she had suffered prior to the accident.

OBSERVATIONS.—The foregoing cases are only a few of those which have been treated, under my observation, in the manner I have detailed; many have been slighter instances of injury, and several as, or more, severe; but in all of them the beneficial effects of the remedy were more or less perceptible. Of course in some the parts had been so extensively destroyed that there was from the first no prospect of recovery; but, even under these untoward circumstances, I have fancied that the means I have employed have lightened the patient's sufferings and prolonged the fatal termination.

The action of the remedy appears to be *directly sedative*, and, as far as I have been able to observe, its first effects have been to lull the pain and moderate the inflammation which almost always exists in the integument surrounding parts which have been recently destroyed by fire, and which has a tendency to a destructive progress if no effective means are used to prevent it; that this also applies to deeper-seated tissues, and is a frequent cause of the fatal termination of such cases, is substantiated by the observation of Mr. S. Cooper, who, in reference to this subject, remarks:—

"The extent of the mischief is often difficult to judge of directly after the accident, notwithstanding the characters of the various degrees of organic injury are strongly marked: for, at the same time that the heat disorganizes the parts on which it acts with the greatest violence, it always affects the textures immediately below them; and, though they may not be killed *in the first instance*, they may not be capable of bearing the subsequent inflammation, and afterwards mortify." Whether the remedy is capable of exercising the same beneficial influence upon these deeper seated tissues, as it appears to do on the more superficial ones, I cannot for certain say: for, until the separation of the skin, they are not exposed to view; but, to the best of my judgment, it does so, moderating the inflammation here in the same manner as it does in the integument.

Its next most obvious effect appears to be that of modifying the tendency to putrefactive decomposition, which destroyed parts are prone to undergo prior to their separation as sloughs; and that it is capable of exercising such an influence I have scarcely any doubt, having had repeated opportunities of observing it, especially in the cases I have related, where its action in this respect was very remarkable; nor could the least putrescent or unpleasant odour be perceived during the whole period of the treatment. I had an excellent opportunity also of observing this latter circumstance in a case which, through the liberality of one of my colleagues, was placed under my hands for treatment. Although no less than 270 superficial inches of integument (principally of that covering the abdomen) had been destroyed, I could not, nor could those more immediately about the patient, at any time observe any unusual smell. I may mention that this patient lived a month, and at the time of her death the whole of the integument, having undergone the carbonizing changes observed in similar cases, had separated from the surface, which had begun to suppurate freely. On dissection there was no evidence of the duodenum or any other part of the intestines having been inflamed by metastasis, but she appeared to have sunk from the great suffering she had undergone, as well as from the shock, from which she had never recovered. There was a slight turgescence of the posterior part of the right lung, but whether from subsidence or other cause could not be accurately determined.

It remains only to endeavour to account for the smooth and regular cicatrization, which I have reason to believe is assisted by this method of treatment. It occurs, I think, in this way: the disorganized integument and cellular tissue, having undergone carbonization, remains adherent to the parts beneath, and while it is so in contact acts as an extraneous substance by excluding the air from the surface, and mechanically represses the growth of what would otherwise be exuberant granulations. As the carbonized integument is first observed to separate from the margins, the granulations round the periphery of the wound, by the contracting process which Dupuytren* ascribes to the approximation of the margins to the central point, begin to cicatrize before the centre of the wound has become uncovered, which always happens last, and thus a gradual and even cicatrization follows.

It will also be observed, that what would otherwise be called the separation of a slough is prolonged by this treatment, until the system has recovered strength to furnish healthy granulations, in contradistinction to those irregular and unhealthy masses which are produced on a too early separation of the sloughs in a constitution yet suffering from shock, and aided in many cases by the stimulating applications which are sometimes employed. Perhaps, also, the constant application of the treacle dressing to the neighbouring skin, by rendering it more supple and extensible, may favour a more regular cicatrization, by enabling it more evenly to be drawn towards the margins of the cicatrizing wounds.

It is but right to mention that in the year 1838 Dr. Greenhow, of North Shields, published an account of the action of treacle alone, in excluding air from burnt surfaces, and in some way modifying the subsequent suppuration; but I was not aware of his having done so until some time after I had used it in a *diluted* form, and with different objects to those proposed.

OBITUARY.—On the 11th inst., at Fulham, Joseph Holmes, Esq., surgeon, aged 47.—On the 11th inst., at Bath, Joseph Chaning Pearce, Esq., M.R.C.S., F.G.S., formerly surgeon at Bradford, Wilts, aged 35.—On Monday night, the 17th inst., at his residence, 308, Regent-street, universally beloved, John Philips Potter, assistant surgeon to University College Hospital, and assistant-demonstrator at University College.

ARMY MEDICAL DEPARTMENT.

REPORT ON MR. HUTCHINSON'S SPIROMETER, AS APPLIED TO RECRUITS AND YOUNG SOLDIERS.

By Dr. GEORGE WILLIAMSON, Assist. Staff-Surgeon.

Agreeably to a letter dated May 31st, 1846, directing a series of observations to be made with Mr. Hutchinson's Spirometer, with the view of showing how far the instrument, and the other inquiries, may be made available as a test of the condition of the lungs, and the health generally. The record of the observations with similar tables to those of Mr. Hutchinson will be forwarded by Dr. French, deputy inspector-general and principal medical officer, Fort Pitt.

The men on whom the experiments were made were soldiers belonging to the different depots in Chatham garrison, a great proportion being recruits, having very recently relinquished their previous occupations, and therefore cannot strictly be considered soldiers: for this reason I have divided them into twenty-seven different classes or trades.

The first table shows the mean capacity of the lungs in 477 cases of healthy men, with relation to the height. On comparing this table with that of Mr. Hutchinson, it will be observed that the two correspond in a remarkable degree, and as a general rule, for every inch of height (from 5ft. 0in. to 6ft. 4in.), 8·6 cubic inches of air are given out by a forced expiration. The mean capacity is greater in this table than in that of Mr. Hutchinson: for example, from 5 feet 6 inches to 5 feet 7 inches, the one is 230 and the other 224, and so on, increasing in proportion; but on the whole the difference is very slight. These discrepancies are not, however, to be accounted for by the number of cases examined being greater, as each trade, though fewer in number, still show a larger capacity, which will likewise be observed under all the other heights, but probably to be ascribed to a healthier description of men—younger, better fed, and breathing a purer atmosphere than that of the metropolis. If a person between 5 feet 6 inches and 5 feet 7 inches tried the experiment, and if he could not force out of his chest more than 190 cubic inches of air, disease might be suspected. With regard to stout and corpulent men blowing less, although this may be true as a general rule, yet several will be found in the record-book who blew even more than could have been expected for their heights.

The forty-one diseased cases examined were generally far advanced in phthisis or other pulmonary complaints, and show that the capacity of the lungs was very much diminished: for example, from 5 feet 6 inches to 5 feet 7 inches, the power of expiration was reduced from 230, that of the healthy, to 150 in the diseased; and I am confident that all of them endeavoured to blow their utmost, not wishing to believe themselves past recovery.

The second table shows the mean power of inspiration and expiration in 346 cases, which also, in some measure, accords with that of Mr. Hutchinson,—the power of inspiration being in the accompanying table much less for every height than in his. From 5 feet 6 inches to 5 feet 7 inches, the inspiration is only 1·65, while in his it is 2·93; that of expiration nearly coincides —in this being 3·10, and in his 3·90.

The instrument for measuring these powers is very defective: it is very difficult to fit the apparatus to every shape and description of nose, and perhaps the nares are in some cases contracted. When it does fit, it requires great nicety to apply the requisite degree of pressure to its sides, on the one hand to guard against stopping the nostrils altogether, and on the other to prevent the escape of air at its margin; also the difficulty of making the person understand what is to be done. The instrument also becomes very filthy after a hundred or more noses have blown into it; and lastly, it is constantly getting out of repair. These, I apprehend, are the causes of this table differing so much from that given by Mr. Hutchinson.

The third table shows the mean capacity of the chest compared with the weight of the body, which is greater in this for any given height than in that of Mr. Hutchinson; but the two succeeding tables correspond nearly with his.

The results obtained from the observations made with the spirometer are interesting as showing the relation which exists between the height and the capacity of the lungs—that it does not so much depend upon the circumference as the length of the chest. The power of taking a full inspiration, and the strength of the different muscles of expiration, are, however, so various in different individuals, that, taking each case separately, a very marked difference is frequently observed—even 10 or 20 cubic inches—without there being the slightest evidence of disease in any organ. Yet this is within certain limits: for, as will be observed in the diseased cases compared with the healthy, from 5 feet 6 inches to 5 feet 7 inches, the latter are 230 and the former 150; these again, it must be remembered, were cases of phthisis, &c., in an advanced stage. If there is only a small amount of obstruction or organic disease in the lungs, it will be difficult to determine it by the spirometer only; and if of a more serious character, it will with more certainty be ascertained by other means.

With regard to its application in recruiting, for instance, a young lad quite free from disease, but half starved, much emaciated, and the muscles of respiration in consequence of small size, will not be able to force out a quantity of air equal to one of the same height who is stout and muscular; also a recruit who has repented of enlisting, on trying the spirometer, will not exert himself. This, however, can be easily determined by an experienced operator. I have tried several old soldiers who complained of tightness across the chest, shortness of breath, &c., where there was no appreciable disease, but I could never prevail upon them to exert themselves to their utmost.

Having made these few remarks on these interesting observations, which are in a great measure corroborative of Mr. Hutchinson's views, I beg to refer to the accompanying tables, which show at once the results obtained.

Dr. Paris had an interview with Sir George Grey on Saturday at the Home-office, and presented the annual report from the National Vaccine Board.

Bristol Medical School.—After the examination, held at the above school, at the close of the winter session 1846-7, Henry Clark, Esq., having delivered a suitable address, presented the prizes and certificates of honour, with appropriate remarks, to the following gentlemen: —3rd year—prize: Mr. John P. Challicombe. No certificates awarded.—2nd year—prize: Mr. Crosby Leonard. Certificates: Mr. Robert W. Ellis, Mr. Nathaniel Crisp, Mr. Charles John Ridge.—1st year—prize: Mr. Edward Horace Swete. No certificates awarded.

Table I.—The Mean Capacity of the Lungs of Twenty-seven Classes, with the Total Mean of the Mean.

CLASSES.	0 to 5 ft.		5 ft. to 5 ft. 1 in.		5 ft. 1 in to 5 ft 2 in.		5 ft. 2 in. to 5 ft. 3 in.		5 ft. 3 in to 5 ft. 4 in		5 ft. 4 in. to 5 ft. 5 in		5 ft 5 in to 5 ft, 6 in	
	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.
Glazier	..	..	..	..	..	..	..	..	..	..	..	..	220	1
Groom	..	..	..	..	..	..	..	..	..	..	..	..	255	2
Brushmaker	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Shoemaker	..	..	..	..	..	..	..	..	..	..	..	..	216	3
Labourer	115	2	..	..	145	2	160	1	..	..	170	3	220	53
Blacksmith	..	..	..	..	..	..	..	..	..	..	..	..	228	11
Bleacher	..	..	..	..	..	..	..	..	..	..	..	..	280	1
Nailer	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Papermaker	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Clerk	..	..	..	..	..	..	..	..	..	..	..	..	210	2
Painter	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mason	..	..	..	..	..	..	..	..	..	..	140	1	180	2
Weaver	..	..	..	..	..	..	..	..	..	..	..	..	215	4
Optician	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Servant	..	..	..	..	..	..	..	..	..	..	..	..	231	7
Draper	..	..	..	..	..	..	..	..	..	..	..	..	250	1
Baker	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gardener	..	..	..	..	..	..	..	..	..	..	..	..	245	1
Tailor	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Musician	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Carpenter	..	..	..	..	..	..	..	..	..	..	..	..	197	4
Grocer	..	..	..	..	..	..	..	..	..	..	..	..	230	1
Tobacconist	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Miner	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Watchmaker	..	..	..	..	..	..	..	..	..	..	..	..	200	1
Miscellaneous	..	..	..	..	..	..	..	..	..	..	..	..	205	2
Butcher	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Mean	115	2	..	..	145	2	160	1	..	..	155	4	224	96
Mean of diseased cases	..	..	..	..	..	..	..	..	..	..	..	..	180	2

CLASSES.	5 ft 6 in. to 5 ft. 7 in.		5 ft. 7 in to 5 ft. 8 in		5 ft 8 in to 5 ft 9 in		5 ft 9 in to 5 ft 10 in.		5 ft. 10 in. to 5 ft. 11 in.		5 ft. 11 in. to 6 ft.		6 ft. to 6 ft. 2 in.		6 ft. 2 in. to 6 ft. 4 in.	
	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.
Glazier	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Groom	243	7	230	3	245	2	220	1	..	..	..	..	..	..	..	..
Brushmaker	220	1	258	1	..	..	..	..	..	..	..	..	..	..	..	..
Shoemaker	235	4	216	7	[illegible]	2	250	2	..	..	..	..	..	..	..	..
Labourer	[illegible]	101	[illegible]	45	239	34	[illegible]	14	251	10	282	9	275	2	300	2
Blacksmith	226	10	210	4	..	..	290	1	..	..	..	..	..	..	..	..
Bleacher	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nailer	..	..	..	..	..	..	..	..	260	1	..	..	..	..	..	..
Papermaker	..	..	..	..	..	..	230	1	..	..	..	..	..	..	..	..
Clerk	236	5	230	1	[illegible]	1	300	[illegible]	..	..	270	1	..	..	290	1
Painter	[illegible]	2	250	1	200	1	260	1	..	..	..	..	..	..	..	..
Mason	[illegible]	6	228	5	210	1	..	..	..	..	270	1	..	..	..	..
Weaver	226	9	235	2	..	..	245	3	280	1	..	..	..	..	..	..
Optician	..	..	..	..	[illegible]	2	..	..	..	..	..	..	..	..	..	..
Servant	[illegible]	6	240	2	280	1	..	..	..	..	..	..	..	..	..	..
Draper	[illegible]	1	210	1	..	..	250	1	..	..	..	..	..	..	..	..
Baker	230	6	230	1	..	..	..	..	..	..	..	..	..	..	..	..
Gardener	230	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tailor	210	5	230	3	275	2	280	1	..	..	..	..	..	..	..	..
Musician	..	..	..	..	..	..	..	..	..	..	270	1	..	..	..	..
Carpenter	[illegible]	3	225	2	255	2	300	1	300	1	..	..	..	..	..	..
Grocer	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tobacconist	220	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Miner	..	..	..	..	230	1	..	..	..	..	..	..	..	..	..	..
Watchmaker	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Miscellaneous	227	4	246	7	230	4	220	2	..	..	..	..	..	..	..	..
Butcher	250	2	..	..	..	..	240	1	..	..	..	..	..	..	..	..
Total Mean	230	175	239	85	242	53	[illegible]	30	273	13	274	12	275	2	295	2
Mean of diseased cases	150	11	171	8	153	9	197	3	172	4	167	3	230	1	..	..

41 diseased cases.

Table II.—The Mean Power of Inspiration and Expiration of all the Cases examined in Twenty-seven different Classes, without any Separation for Disease, thus presenting the ordinary Average of Health or Power.

CLASSES.	0 to 5 ft. Insp.	Exp.	No.	5 ft. 1 in. to 5 ft. 2 in. Insp.	Exp.	No.	5 ft. 3 in. to 5 ft. 6 in. Insp.	Exp.	No.	5 ft. 6 in. to 5 ft. 7 in. Insp.	Exp.	No.	5 ft. 7 in. to 5 ft. 8 in. Insp.	Exp.	No.
Glazier							2·00	3·50	1						
Groom							1·07	2·00	1	1·90	3·40	5	0·75	2·25	2
Brushmaker															
Shoemaker							1·33	2·50	3	1·25	3·25	4	1·87	2·75	4
Labourer	1·0	3·60		00	3·50	1	1·66	2·49	14	1·65	3·03	71	1·65	3·20	36
Blacksmith							1·44	2·38	6	1·38	2·75	6	1·00	3·[illegible]	2
Bleacher															
Nailer							1·50	3·00					[illegible]	3.00	1
Papermaker															
Clerk							1·45	3·75		1·50	3·00	2	3·00	6·00	
[illegible]er													2·00	3·0	
[illegible]							0·50	1·50		1·70	3·10	5	1·37	2·50	
Weaver							1·75	4·25		1·62	3·37	4	1·50	2·50	
Optician															
Servant							2·20	1·9[illegible]	5	1·30	3·40	5	1·50	3·00	
Draper													3·10	2·00	1
Baker										1·87	2·75	4	2·75	4·00	2
Gardener							2·00	4·00	1	1·50	3·25	2			
Tailor										2·75	3·50	2	2·00	3·50	2
Musician															
Carpenter							1·50	3·00	3	1·11	2·83	3			
Grocer							1·00	1·50	1						
Tobacconist										1·00	2·00	1			
Miner										2·00	1·00	1			
Watchmaker							1·50	3·00							
Butcher										1·00	2·00	1			
Miscellaneous							1·75	1·2		2·37	3·[illegible]	8	1·6[illegible]	3·6[illegible]	[illegible]
Total Mean	1·00	3·60	2	1·00	3·50	1	1·50	2·8[illegible]		1·65	3·10	121	1·68	3·16	63

CLASSES.	5 ft. 8 in. to 5 ft. 9 in. Insp.	Exp.	No.	5 ft. 9 in. to 5 ft. 10 in. Insp.	Exp.	No.	5 ft. 10 in. to 5 ft. 11 in. Insp.	Exp.	No.	5 ft. 11 in. to 6 ft. Insp.	Exp.	No.	6 ft. to 6 ft. 2 in. Insp.	Exp.	No.	6 ft. 2 in. to 6 ft. 4 in. Insp.	Exp.	No.
Glazier																		
Groom	1·75	4·50	2	1·00	3·00	1												
Brushmaker																		
Shoemaker	2·0[illegible]	4·0[illegible]		1·25	5·50	2												
Labourer	1·52	3·13		1·33	2·71	12	1·20			·47	3·50					1·50	3·95	8
Blacksmith				2·00	3·00	1												
Bleacher																		
Nailer							2·50	4·00										
Papermaker																		
Clerk										1·5	4·00							
[illegible]er																		
[illegible]				1·0[illegible]	2·00	1				1·00	3·00	1	2·50	5·0				
Weaver				1·50	3·25	2		1·50	1									
Optician	[illegible]00	3·50	1															
Servant																		
Draper																		
Baker	1·[illegible]0	3·00	1															
Gardener																		
Tailor				1·00	3·00	1												
Musician										1·50	3·00							
Carpenter	1·00	3·00	1	2·00	3·00	1	2·50	1·0[illegible]										
Grocer																		
Tobacconist																		
Miner																		
Watchmaker																		
Butcher				1·5	1·0	1												
Miscellaneous	1·83	3·10	3	1·25	2·50	2												
Total Mean	1·73	3·18	32	1·78	3·21	24	2·2[illegible]	3·67	9	1·37	3·37	11	2·50	5·00	1	1·50	3·25	8

Table III.—The Mean Capacity of the Chest, compared with the Weight of the Body (stone of fourteen pounds).

CLASSES.	7 to 7½.	No.	7½ to 8	No.	8 to 8½.	No.	8½ to 9.	No.	9 to 9½.	No.	9½ to 10.	No.	10 to 10½.	No.	10½ to 11.	No.	11 to 11½.	No.	11½ to 12.	No.	12 to 12½.	No.	12½ to 13.	No.	13 to 13½.	No.
Glazier	..	..	..	..	..	..	..	..	2[illegible]0	1									..	..	.	..	.	..	..	..
Groom	..	..	..	..	..	.	217	4	22[illegible]	1	2[illegible]0	2	240	4	233	3		.	..	..	..	..	.	..	..	.
Brushmaker	..	..	..	..	2[illegible]8	1	..	..	.	.	.	.	..	..												
Shoemaker	..	..	200	1	23[illegible]	1	2[illegible]5	4	226	3	290	4	2[illegible]0	2	2[illegible]	1	270	1	260	1	260	1	.	..	.	..
Labourer	176	5	172	4	217	19	211	31	23[illegible]	68	231	51	[illegible]13	12	215	31	2[illegible]5	12	240	3	[illegible]50	1	.	.	310	1
Blacksmith	..	..	..	.	210	2	212	1	26[illegible]	4	200	1	[illegible]40	1	290	1	210	1	.	..		..			..	..
Bleacher	..	..	..	..	..	..	..	..	.	.	.	..	[illegible]80	1			..	..	..		..			.	..	..
Nailer	..	..	..	..	..	..	2[illegible]0	1	2[illegible]5	2	..	..	..	..	2[illegible]0	1	..	..	..		..		..	.	..	..
Papermaker	..	..	..	..	..	..	..	..	210	1	.	..					.	..	2[illegible]0	1	..	.	.	..	..	..
Clerk	..	..	..	..	228	3	225	2	23[illegible]	2	260	1	27[illegible]	1	215	2	.	..	..	..	.	.			..	..
Painter	..	.	..	..	..	..	213	3	2[illegible]0	1	250	1	..	..	..	..		..	..	.	..	..	..	.	.	..
Mason	..	..	..	..	1[illegible]5	2	207	4	215	4	210	2	255	2	..	.	235	2			..	..		..	..	..
Weaver	..	..	..	..	..	..	22[illegible]	2	206	5	2[illegible]0	1	234	8			284	1	230	1	..	..	..	..	..	.
Optician	..	..	..	..	..	..	250	1	.	.	.	.	..	.		..	..	..	..	.	..	..	..	..	..	..
Servant	110	1	220	1	..	.	..	.	233	3	233	3	236	5	110	1	2[illegible]0	1		.	..	..	..	..	..	..
Draper	..	..	..	..	..	.	..	..	..	..	..	..	.	..	.	.	26[illegible]	1	..	..	..	..	..	..	.	..
Baker	..	..	..	..	220	1	260	1	215	2	240	1	210	2	.					..	..	.	..	.	..	..
Gardener	..	..	..	..	..	..	.		225	2	.	.	..	..	.		2[illegible]0	1	..	.	..	..	..	..	.	..
Tailor	..	..	..	..	..	.	210	1	215	4	2[illegible]0	4	280	1	230	1	..	..	..	..	..	..	.	..	..	.
Musician	..	..	..	..	..	..	.		..	..	.	..	270	1												
Carpenter	..	..	200	1	..	..	210	1	180	2	213	3	270	1	2[illegible]5	2	300	1	..	.	.	.	..	..	..	..
Grocer	..	..	..	..	250	1	..	..	..	..	..	.	..	.	.	.	..	..	..	..	.	..	.	.	..	..
Tobacconist	..	.	..	..	..	..	.	..	2[illegible]0	1	..	.	..	.	..	..	.	..	.	..	..	..	.	.	.	..
Miner	..	..	..	..	..	.	.	.	220	1	230	1	..	..	.	..	300	1		..	..	..	..	..	..	..
Watchmaker	..	..	..	..	..	..	.	.	220	1	..	.														
Butcher	..		..	..	..	..	..	.	..	..	..	..	210	1	2[illegible]0	1	2[illegible]0	1	.	..	..	..	..	..	..	..
Miscellaneous	..	..	..	..	191	3	211	5	237	8	236	6	226	6	263	3	24[illegible]	2	260	1	..	..	.	..	.	..
Total Mean	158	6	198	7	221	31	221	64	226	116	24[illegible]	87	314	78	215	17	2[illegible]9	[illegible]5	256	7	255	5	..	..	31[illegible]	1

Table IV.—Number of Respirations per Minute observed when in the Sitting Posture, in 477 Cases considered to be healthy.

Number of Respirations per Minute	No. of Cases.
14	2
15	1
16	15
17	6
18.	53
19	15
20	121
21	17
22	78
23	[illegible]7
24	88
25	4
26	29
27	1
28	[illegible]0
29	1
30	3
32	2
	Total 477

Table V.—Number of Pulsations per Minute taken when in the Sitting Posture, in 477 Cases considered to be healthy.

Pulse per Minute.	No. of Cases.	Pulse per Minute.	No. of Cases.
50	1	71	20
52	1	7[illegible]	6
54	4	76	3[illegible]
5[illegible]	8	78	1[illegible]
58	[illegible]	77	2
59	1	79	2
60	51	80	3[illegible]
61	1	81	1
62	9	82	5
63	1	84	12
64	4[illegible]	85	2
65	6	86	3
66	30	84	6
67	2	90	2
68	17	9[illegible]	[illegible]
		95	
7[illegible]		100	2
71			
			[illegible]477

Pulse per Minute	
50, 52, 59, 61, 63, 71, 81	No. of cases.—1.
67, 69, 79, 77, 85, 90, 100	No. of cases.—2.
86, 96	No. of cases.—3.
54, 73	No. of cases.—4.

George Williamson M.D., Staff Assistant-Surgeon.

MIDWIFERY.—SINGULAR CASE OF ABNORMAL OPENING IN THE ABDOMINAL PARIETES OF AN INFANT, WITH ESCAPE OF THE STOMACH AND INTESTINES.

Communicated by FRED. LOWES, Esq., *of Gosport.*

I was called at eight o'clock A.M., on the 8th of March, to a patient who stated that she had been in labour for three hours; the pains were of short duration, and occurring at long intervals. On examination I found the os uteri dilated to the size of half-a-crown, the membranes entire, and presentation natural. The labour progressed favourably, and she was delivered of a male child about half-past eleven A.M. On tying the umbilical cord I discovered in the bed a large quantity of intestine, which, on further examination, I found proceeded from an opening adjoining the umbilicus, but quite distinct from it, and receiving no covering either of skin, fascia, or peritoneum. The mass consisted of nearly all the stomach, the whole of the small and large intestines, as far as the sigmoid flexure of the colon. I endeavoured to return a portion of the protruded viscera, but found it impossible to pass up more than the remaining portion of the

stomach The child lived twenty-three hours, during which time a dirty offensive fluid was frequently exuding from the mouth On examining the body after death, all the viscera appeared healthy and well formed, with the exception that the calibre of the intestines was larger than natural, but the sigmoid flexure of the colon and the rectum were not wider than an ordinary quill The child had the appearance and size of one at eight months and the mother believed she was about a fortnight before her time

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of May 10 M Brongniart in the Chair

Ether At a late meeting of the Academy, M Pirogoff, of St Petersburg, stated in a written communication that the injection into the rectum of ether in a gaseous state was productive of phenomena o ir ensi'ul ty analogous to and not altogether id ntical with, t o consequent up n inhalation M Velpeau remarked that this observation had first been made by Professor Roux. M Duchappe of h u n l d se n then repeated the experiments n d , i d had ascertained that when fluid ether was injected in large do s into the intestin s, de th w s r pidly produced but when th v pour only was introduced into the rectum and colon by means of an appropriate instrument in culability was or s rel m a period of time varying between four and ten minutes, and with s i eat p rf ction as after inspiration int the respiratory organs

Mineral Waters Professor Ilemandre d a report on a paper by Dr P j ades, director of an establishment for the exhibition mineral waters at Icch, in the Pyrenees Dr Pujades recommends the use of these waters (sulphur n) in all seasons and proclaims the advantage of a winter residence in a house h d by the circulation in a continuous manner of the thermal water the term rature on ming always equal The conclusions of the report were favourabl

Structure of Nervous Centres — A short paper was received from M Papenh nd lative to the structure of nervous centres In this M Papenheim and nts the existence of three distinct layers of cerebral matter, and states that the nerves emanate from the central layer alone

Meeting adjourned at five o clock

ACADEMY OF MEDICINE

Meeting of May 11, M Baillard, V P, in the Chair

TREATMENT OF DISEASES BY CAMPHOR

M Dubois (d Amiens) reported on a communication from M Piedagnel relative to the illness of the late Dr Cottereau The reporter reminded the Academy that on the 6th of April Dr Piedagnel had read a history of the case, together with the details of the *post mortem* examination of the body This communication had been read in a hurried manner, at the close of a long meeting, and had not, at the time, excited a lively interest, yet M Piedagnel had brought forward difficult questions and one likely to call forth a th r a lent co troversy M Cottereau s case was not one distinguished by any special features, observed and r any other circumstances it would not have excited the smallest degree of interest, but it derived all its importance from the consequences M Piedagnel had thought proper to draw from it According to M Piedagnel the patient had been the victim of a would-be medication, recently invented, and of which M Cottereau had been during his life the responsible champion It was, therefore, not so much a pathological case which M Piedagnel had read before the academy as an indictment not against an individual, but against a method he had invoked the scientific jurisdiction of the Academy of Medicine, and expected a judgment If M Piedagnel s view of the matter was correct, M. Cottereau had in reality been poisoned by that plan of treatment which he himself was endeavouring to propagate. In order to come at the truth, the reporter found it necessary to enter into further details, and to lay before the academy some account of the method to which M Cottereau's death had been attributed This plan of treatment was simple in its applications camphor was its exclusive instrument —in cigars snuff fluids, lotions, or ointments The person who imagined this method, evidently passed from sciences that he knew little of, to others with which he was totally unacquainted This ignorance of medical art had led him to form a gratuitous hypothesis, and thence to details by which his complete innocence of all medical knowledge became fully established The general hypothesis was the following —"Parasitical animalculæ are the causes of the nine tenths of all diseases" They were all produced by helminths, or acari, hence the necessity of using m ll n d hes a remedy capable of destroying all animalcule, viz, camphor After some further remarks on this doctrine, M Dubois concluded by e p sin the opinion that M Cottereau d e l f i the progress of acute pneumonia and that the camphor was not directly the cause of his death but indirectly, by having prevented the application of proper therapeutical measures Chronic gastritis and hypertrophy of the brain which were found on dissection, were not proved in the reporter's opinion to have been th cons uence of the exhibition of camphor

M Gibert believed that the camphorated preparations used in Raspail's method were more dangerous than the reporter s se t n. He had seen n o t l a d l ut h th u e of the so called cigarettes l rts which showed it to be one of m ely irritating application. As to the camphor cigarettes they were also most injurious, at a trial of a few minutes M Gibert had been always obliged to use them in hilation in consequence of giddiness and vertigo

M Bussy, M Adelon and M Moreau were of opinion that the conclusion of the report were too mild, and that the blame they contained against the quacking exhibition of camphor was not expressed with sufficient energy

The report was not adopted and the commission was requested to reconsider the conclusions, and to lay before the academy more severe strictures on the method

Meeting adjourned at five o clock p m

HOTEL DIEU

CLINICAL LECTURE BY PROFESSOR ROUX

DISLOCATION OF THE ELBOW

A case at present in the wards suggests some remarks on this subject Before the patient was admitted, the dislocation had not been recognised, still we expressed no blame we said nothing of the mistake which had occurred in the first place, because we consider such accusations as highly unbecoming, and in the second because in dislocations of the elbow a thing is easier than to commit an error of diagnosis The prominences by which the joint is surrounded may be very readily mistaken for each other if the swelling has set in In our best surgical works we find on this subject numerous errors and inaccuracies For instance in the displacement backwards, the forearm is said to be always bent on the arm to that degree that the flexion of the extremity, together with the protrusion of the olecranon, constitute the two characteristic features of the injury Now, it often happens in this form of luxation that the limb is much nearer to extension than to flexion, and, if you were to found yourselves upon this sign for the diagnosis, you might commit an error—justified, it is true, to a certain degree, by the assertions of those who have gone before us It is particularly in women and children that an error can easily be fallen into, on account of the small size of the prominences from the bones, rendered still less distinct by the presence of swelling of the soft parts We have seen at least ten or twelve cases of error of this kind, but fortunately it so happens that several weeks and even several months, after the accident, reduction of the dislocation may still be attempted with fair chances of success If the bones be not replaced, the movements of the joint are irrecoverably lost We will relate one instance of success, which derives its interest not only from the history of the disease, but from the circumstances under which it was observed. Twelve years ago, at Milan, where we had returned from Pavia, in the museum of which city we had seen Scarpa's head ingloriously macerating in a tub with other anatomical preparations, we found a detachment of police awaiting our arrival at the hotel Recent political disturbances, and the jealous precautions of the Austrian Government against travellers, caused in our mind some slight uneasiness, which was, however, speedily dispelled, when the commanding officer told us he had called to consult us on the behalf of his son, a cadet in a cavalry regiment, who in a fall from his horse had, five months before, put out his elbow. The nature of the injury had not at first been recognised Panizza and Scarpa's successor had afterwards deemed the dislocation too ancient to warrant any further attempts at reduction. On examination we found that hardly any mobility could d tected we attempted, however, some efforts, and had the good fortune to replace the bones. Since that time many analogous cases have occurred in our practice in this case the olecranon w s fra tu ed during the efforts of extension, but motion was restored, and no ill consequences followed. We are even surprised that laceration of adhesions should not more frequently produce unpleasant results than it has been observed to do in the reduction of ancient dislocations of the elbow

It is sometimes very difficult to ascertain the precise seat occupied by the fracture in so complicated a joint as that of the elbow, it must also be recollected that not unfrequently simple contusions of that part are followed with ankylosis particularly in children, and that, if it sometimes happen that a surgeon receives from the public the credit of a cure principally due to the efforts of nature, it is still more common to find that he receives blame in cases in which the gravity of the accident is the sole cause to which an unfortunate issue should be attributed One of our best pupils had, in a case of fracture of the elbow, most skilfully and properly treated the accident yet it was totally impossible to remove from the patient s mind the impression that the ankylosis of the joint was not due to the want of skill of the surgeon You must be prepared beforehand to meet with unjust reproach, and become bronzed against unfair accusations of this sort, by the recollection that the most illustrious members of our profession have not enjoyed any immunity in this respect

HOPITAL SAINT LOUIS.

ECZEMA IMPETIGINOSUM; DEATH.—DYSCRASIA.

R, aged twenty seven, a porter, was admitted into the hospital on the 10th of March last Some months previously, under the influence of circumstances which remained unknown, a scaly eruption showed itself on the body and limbs; warm baths were exhibited; the scales fell, and an eruption of impetiginous eczema appeared on the thighs, scrotum, and arms The eruption was rapidly yielding to a mild antiphlogistic treatment, when on the 12th of April ædema of the face intense pain in the lumbar region, and suppression of urine were observed, together with a considerable degree of dyspnœa and febrile excitement In the peritoneal cavity a certain amount of effusion was also detected The urine, which at first was altogether suppressed, was afterwards secreted, but in very scanty proportions, and was found to contain a large quantity of albumen The respiration became more and more difficult, although auscultation of the chest and heart betrayed the presence of no physical change, and after three days the patient died The treatment consisted in venesection the first day, and afterwards abundant drinks, with nitre and syrup of squills, and stimulating frictions

with croton oil on the region of the loins. Tartar emetic was also exhibited without procuring any relief.

On dissection a small quantity of transparent serum was found to exist in the peritoneum; the kidneys, otherwise healthy in their texture, were slightly injected on their surface; the lungs and heart presented no morbid change, and no alterations were detected in the brain or spinal cord.

M. Devergie took occasion to remark that the fatal issue of this case was attributable in a great measure to the arrest of the cutaneous eruption. Instances of the kind were observed almost every year in hospital, and not only in eruptions attended with secretion, but also in others—prurigo, for instance—which it was often highly perilous to suppress, particularly in the aged. Whether the suppression resulted from too active a treatment, or from atmospheric causes—the influence of cold air, for instance, its effects were the same, and in asthmatic subjects death frequently occurred as a consequence of pulmonary irritation. In general, also, the anatomical changes noticed after death were not in harmony with the severity of the symptoms during life; abundant secretions in the bronchial tubes were, however, usually found, and might account for the permanent dyspnœa which had previously existed.

Death of M. Lisfranc.—The celebrated surgeon of La Pitié died on the 12th of May from the progress of diphtheriticangina, complicated with pernicious fever, during the second paroxysm of which he expired. M. Lisfranc was only sixty years of age. The funeral took place on the 14th inst. It was most numerously attended, and MM. Pariset and Terres, and others, pronounced on the grave speeches expressive of their feelings on the melancholy occasion. As an operator, Lisfranc was unequalled, and it is a serious misfortune that his work on Operative Surgery, though far advanced, was not completed at the time of his death; his lectures, of the most practical nature, were always fully attended, and were remarkable at all times for the energy with which his opinions were expressed. Lisfranc has written few works: two volumes of clinical surgery, and an incomplete sketch of the art of operations; but in his books, as well as in his practice, the following principle is constantly illustrated:—"The operations of surgery are brilliant; but the art of the surgeon consists less in performing them with ability than in rendering them useless by proper treatment." Lisfranc's researches on cancer, on uterine disease, on white swellings, and his method for the partial amputation of the foot ensure to his name a place amongst those of the most distinguished surgeons of the French school.

D. M'CARTHY, D.M.P.

Habitual Miscarriage prevented by the Use of Antispasmodics.—Dr. Griffin, physician to the County of Limerick Infirmary, recommends to the notice of the profession the use of tonics and antispasmodics when there is an habitual tendency to abortion or miscarriage. In three cases, which he treated successfully, he employed the following remedies—two grains and a half of oxide of zinc, with two grains of extract of hop, three times a day; and, after each pill, two tablespoonsful of a mixture of valerian, aromatic spirits of ammonia, and infusion of snake-root. He recommends also a box of pills to be kept by the patient, containing a grain of opium in each, to be taken when pain came on, and to repeat the dose every hour till relief is obtained.

Case of Double Amputation.—M. Brouzet relates the case of a man on whom he practised amputation of both legs below the knee, the one immediately after the other, on account of injuries inflicted by the wheel of a railway carriage. The patient suffered comparatively little from the double shock of the injury and the amputations, and made a speedy and perfect recovery.

Delirium Tremens.—Dr. Ware observes, that in cases of this disease, the patient, so far as the paroxysm alone is concerned, should be left to the resources of his own system, particularly that no attempt should be made to force sleep by any of the remedies which are usually supposed to have that tendency; more particularly that this should not be attempted by the use of opium. This remedy he considers to be very seldom necessary.

Treatment of Enlarged Subcutaneous Bursæ.—When matter is formed the only means is the evacuation of the fluid by a free opening; this is unattended with danger, and followed by a rapid and complete cure. When, however, the affection is recent, and the swelling does not yield to the application of blisters, or to the external use of iodine, if the swelling be not large, the best plan of treatment is to introduce a fine thread through it, and use it as a seton. On the second day this generally causes considerable pain, and requires withdrawal. A small quantity of puriform fluid passes for a few days through the opening, after which the swelling gets gradually less, and contracting is completely cured.

General Erethism produced by Injury to the Membrana Tympani.—Dr. Cottman, of Whitehaven, United States, relates the case of a lady who, while picking her ear with a knitting needle, accidentally injured the membrana tympani. She immediately became insensible; pupils became very much dilated, face flushed, and tetanic twitchings of the muscles of the arm. This was succeeded by general syncope, which lasted for half an hour, when she became violently sick, and the extremities were cold. She continued in this state for five hours, when she fell asleep for a short time; afterwards she became sensible, complained of pain, and at times conversed incoherently. She was bled to the amount of a quart, with decided benefit, and in the afternoon two small blisters were applied behind the ears. Two days afterwards she complained of a roaring in the ears like distant thunder, accompanied with intense headache. In the afternoon she took eight grains of blue pill. After this she began to sleep well, the roaring gradually ceased, the bowels were gently opened with calcined magnesia, and she speedily recovered without any defect of hearing.

Enterotomy.—Dr. Conger was called to a man who had received a stab in the abdomen with a large butcher's knife, near the anterior superior spinous process of the ileum, on the left side, cutting upwards to the extent of three or four inches. A large mass of intestines protruded, covered with coagulated blood, and there was profuse hemorrhage. The omentum was divided, leaving a strip five inches long hanging from it. The arch of the colon was severed at a point eight or ten inches from the cæcum, at its lower edge, where the peritoneum doubles to form the mesentery, which was also slightly wounded. There was a puncture higher up, an inch in length. After tying four small arteries, the divided edges of the gut were brought into close apposition with sewing-silk by four interrupted sutures, the ends cut off close to the knots. The small wound was left, and the mass returned. The external wound was brought together with three interrupted sutures and adhesive strap, above which was a compress and bandage. He had a dose of forty drops of tinct. opii.; the thighs were flexed on the body, and the legs supported with pillows under the knees. The patient at first was unable to pass his urine from loss of power over the abdominal muscles, and the catheter was used. At first there was restlessness, which was treated with T. opii. Tenderness required one bleeding to the amount of sixteen ounces. On the fifth day it was necessary to give an enema, the bowels not having been moved, which brought away hardened fæces without pain. Afterwards the case went on favourably, and in a fortnight after the injury the patient was quite well.

White Swelling treated with Chimaphila Umbellata.—Dr. Blakey, of America, having under his care a youth of seventeen years of age, with a scrofulous white swelling of the knee-joint, which had been treated for a long time unsuccessfully with iodine, blisters, and setons, gave a trial to the chimaphila umbellata, which was exhibited as an infusion twice a day; oatmeal poultices also being made with the infusion, and applied to the knee. Under this treatment the swelling gradually diminished, and eventually the knee (which was at first three times its natural size) became as strong as the one which had been unaffected.

The Blood in Cancerous Diseases.—Dr. Heller remarks that there is invariably in these diseases an absolute and relative increase in the amount of fibrine in the blood, and a considerable diminution in the quantity of blood corpuscles. In the large colourless cells which, by microscopical investigation, he discovered, and which formerly he regarded as true cancer-cells, he is now disposed to consider as merely the pale corpuscles of the blood, altered by the action of the water employed in the process necessary to demonstrate their existence.

Poisoning by Acetate of Morphia.—In the case of a person who had swallowed ten grains and three-quarters of this drug, and in whom tartar emetic had failed to produce vomiting, a highly concentrated solution of coffee with the solid residue was given, to the amount of ten ounces in twelve hours. Under this treatment the coma disappeared, and he perfectly recovered.

Division of the Vitellus in the entire Animal Series.—It is believed that among birds, scaly reptiles, and cartilaginous fishes, the organization of the blastoderm does not take place in the same manner as among other animals. The experiments of M. Coste prove that such a difference does not exist, but that nature proceeds in a manner identical in all cases. He has observed in birds, &c., during the passage of the ovum through the oviduct, the division of the vitellus to go on as in other cases, with this difference, instead of proceeding throughout the vitellus, it occurs exclusively in the cicatricula.

Diabetes and Dropsy.—Dr. Mackenzie mentions the case of a man with diabetes becoming suddenly affected with dropsy. As soon as symptoms of the latter disease made their appearance, the former entirely ceased, the urine was reduced to an ordinary or even less than ordinary quantity, and lost entirely its sweet taste. By means of diuretics the dropsy was removed, and that instant the diabetes returned. After a time, this latter disease again suddenly stopped, and the former returned, till at length the man died, worn out by these alternating diseases.

Bright's Disease.—Remak confirms the views maintained by Henle, that the cylinders occurring in the urine are not modified urinary canals, but simply coagula of fibrine moulded in those canals. He conceives that the granular appearance of the cylinders is due to the presence of urate of ammonia. He regards their presence as of great importance in enabling to form an early diagnosis of the disease; and states that by this means alone, on several occasions, he has determined the nature of the disease several weeks before the first appearance of albumen in the urine.

The Urine in Scarlatina.—In cases of this disease the urine often continues to deposit a white flocculent sediment for a considerable time after the process of external desquamation has ceased. The deposit consists for the most part of epithelial scales from the surface of the bladder; and as long as it continues to occur the patient must be carefully watched, even though in all other respects his health be completely established.

Cancer of the Stomach.—A microscopic examination of the brown, chocolate-like masses observed in the sour vomited matters in cases of cancer of the stomach, has led to the interesting discovery, that they consist for the most part of yeast plants. In one case the fermentation was accompanied by a well-marked development of gas, and there was an obvious separation of the yeast into an upper and lower stratum.

Entrance of Air into Veins.—Dr. Wattman considers that the instantaneous and permanent closure of the wound of the vein is the remedy on which our sole and only dependence should

be placed. This might be done by compression whenever the lips of the wound can be completely closed, or when a flap or one of the lips of the wound can be laid over the vein and retained there. When this cannot be effected, either the vein must be included in a ligature, or, if there is but a small opening in a large trunk, the orifice must be pinched up in a small, light, spring forceps, and a ligature tied round the coats of the vessel included in the instrument.

Mercury in Yellow Fever.—This was once very favourite remedy in yellow fever, and it was considered that, at whatever stage of the disease salivation was excited, it was an infallible criterion of cessation of disease, and of returning health. Dr. Bone says, salivation neither cures nor prevents yellow fever; but, on the contrary by rendering the body more sensible to impressions from currents of cold air, *predisposes* to yellow fever.

Hooping-cough.—Dr. Bird has found alum most valuable remedy in the non-inflammatory stage, diminishing the secretion and relieving the cough. The following is the formula he has generally used for children of two or three years – ℞. Aluminis, gr. xxv.; ext. conii, gr. xij.; syr. rhœad., ʒij.; aq. anethi, ℥iij. *m.* ft. cochl., i.; med. 6ta quâque hora.

Fistula.—The treatment of fistula by stimulating injections, when they are so situated that they cannot be laid open, has been proved by Dr. Morand to be particularly advantageous. In the case of a young woman who had suffered for nearly twelve months from a fistulous opening in the right iliac fossa, after the ordinary means o treatment had failed, a solution of chlouret o sodi was thrown in with the best effect, the fistula being firmly closed in a fortnight.

Syphilitic Eruptions.—Of all the mercurials which have been recommended in the treatment of syphilides M. Cazenave has found none so efficient or valuable as the protoiodide of mercury. It seldom occasions salivation, and under its influence the patches of disease assume a more lively and healthy aspect, and evince a tendency to resolution. The general condition and appearance of the patient undergoes a remarkable alteration. The countenance becomes more animated, and the eruption advances towards resolution with a rapidity which, in some instances, is really surprising. It is worthy of note that when the administration of the protoiodide is likely to be followed by beneficial results, these latter will begin to appear in the course of a few days from the commencement of the treatment. In the mild forms, not of long standing, ten grains of protoiodide formed into twenty pills with liquorice powder are to be made. Dose to begin with one, to be increased to two, and afterwards to four pills in twenty-four hours. In the severe tubercular varieties two scruples are made into forty pills, and administered as the preceding.

Dysentery.—The fæcal evacuations in dysentery and typhus ordinarily present similar appearances, yet, under the microscope, they occasionally present striking differences. In the former, crystals of ammoniaco-magnesian phosphate are very rare, and the blood corpuscles are not so much decoloured nor so modified in form; long strings of coagulated fibrine are intermingled with the corpuscles. The granular cells are mixed with numerous flattened, spherical, and cylindrical epithelial cells, and the whole are imbedded in the structureless stroma of the mucus. Conferva, and sometimes fermentation fungi, occur in great excess, apparently in direct ratio with the acidity of the evacuation.

Rupture of the Uterus.—M. Robiquet attended a woman in her confinement, when the uterus gave way spontaneously after twenty-four tedious but not severe labour, and no very grave symptoms succeeded the occurrence. After delivery, a portion of omentum and a coil of small intestine prolapsed at the vulva. Soon after their return, the uterus contracted well, and on the seventeenth day the patient was convalescent.

Ether-Vapour Enemata.—M. Pirogoff, of St. Petersburgh, has been trying some experiments on the effects produced by the injection of ether vapour into the rectum. The ether is introduced by means of a catheter attached to a syringe, the latter being enclosed in a vessel of water sufficiently heated to convert the ether into vapour. The odour of the vapour was perceptible in the breath in from two to four minutes. The quantity of ether used has varied from half an ounce to two ounces. No injurious symptoms have followed its use, and the most troublesome operations have been performed with great facility.

Hydrophobia.—Experiments performed by Dr. Eckel have proved to his satisfaction that rabies is not transmitted at distances, nor by mediate or immediate contact of the bodies of animals, living or dead, but only by the bite of the rabid animal, or by inoculation.

Chemical Composition of Osteo-Sarcoma.—M. Roux analyzed a specimen from a tumour removed from the humerus. It consisted as follows:—

Water	87·86
Chondrine	0·85
Albumen	0·30
Margarine, stearine	0·28
Carbonate of lime	0·67
Phosphate of lime	0·59
Sulphates of soda and potass	0·28
Carbonate of soda	0·11
Sulphate of magnesia, silica, &c.	a trace

REVIEWS.

On Indigestion, and certain bilious Disorders often conjoined with it. To which are added, Short Notes on Diet. By George C. Child, M.D. 8vo., pp. 219. London, 1846.

The subject of indigestion has been so often handled, and so well, by writers at home and abroad, as really to leave little room for novelty in treating it. At the same time, the accumulated observations of previous scribes make it somewhat easy for those who follow, and are willing to be satisfied with dressing up old facts in new clothes. A certain Welsh parson, not very competent at sermon-making (we should like to know any Welsh parson who was), used to buy his discourses, and, by way of disguising them, translated them first into Welsh, and then back again into English; after which transmigrations he would have defied the very authors themselves to make out their own. Medical writers who work by borrowing of their predecessors do not go in so roundabout a way as this to make books, but dash along with scissors and paste, as though selection and appropriation constituted the sole business of authorship. A lucky fellow, once upon a time, possessed a cat which he could always make a dinner by when he was short of one. Sixpence was the price of this cat, for which sum he often sold her; but she always came home again, to give him fresh opportunities of merchandise whenever his pocket might happen to be low. We have often thought, if the original facts developed by authors would return to them like this cat, how many men would go empty-handed, who have managed to carry on a literary trade with the capital of other people.

We do not mean to charge this sin upon Dr. Child, for a moment, as an intentional transgression, for, if a man write upon a subject whereon nothing new is to be said, nothing new can reasonably be expected from him. We did not open the volume before us with the most distant idea of its containing any novelties: we knew the thing to be impossible; yet it is something to say that the sum total is composed of very decent materials derived from very decent sources. Dr. Child has obviously begun by reading and making notes from the chief authors on the subject of stomach and bowels, and has connected these various gatherings into one mass, with intermediate material of his own. This he has obtained from some experience, very creditable to his industry; but still we cannot, even from the cases himself has treated, find anything that goes one step beyond our previous knowledge upon the popular subject of indigestion: and it appears pretty clear to us that, notwithstanding his experience, the impression of his reading is uppermost. Were the authors from whom he has derived aid all referred to with precision, the work would have greatly the appearance of a graduation thesis. Occasionally, however, throughout the work, there are straggling inaccuracies, which we are surprised to see, considering that it is for the most part a compilation.

At page 17 we are told that "the stomach may be viewed as a hollow muscle, or gizzard, where mastication is finished." We humbly think that this view is somewhat the reverse of right. We have yet to learn that the stomach is either a muscle or a gizzard, or that it can perform the feat of mastication.

At page 19 we learn that "urinary calculi consist essentially of earthy particles, held together by a cement of animal matter." What *essential* earthy particles are there in the most common of these, the uric-acid calculus?

At page 23 he says that physiologists are by no means agreed as to the use of the saliva. It has always been our opinion that physiologists are pretty well settled upon this point.

"It has often occurred to me, that one use of the saliva may be, by means of the air it contains, to keep the morsel porous, and readily permeable to the gastric juice." Is this sin against pneumatics and physiology serious? Dr. Child really could not have meant what he wrote.

"The effect of morbid changes in the saliva upon digestion is not known." We had imagined, in our simplicity, that these were known tolerably well. If Dr. Child will turn to the *Lancet* of 1841-42, he will find that a certain author named Dr. Wright has classified the varieties of morbid saliva, given their distinctive physical and chemical characteristics; and furnished many cases, from his own practice and that of others, of indigestion being secondary of a depraved salivary secretion. In such cases it is advised by the author referred to that stimulating gargarisms shall be used; and that in very bad cases the offensive saliva shall not be swallowed. He will find also, in the same numbers of the periodical, an astringent wash for the mouth, in salivary discharge symptomatic of dyspepsia, recommended by the same author, which he (Dr. Child) prescribes at pp 139 and 140 of his work, as though the suggestion were now made for the first time. We cannot help thinking that our author has not been accidental in his prescription here, for at the time of Dr. Wright's papers appearing this form of practice, in these particular cases, was quoted by journalists on account of its novelty.

According to Dr. Child, the manner in which dyspepsia becomes intricate may be illustrated by the following plan:—

"Starting-point: simple indigestion in a person otherwise sound.

1st. Complication. *Indigestion* in a person of scrofulous constitution.

2nd. *Indigestion in a scrofulous person* exhausted by a weakening discharge, or by nursing.

3rd. *Indigestion complicated with scrofulous diathesis and exhaustion from nursing;* also with some local complaint, as chronic bronchitis, or uterine disorder.

4th. Arising from the addition of erythematic inflammation to the above." (P. 43.)

What the "starting-point," here, has to do with the illustrations underneath it, we cannot exactly see. We cannot for a moment admit the latter to be varieties of the former, or complications of it, as our author says. These he makes it appear are particular states of health in which dyspepsia is apt to occur. But, in arranging these as varieties under the first proposition, what other is it than saying, that the

"scrofulous diathesis or constitution" is a "complication" of a "sound" one? Again, surely Dr Child does not mean to say that indigestion only occurs in five forms—in a subject otherwise healthy, in a scrofulous one, in one scrofulous and weakened by some cause, in another of this sort, troubled additionally with some local disorder; and in any one of these with erythematic inflammation added? According to this, a man must either be in good health (his stomach excepted) when he is dyspeptic; or he must be scrofulous. Has Dr Child never seen indigestion unconnected either with general good health, or with the scrofulous diathesis or constitution? We have often!

At page 60, we are informed that, "in the liver, the carbon is excreted along with the bile." This is very much like saying that in the operation of phlebotomy the blood corpuscles escape along with the blood. We should not have mentioned this error, but it does not happen to stand alone.

A favourite remedy of our author for unloading the liver consists of six grains of calomel, ten grains of compound extract of colocynth, half a drachm of compound jalap powder, and ten grains of sulphate of magnesia!! (P. 127.) This *mosaicum* he advises to be given, when it does not produce sickness, for several days in succession. We should really think such a dose would not need a repetition very often.

The chapter on Pyrosis is very creditable to the author's industry, but we cannot help thinking that a good deal of it is due to West's "Treatise on Water-brash, though, strangely enough, Dr West's name is nowhere mentioned. It may have happened that Dr Child never saw this work, which made its appearance in 1841, but his own production certainly very much resembles it.

In describing the ejected fluids of pyrosis, at p. 135, our author forgets the most common variety—that which is as transparent as water, of scarcely higher specific gravity than this, and containing scarcely anything but a little chloride of sodium.

At p. 137 Dr. Child says, "The hydrochloric acid is for the most part derived directly from the food,"—we suppose he means from the common salt contained in the food. But does he not know that the experiment has often been tried, of feeding animals, and even man himself, with food containing no salt, without there being any lack of hydrochloric acid in the gastric juice, in consequence?

At p. 136 we learn that "the gastric juice seems never to be secreted in excess." We rather opine that there are some cases on record, of solution of the stomach, which prove the direct contrary.

At p. 139 Dr Child talks of ptyalism in dyspepsia, and calls it "false pyrosis." As well might he call bronchorrhœa false phthisis. Ptyalism is ptyalism and pyrosis is pyrosis, and they in nowise relate to each other, except in so far as according to Dr Wright, whose opinion was founded upon an analysis of the ejected fluid, the matter of pyrosis is often saliva that had been swallowed. He further calls this ptyalism a *symptom*; it is quite as often an *idiopathic* affection.

At p. 177 we read that the "presence of bile-pigment in the urine may be more accurately ascertained by the addition of nitric acid, by which the colour is changed successively from green to violet, red and yellow." A very extraordinary change of colour, this, we should say. In the first place, the correct purple is yellow, with, at most, only a faint shade of green. The addition of an acid such as nitric or muriatic, to it, deepens the green tinge, which afterwards passes into an olive and finally almost into black. Such an order reversing this order of colouration is a chemical curiosity we have never yet seen.

We have read Dr Child's book at random, and have found the aforesaid faults in it, of which, as impartial reviewers, we have felt it our duty to speak. We have spoken the more plainly, because we expect, if we were to read the work through with the express object of criticism we should find its errors much more numerous.

Nevertheless, it is a very creditable production, and is for the most part plainly and correctly written. It contains nothing new, and something that, scientifically speaking, is not true, yet, with all its faults, it is calculated to prove of use, by conveying intelligible information, in very fair quantity, upon the subject of dyspepsia.

The Surgeon's Vade-Mecum. By ROBERT DRUITT, M.R.C.S. 4th Edit. Renshaw, Churchill. 1847.

Celebrity is not always confined to originality, and a man, when he resolves to become an author, may obtain honourable fame by judiciously selecting and condensing the truths which others have made known to the world. It is no easy task to collect from the best sources scientific information, and arrange it in such a manner that the book may be carried easily in the pocket and be made an interesting and useful companion. Most manuals and vade mecums are very trashy productions, and rapidly become enormously useful as waste paper. The press is ever active, and it as attractive to scribes as the candle to moths, and too close contact very frequently proves as destructive to the delicate wings of the one genus as of the other. Mr Druitt, however, is an author of a superior class, and his book is justly held in estimation by the professional world. The work has now reached its fourth edition, and its pages are enriched with the fresh valuable information suggested by the advanced state of surgical knowledge. The author has mentioned in his preface the departments of the book which have received the greatest improvements, and he has not thought it beneath his duty to add an entirely new chapter on the art of bandaging, with copious illustrations, drawn from nature under his own superintendence. To *the surgeon* this may appear a work of supererogation, but it will be appreciated by an extensive class of readers, *the tyros* of the profession. True it is that bandaging is an art which can only be dexterously accomplished by practice, and a surgeon's reputation will often stand or fall by it. Yet a few directions from an experienced hand are good helps to those who are not *au fait* in the matter. The number of wood engravings have also been augmented, and are well executed. All the editions have been highly meritorious, this, however, is by far the best of them. The work needs and can, indeed, bear no higher praise.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half yearly Subscription, 13s., Quarterly, 6s. 6d.*

Blunderbuss *goes off with too much report. The charge is a little too heavy.*

A Birmingham Student *has mistaken the meaning of the article. There is no originality or singularity implied, it is merely stated as a mode adapted to accomplish a certain end. Being so simple, it is worthy of general diffusion. The fact that the excellent clinical professor at Queen's Hospital, Dr Wright, using it so frequently, and detecting by the process the presence of sugar in the brain of a man who had died of diabetes, is at once a proof of its value and also an argument for its publicity.*

Mr William Frazer, Dublin.—*The request will be attended to.*

A Sufferer, Pine street School of Medicine, Manchester.—*We are sorry there should be any differences between Mr Smith, the demonstrator, and his pupils, concerning the money paid for subjects, and we hope matters will be amicably arranged.*

Sufferer *must remember, in reference to the distribution of prizes, that it is possible for a young man at one time to be "morally bad in his conduct," and afterwards be so reformed as to be worthy of a certificate of honour "for good moral conduct."*

Mr Jebson.—*The penal clause in the Registration Bill offers far less security against illegal practitioners than that in the Apothecaries' Act of 1815, which is working well, with the new interpretation put upon it. The Company, we believe, will not be easily plucked by certain noisy politicians.*

Mr J. Jones, Llanfair, Montgomeryshire.—*The suggestions will receive our consideration. The questions are so many that it would take a long column to answer them all. A work on Chemistry well suited for those whose knowledge is defective as regards this science is "Kane's Elements."*

Chirurgus, Derby, *does not appear to clearly understand the subject. A carrier with plenty of [illegible] but lacking direction, is easily vanquished. The College possesses a charter, but not an act of Parliament. [illegible] Any barber or tailor may [illegible] and lop off limbs [illegible] the College could neither have the power [illegible]*

Simon Sick. *[illegible] the party was [illegible], nor can we say who the [illegible] so freely as to [illegible] such a length to the [illegible] that it is perpetually [illegible] themselves will afford the desired information, [illegible], on application.*

Atticus, Berwick. *The provincial schools [illegible] recognised by the Hall and College are [illegible] Medical Times Almanac.*

A Reformer, Lambeth. *We are aware of the trick practised to obtain signatures. Plenty of paper and few names will not be found to answer the purpose intended.*

Mr Deane. *[illegible] qualified practitioners must sign the certificate. A double qualification is not necessary.*

Chemist *had better write to the Editor of the* Pharmaceutical Times, *who will afford him the desired information.*

Mr James. *The letter is at our office, which may be obtained on application.*

Inquirer.—*We published some time ago Dr. Corrigan's lecture "On Select Points in the Theory and Practice of Medicine."*

J. M. T., Tewkesbury.—*The acetum lyttæ, when good, is an efficient and powerful blistering agent.*

Rusticus. *The tincture of iodine has been applied to smallpox pustules to prevent "pitting" with some success.*

F. Henley, M.D. *There are medical men in Egypt who have a scientific knowledge of their profession. We agree with our correspondent "that whoever he was that first suggested to the Pasha the idea of turning mummy linen into gold must have been a very shrewd fellow."*

A Country Practitioner.—*Ether inhalations are still successfully used in the London hospitals when capital operations are performed. There seems no danger, at present, of its being "ultimately laid aside either as inefficient or injurious."*

Philo, Gravesend.—*The paper is under consideration, and may, at some future time, be admissible.*

A Friend to the Insane.—*The commissioners in lunacy will investigate the matter. The statement had better not be published at present.*

X. Y. Z. [illegible]

Mr W. J. Anderson *will have a communication [illegible].*

P. S. M.R.C.S. [illegible]—*An M.D. who has received his diploma from the University of Edinburgh, or any of the Scotch Universities, may practise in England without molestation.*

Mr B. W. Brown, Wincswold, Leicestershire.—*The case of strangulated inguinal hernia, with operation, has been received.*

Mr. Robt Wm Ellis *will see that we have attended to his request.*

Mr. Geo Millett Davis, Liverpool.—*The communication has been received, which will be noticed next week.*

We have also received communications and letters from Mr. Wm Smith, Belper, Mr. Evans, Pwllheli, North Wales, Legend; A. M., Lambeth, Mr. Lowe, Gosport, Chirurgus, Mr. Wm. Frazer, Arran-quay, Dublin; A Student, Queen's College, Birmingham, Mr. Jones, Llanfair; Mr. George Higgins, Manchester, Amicus, Philo, Dr. Hensley, A Reformer, Mr. Deane, Mr. Jobson, Mr. Anderson, Brompton, Mr. Ellis, Colston's parade, Bristol, Mr. Upton, Southampton, Mr. Hade, Chorlton-on-Medlock, Mr. Oldham, Brighton, Mr. Williams, Ancoats, Mr Holbrook, Cheltenham, Dr. M'Gregor, Glasgow, Mr Whitehead, St. Alban's, Mr Hardwicke, Hempnall, Dr. Woods, Parsonstown, Mr. Drummond, Brighton, Dr. Fyfe, Aberdeen, Mr. Martin, St Columb, Mr. Looke, Stalbridge, Mr Ware, Southampton, Mr. Sampson, Southampton Dr Ellis, Dublin, Dr. Sheils, Cork, Dr O [illegible], Dublin, Dr Seward, Cahirconlish, Mr Connolly, Killeagh, Mr. Bosquet, Stapleford, Mr [illegible], Maidstone, Mr. Taylor, Ballymoney, Dr Carmichael, Bucks, Mr Jay, Northaoll, Mr Holmes, Lincoln, Mr Albutt, Bitby, Mr Sweeny Clonmell, Mr. Irvine, Moville, Dr Mulhern, Donegal, Mr Howard, Linton, Mr Hellent, Farnham

---

THE MEDICAL TIMES.

SATURDAY, MAY 22, 1847

PUBLIC JUSTICE AND MEDICAL CORONERS.

When a great public injury is done to the administration of justice, and a severe hardship to one or more fellow subjects, it is of the first importance that we should not suffer either our apathy or good temper to allow the offence to go without punishment. The maintenance of a good system of social relations depends upon a watchful guard over this principle, and if ever great and wanton aggression should be scrutinized, arrested, and delivered to condign punishment, it is especially so where the offender holds a conspicuous position, commits his delinquencies in the public eye, and is surrounded by circumstances which seem to assure him, with the rewards of misdoing, permanent impunity and temporary triumph. As social good is injured by individual efforts, so also is it maintained and vindicated, and the careless, apathetic, good tempered multitude must be ever indebted for a good system of social administration to the exertions of *individuals* either loving justice more ardently or asserting it more energetically.

Under one aspect the melodrama of the Hounslow Inquest might be allowed to be quietly enshrouded under the curtain of public contumely which has of late been drawn over it. The great performer in the scene, after perilling everything to secure a great personal triumph, has, if he has not met his deserts, at least utterly and wholly failed in the object he proposed for himself.

His political position has not been improved, the public sympathy excited has not been secured, the great meetings that were to make a political celebrity out of a partial judge have not been held, and that handsome testimonial which was to have added so largely to the *res domi* has never risen above what would hardly look respectable even as a pauper gratuity. Between the gigantic unprincipledness of a partisan magistrate and huge political success there stood the *Medical Times*, and the *Medical Times* alone, and while injustice has been baffled, right, if not fully vindicated, has at least not been permanently hurt. It is neither right, however, for the public, for the profession, for the cause of justice, nor for our own consistency that matters should rest here. There must not be one iniquity in the whole series of iniquities hidden from public notice and condemnation. It would be worse than wrong—cowardice—if we suffered such a man, after such acts, longer to defile the judicial seat. Courts of justice must be moved, the House of Commons agitated, and no rest given till a severe retribution be won. The first great fact that is by this time everywhere known—the judicial suppression of the testimony of two most competent witnesses—must not escape a speedy investigation, and to this end we now proceed to detail the circumstances of a transaction unparalleled, we believe, in the annals of our courts of justice.

The inquest was held on the 15th of June, 1846, the poor man White was supposed, in the neighbourhood of Hounslow, to have died from the effects of flogging, but on no better authority than the most vague and inconclusive rumours. That the officers had been guilty of any extra severity was not charged, the *system* of flogging itself was considered the potent cause. Under these circumstances a coroner would naturally feel no other inclination than inclination for *personal* suspicions or accusations. He would, if fair, prejudge nobody, and be open to all candid and authoritative evidence. With this conviction on the mind of Colonel Whyte, and believing, no doubt, that there was nothing in the transaction that would not bear the fullest scrutiny, and that the result would conclusively remove the foolish as well as unjust, surmises circulated about, he charged the officer of the regiment, who knew more about the history of the matter than any other man in the regiment, to attend the inquest, and give all the information within his power. Captain Shirley, now the colonel of the regiment, was the captain to whose troop poor White was attached, he was the president of the court martial by which this private had been tried and sentenced, he was present at the infliction of the punishment, and further, had visited the patient twice or more in the hospital after the flogging and before his death. It was impossible to fix on a person with more information, and, from his position, one on whose testimony more confidence could be placed. Captain Shirley attends the inquest, and, after stating that he is commissioned to give the coroner every facility for the inquiry that the regiment could afford, and every information in his power for its elucidation he is accepted as a witness. The deputy coroner, in the presence of the public, examines him on every circumstance of the transaction, every word of the statement is written down as evidence by this functionary, who, not content with the voluntary narrative of the witness, cross-examines him on many of the events, recording every answer so elicited. At the termination of this examination the coroner and jury being engaged in viewing the body, the deputy coroner tells Captain Shirley that the evidence is satisfactory as far as it goes, that he must be sworn to its contents, and that he must hold himself in readiness to answer any questions which the coroner may further wish to put to him.

Captain Shirley tells us that the evidence he had thus given was most material, that it completely exonerated the officers from any imputations of inhumanity, irregularity, or ill doing, that it consisted of facts which, if published, would have removed every unfavourable impression as to the cause of the poor man's death, and he further vouches that he did hold himself in readiness to bear any other examination, and was at all times in readiness to be sworn as to the facts he had deposed.

Now, what is the startling fact? *Captain Shirley, though further examined by the coroner, as promised, was never sworn to his evidence, and that evidence was never submitted to the jury!* But the suppression did not stay here: the deputy-coroner, noticing, no doubt, the direct tendency of such conclusive testimony to strip the judicial procedure of its dramatic importance, would appear to have thought that the contrasting evidence of a private soldier would not be without its value, and, therefore, he calls forward from the crowd about the inquest-room one of the band of the regiment who had been present at the punishment. Private Rising, however, being a person of honest and good character in the regiment, neither thinking nor dreaming of turning any public excitement to profitable account, and having yet no speculation that "stunning" evidence would purchase him his discharge and win him popular notoriety, stated impartially what he knew, what he had seen, and what he had observed, and his testimony was, of course, confirmatory of that of the honourable and upright officer who had preceded him. Examination and cross-examination were duly recorded by the deputy-coroner, the man was to hold himself in readiness to be sworn and further examined, he did so hold himself in readiness, but he was never sworn, and his testimony never was submitted to the jury! It was SUPPRESSED. But we have not done with the suppression here. There was one reporter present, and only one. That reporter—a gentleman favourably known to his profession—was appealed to directly by the coroner during the proceedings, and his presence was not only recognised, but sanctioned.

Did that gentleman report the evidence of Captain Shirley and Private Rising? He did. Did that suppressed evidence, then, appear in the papers? No. Why did it not?—A few facts will explain. Mr. Teuten, having written *his* report of the proceedings, including the testimony of Captain Shirley and Private Rising, had prepared copies for all the morning journals. But if it was convenient to suppress that material testimony from the jury, it was still more important to exclude it from the public. What then happened? Mr Christopher Teuten, of Scarsdale-terrace, Kensington, was invited to take his place in the carriage of the two coroners, who had to proceed through Kensington on their return home. Did they drop Mr. Teuten at Kensington? No. They took him to Bedford-square, and at midnight, Mr. Teuten, instead of sending round his reports to the morning papers, sends, to the *Times* alone, a new version of the story, written since his arrival in town—a version which is headed "Death by Flogging," which omits all reference to the testimony of Captain Shirley and Private Rising, and makes the whole affair to assume characteristics so mysterious and tragical as could not have failed to cause a most intense and general public excitement. Why did Mr Teuten abandon his reports written fairly, at the time of the inquest, under no dictation? Why did he give up so many copies that had caused him so much trouble to prepare? Why did he relinquish the large remuneration which so interesting a report in so many journals would have been certain to secure him? Why did he limit to the *Times* a brief report so contrary to everything deposed to by the only two witnesses examined in the transaction? Let Mr.

Wakley, whose house he left on the midnight of that day, answer these questions if he can! Let those functionaries respond who suppressed the same evidence to the jury!

These are questions that will be conceived to demand an answer; and, in the hope that we may hear something in explication of them, we postpone further observations on this most extraordinary case until our next number.

THE CASE OF ILL TREATMENT AND DEATH OF A PAUPER LUNATIC AT GROVE-HALL, BOW.

THE trial of the two keepers for the manslaughter of a pauper lunatic in the above establishment came on last Thursday, before Mr. Justice Alderson, at the Central Criminal Court; and we cannot allow it to pass without making a few remarks upon the facts which have been elicited. The prosecution of the criminals was at the instance of the Commissioners of Lunacy, and, had it not been for their watchful superintendence, it is highly probable that these inhuman keepers would never have stood at the bar in the humiliating condition of culprits, but would have been still pursuing their calling with that old-fashioned despotism which terrified unfortunate maniacs into submission by the infliction of blows, or the application of strait waistcoats. Even now, with Government officers to inspect these establishments, the guilty men were within a very little of escaping detection, for, though death followed their cruelty, the medical officer of the asylum, when examined before the coroner, gave it as his opinion that "death arose from disease of the heart, with serous effusion into the chest," and consequently a verdict to this effect had been recorded. It is singular that such an opinion was hazarded, and that a *post-mortem* examination in the first instance was not made, because there was sufficient proof, from the wounds and bruises of the sufferer, that violence had been used towards him, and which certainly did not escape the notice of his medical attendant. Better far that the autopsy had been speedily performed, than that it should have been afterwards forced by those murmurs without, which were not only heard within the walls of the asylum, but afterwards reached even the ears of the Government commissioners. Better, we say—especially for the medical superintendent, because he would not then have been under the painful necessity of coming forward to state that he had discovered five ribs broken by violence, one of which had penetrated the pleura, and that this was the cause of death—not "disease of the heart, with serous effusion into the chest." The public are now very suspicious of the conduct of all officers in private lunatic asylums, and such occurrences as these serve especially to bring medical evidence into disrepute, when coming from one who is supposed to be an interested party. The *Times*, therefore, very sagaciously remarks, "The contradiction between these two statements, both proceeding from the lips of the same medical man, is indeed remarkable;" and then ironically adds, "We cannot, however, find fault with the mistake he made in the evidence he gave in the first instance, for he had no opportunity of ascertaining the facts which a *post-mortem* examination alone could have have discovered." If those who have the management of this establishment had been properly alive to their own respectable standing with the public, they would have been more forward in using every means that suspicion might be averted from them. Surely one of their pauper inmates could not have been beaten, kicked, and knelt upon without their knowledge. When patients are placed under their care they are not to be left to the tender mercies of servants, whose only qualification for their duties may be physical strength, with but little kindly feeling to control its exercise. Hence, it was the imperative duty of the principals of Grove-hall to have *at once* instituted such a searching investigation into Rank's death that would have satisfied the poor man's friends, the Government, and the public. There was a tardiness, however, from some cause, and the consequence is that there is an unfavourable feeling towards the establishment and its officers, which might, perhaps, have been easily prevented.

And here we are reminded of the very trying situation in which a medical witness is placed when called to give evidence in a court of justice, where powerful causes may be in operation to bias his testimony. A high moral feeling alone can help him honourably through his difficulties; and we do not mean to say that in the present instance those feelings were not in exercise. Far better would it have been, however, if a professional gentleman had been placed in the witness-box, unconnected with the affair, and whose motives, in consequence, would have had no chance of misconstruction. Hence we view the sentiment as correct which has been enunciated by the press, that "the medical officer, who may be compromised by the result of an inquest, should never be the *only* person to give evidence of the way in which death has been occasioned." Nay, more: we consider the carrying out of such a principle to be one of the surest means of securing for the members of the profession the greatest approbation and confidence of the public.

The manner by which this unfortunate maniac came by his death is a proof that something more is yet necessary to ensure the efficient and humane treatment of paupers in private asylums. It is frightful to contemplate the increase in the number of incurable lunatics in places set apart for their reception; and who can wonder that the most beautiful features of the mind are for ever obliterated, if poor sufferers are doomed occasionally to experience the despotic power of servants, which they will be ever ready to dispute, either in fear or in danger? There must be a still closer inspection of these places, in order that no inhuman keepers may be found exercising their vocation to the injury of the patients: no, not if they should, in any of their paroxysms, commit acts of violence. If this man had not died, should we have ever heard of his blackened eye, his fractured ribs, his bruised body, and the bloody stream issuing from his mouth? What men have we here, who, while one is inflicting blows with merciless severity, another can urge him on by calling out—"Serve out the old devil;" while a third, beholding the terrible scene, comes not to the rescue of the sufferer, but merely says "Drop it"! Were they, for these brutal acts, immediately expelled from their situations as unmerciful servants? It seems, by a subsequent statement of the medical officer, that one was dismissed and the other two placed under short notice to leave, before the official investigation commenced; if this, however, had been done before the man expired, it would have removed those suspicions now entertained, that it was only the prospect of a searching investigation that prompted to the act.

But what said the Judge in reference to the conduct of the prisoners when placed in the dock? In summing up he observed, "that the keepers of lunatic asylums had a perfect right to make use of any reasonable violence that might be necessary to restrain their patients; and if violence, therefore, was made use of, it was not necessarily illegal." Reasonable violence! What is that? Baron Alderson may consider it one thing, and men of the same stamp as the prisoners at the bar another; hence we see the necessity of a sharp watch being kept over the conduct of those who on certain occasions might be inclined so to interpret the learned baron's doctrine, as to use measures which they might consider reasonable, but which disinterested spectators might call cruelty or vindictiveness. Men, in the right discharge of their duties, ought certainly to be protected; but no amount of violence on the part of a maniac, that we know of, could justify those who have the charge of him crushing his ribs, so that the splintered bone pierces the lining membrane of the chest, and death ensues.

The trial, conviction, and punishment of these individuals will not fail of producing salutary effects: the public eye will be directed more constantly to lunatic asylums; the managers of these places will be more anxious to employ servants with moral as well as physical endowments suited to their office; while the keepers, more careful in the discharge of their functions, will not expose themselves to the danger of three or six months' imprisonment by manslaughtering an unfortunate patient who may be occasionally obstreperous.

THE PHARMACEUTICAL BILL.

THIS bill, now before the House of Commons, is exciting a good deal of attention throughout the country; and we, therefore, present to the members of our profession a brief outline of it, intended as it is for the renovation and elevation of that community for whom it proposes to legislate.

It commences with the declaration that it is expedient for persons exercising the business of pharmaceutical chemists to be acquainted with the Latin language, and other branches of useful learning; that the Pharmaceutical Society shall have the power, within one month after the passing of the bill, to appoint a registrar, who may be removed at any time by the council, and another appointed in his place.

All persons members of the Pharmaceutical Society when the act is passed, and every person who shall within one year present a certificate, signed by two magistrates, that he was engaged in the business of a chemist and druggist, to be registered without fee.

The council to publish annually a list of persons registered. The Board of Examiners appointed by the society to conduct the examination of candidates; the board to consist of two professors of Chemistry, Pharmacy, or Materia Medica; and not less than four or more than eight members of the Pharmaceutical Society to be annually appointed.

The council of the society to be empowered to make and alter by-laws, which are to be approved and confirmed by the Secretary of State.

The certificate granted by the society to entitle the possessor to engage in the business of chemist, &c., and for this certificate he is to pay five guineas. All registered persons to be eligible for election as members of the society.

That after the [illegible] passing of the act, no persons to be registered but such as have been examined.

Every person, not registered, who shall use the name of a chemist, &c., to be fined;—which can be imposed by a magistrate upon the testimony of a witness—one half of which to be paid to the informer, and the other half to the Treasurer of the Pharmaceutical Society.

A person obtaining a fraudulent certificate to be fined.

The act not to affect certain privileged bodies, professional persons, manufacturing chemists, or wholesale druggists.

We think that this bill will not be satisfactory to the druggists, and we are quite certain that it will not be to the medical profession.

THE BILL AND THE CHARTER.

TO THE GENERAL PRACTITIONERS OF MEDICINE, &c.

GENTLEMEN,—The enemy of the peace and welfare of the profession has again endeavoured to set us at variance, and to break up that great organization which alone can accomplish our redemption. He may strenuously labour to this end; but he cannot succeed if we are honest to ourselves, and true to the fundamental principles which brought us together. If the profession are to be deluded by impracticable promises, sneered out of their consistency, and bullied into submission to the despotic will of a vain and self-seeking agitator, then let us abandon at once the league and fellowship we have hitherto gloried to call ours; let us confess the imbecility of all our attempts, the hopelessness of our aims, the falsity of our principles, and let us resign to others a triumph which we are unable and unworthy to achieve.

Is it because an individual, impelled by an insane vanity, and with an utter recklessness of the result, may choose to undertake a scheme of Medical Reform, and promise us benefits which never can be derived from its operation, that, therefore, we are to confide our judgment to his keeping, and wantonly support what our worst enemy as wantonly proposes? Are you, gentlemen, content to be divided, now, for your vacillation, and to be punished, hereafter, by its disastrous consequences? Are you so blind that even a dog may lead you whithersoever he will—so infatuated that you can surrender the honour of your profession to the guardianship of a profligate politician, and so insensible to your true interests that you are prepared to sanction measures that will compass your probable ruin? I hope not.

I have considered this Registration Bill thoroughly: all its bearings, present and ultimate, have occupied my closest attention; and I am constrained positively to assert that a *more dangerous measure* was never attempted to be foisted on public credulity. I may add, also, that infamy was never more plausibly covered. The hypocrisy of the scheme is only exceeded by its wickedness.

What, gentlemen, was the grand principle that electrified professional sympathies in the years 1844-5—banded you together in the National Association, enabled you to divide authority with the thitherto omnipotent colleges, and even to overawe a Minister of State? What enabled you to defeat their united machinations? What established you in the estimation and respect of the Government? What was it that commanded the general consent of all classes of the profession, and taught you to reverence even your own efforts? What was it but the one great and honourable principle—the peculiar master-principle of our day—the principle of *education!* It may be boldly affirmed that no other single principle is at this time so influential over statesmen, so pregnant with great results to society, or is, in itself, so honourable and ennobling.

Any body of men that seeks reformation upon this principle will always command the attention of a Government, because the claim it enforces is irresistible. it is based in truth, it is associated with truth, and its end is truth. Petty men may seek petty interests, divorced from the general good. They do not comprehend that their interests are inseparably bound up in the general welfare, they do not see that by the elevation of the mass they must be also elevated; but they grasp at apparent benefit with an avidity that blinds their reason and stultifies their judgments. Such men gather fruits that grow over a quagmire: while they pluck them they are submerged in the morass beneath.

I am willing to believe, that this so called Medical Registration Bill is applauded by some men in all sincerity, but I am also sensible that there are many who promote it, and are busy in misleading public opinion in reference to it, who are the mere hirelings of faction and the indecent candidates for notoriety and place. Nevertheless, there are doubtless some who, either from a cursory examination of the measure, or under the influence of sinister advice, or from merely narrow personal views, deem this bill a desirable scheme for settling the differences and healing the breaches that the contentions and asperities of party politics have caused in our profession. If any man thinks that this bill can possibly effect this end, he labours under lamentable delusion; and if any man thinks that because his low objects are temporarily served that the whole profession will hence receive a great boon, the sooner he is stripped of such a hallucination the better for the integrity of his faculties.

What can such a Registration Bill as this do for the profession? The answer was given in the last week's leader of this journal, wherein Thomas Wakley, the author of this measure, was condemned out of his own mouth. He has long declared that "it is *objectionable* in *principle*, and must operate *painfully* and *injuriously* in *practice.*" Could you desire higher authority? Or have you so mean an opinion of the truthfulness of the man you support, that even now you suspect him of falsehood, and desire my word to vouch for his integrity? If you believe that he has spoken the truth, is it not mere lunacy to grant him support? If you believe him to have been guilty of a deliberate untruth, your confidence is, surely, very inconsiderately bestowed. You cannot complain if you become his victims. Either way you can gain but little credit for sense or honesty. Your name, attached to any resolution in his cause, is the brand of madness or of folly. I rejoice that, notwithstanding all his stratagems, his activity, and his deceitful ness, so few men have been seduced, and have permitted their political honesty to be debauched by his faithless protestations. I had always a high opinion of the members of our common profession: none have had more ample opportunities of estimating their sagacity, their sincerity, and their zeal in a good cause; and I am pleased to find that the cause of truth and honour has recently suffered so slight a defection of its followers.

The individual, gentleman, who has proposed this measure has advised, with his usual audacity, that the parties who have already petitioned for the passing of his bill shall petition AGAIN. The ink of the first petition is scarcely dry when the same hand is required to indite a second. The honourable member is prepared to practise a gross imposition upon the House of Commons, and he has so contemptible an opinion of your sense of right, that he believes that you will consent to become the shameless tools to advance his sinister purposes! No honest man can acknowledge his fellowship with such profligacy without a blush. If Mr. Wakley is prepared to ring the changes upon a few stock petitions, and multiply his one low marauder into seven men in buckram, are you prepared to disgrace your profession by being parties to so dirty a deception? The next proposition we shall have from him will doubtless be—that each petitioner be requested to attach the name of a friend to his memorial. There can certainly be no harm in this—except that it is *forgery*. This is a warning by anticipation: I trust that it will not be wanted.

A cry has been impudently raised against the Council of the National Institute, to the effect that they are opposed to the admission of gentlemen now in actual practice, and possessed of only one qualification, to equal rights and privileges with gentlemen holding a double qualification. Nothing could ever be more audaciously untrue. This right has been long acknowledged, and has been often affirmed by the Institute, as well as by the Association from which it sprung: it is the leading principle in the constitution of both bodies; they are pledged to it, have stood fast by it, and are resolved to maintain it. Let us hear no more of such misrepresentation.

The resolution of the Council of the National Institute which condemned the bill, objected to it in general terms, because "it would permit persons possessing only a single qualification to practise the three branches of the profession." The Council, admitting the principle to which they are already pledged, *that persons being now in practice upon a single qualification shall be legalized*, objected upon sound and wise grounds that *future* practitioners, *being only partially qualified*, shall receive the same indulgence. An act of Parliament has a permanent influence—it is chiefly intended to regulate *future* affairs, and to regard the future state of the profession; and the interests of a great and learned profession *in the future* are immeasurably more important than the private interests of a section or a party, in the present—however expedient it may be to consider these lesser interests in a general measure. The Council, therefore, reviewed the bill as legislators; and feeling the onerousness of their responsibilities, not only to the present generation but also to the future, they condemned the bill as tending to lower the standard of qualification, to injure the interests of the profession generally, and to destroy the general practitioner. This is, at any rate, the view I take of their conduct; and I think their proceedings perfectly justifiable and correct.

There is no guarantee in the bill that even the single qualification which the bill requires for practice shall denote a high standard of qualification in that particular branch of study. The colleges, forsooth, are required to submit a

curriculum of study—to whom? To the Secretary of State! This is the sublimity of nonsense. You might as well ask a Chinese mandarin to construct a steam-engine, or to work out a calculation by the binomial theorem, as require the Secretary of State to decide upon the best course of study for the practitioners of medicine. Poor, persecuted man! he cannot even decide upon the best laws for their government—a duty much more within his province than that of acting as high pedagogue to the profession of medicine. Scarcely ever has anything more farcical been imposed on the good sense of the public. Some people can perpetrate drowsy jokes with incomparable gravity. We may depend upon it, that notwithstanding his ignorance, which is proverbially rash, the Secretary of State will not be rash enough to exercise the powers conferable by this bill; and, unless the whole provision become a dead letter, he will appoint a *Medical BOARD* to assist him in his duties.

But why did not Mr. Wakley provide for this necessary contingency? Simply because he had so vilified the clauses of Sir James Graham's Bills embodying this object, that even he had not effrontery enough to engraft them in his own; and because, also, it would have been necessary to place on such a board a certain number of general practitioners, which he foresaw would involve the further necessity of granting a *Charter of Incorporation* to that body. This he is determined to oppose, and he therefore preferred giving, indirectly, an irresponsible authority to a Secretary of State to appoint such a board as he may choose. There can be no doubt that this board of advisers would be composed of physicians and pure surgeons,—of the men who have publicly boasted of their nefarious schemes to degrade the general practitioners, and who have declared that, in the case of surgeons, they never intended to fix a higher standard of examination than was necessary "for the *ordinary exigencies* of surgery."

The standard of education—the only means by which the general practitioner has attained his present respectability and elevation in public opinion—will be diminished; his station will be, consequently, degraded, his influence permanently enfeebled, and his chance of emancipation and independence in his particular corporation for ever destroyed.

Are you ready to forego the fruits of a thirty years' struggle in this trickish manner? Are you ready to sacrifice your own class to the ambition and love of notoriety of a restless politician? If you are, support the bill;—if you are not, reject it: there is one hope still for you,—a strong hope and a sure one,—the hope that has already carried you through one hard contest, and will carry you victoriously through another: the hope of a REPRESENTATIVE COLLEGE for the general practitioners.

Gentlemen, *we must have the* CHARTER! This is the only means of rendering our class independent, of firmly establishing our professional position, and of securing our respectability, *status*, and attainments. It is an object within the compass of our means; and will be granted, if we are only firm and unanimous. The Government are prepared to hear, if our demand be sufficiently loud,—to concede, if the force we apply be sufficiently strong and steady. It will be our own fault if we fail to obtain it, as its acquisition will be an honour. I shall add no more on the present occasion, except the expression of a desire to recal you to this single object, and to induce you to renew your pledges to accomplish its fulfilment.

I have the honour to be, Gentlemen,

Yours very sincerely,

VOX VERITATIS.

MIDWIFERY.—PUERPERAL CONVULSION AND DEATH.

A MIDWIFE'S MIDWIFERY.

Communicated by W. SMITH, M.R.C.S.E.

On Sunday morning, March 7, I was summoned about half-past nine A.M. to visit H. S., residing at Heage (a village two miles distant), who was stated to be in labour. Her father, who waited upon me, said, "that she had been in labour for two days (it was a first labour), and was a good deal swelled, and that her mother was anxious for me to attend her." I inquired if they had got a midwife, and he said "he understood there was a woman with her"; never mentioned the fact of another surgeon having been applied to, but that his daughter was in fits. I went over as soon as a horse could be got ready. On arriving at the patient's door, I met with her mother, who had walked on from Belper, and we entered the house together. On my going into the lying-in room, the midwife, Mrs. S., said very snappishly, "We do not want you, I have sent for Mr. E." (meaning another surgeon residing in Belper). I then withdrew from the room, when the patient's mother stepped forward and said, "Mr. Smith, I bespoke you to attend her, and I expect you to go on with it; who has so great a right to interfere as her own mother?" On this, I immediately took charge of the woman, and lost no time in investigating the particulars of the case.

The patient, who was short in stature but perfectly well formed, though under eighteen years of age, was lying upon the bed perfectly insensible, and didn't recognise her own mother; there was stertorous breathing and livid countenance; pupils insensible to the stimulus of light; head very hot; saliva mixed with blood was flowing from the mouth; pulse strong and labouring, and convulsive action so violent that it required the joint exertions of the midwife and another woman to hold her on the bed. I then examined *per vaginam* to ascertain what progress had been made toward delivery; the head presented, and was low down, but all uterine action appeared to be suspended. Under these circumstances I concluded the case to be one of eclampsia, and lost no time in opening a vein of the right arm; but, not finding the blood to flow freely, I made a still freer incision into a vein of the left arm, from which the blood, very thick and dark-coloured, flowed *pleno rivo*. After abstracting about a pint the pulse became fuller and softer, and the violent convulsive efforts became somewhat abated; the stertor, however, still persisting, I considered myself justified in abstracting four ounces more, after which the arm was properly secured. The patient after this became more composed and opened her eyes, but never spoke; the uterine action did not return, and, notwithstanding the application of large sinapisms to the thigh, which I personally applied, she expired about forty minutes after the bleeding. Deeming it a proper case for a judicial inquiry, I requested one of the neighbours to summon the constable, who returned with the messenger. From certain inquiries which I made before leaving the house, it transpired that Mrs. S., the midwife, had despatched a messenger to Belper early in the morning (about seven o'clock), to summon Mr. E., another surgeon residing in that place; but we could not ascertain the exact message which he received at Mr. E.'s surgery; neither did that gentleman attend personally, or send any assistance. These circumstances were detailed by me to Mr. H., the constable, who is also *registrar of births, marriages*, &c., for the district. He stated his intention of riding over to Derby in the afternoon, to acquaint Mr. M., the coroner, with the particulars; I, therefore, begged he would call upon me on his return, naturally concluding that my evidence would be required.

The inquest was held on the following day (Monday), at eleven o'clock in the forenoon. A Mr. S. attended, in place of the regular coroner. The only witnesses examined were Mr. D. E., jun., surgeon; the gentleman who had been summoned but did not attend personally, or send any assistance, and Mrs. S., the midwife. I was present during the investigation, but was not examined; the deputy-coroner, however, politely intimated that I was at liberty to ask the witnesses any questions, and I did accordingly put several questions to the surgeon and the midwife. Now, I must confess that it did seem extraordinary that the deputy-coroner should examine no more witnesses. I would also ask, in the first place, in whom rests the power of summoning the medical witness? Is it at the option of the coroner or the constable? If the latter, did that official (knowing that Mr. E., jun., had been summoned to attend the woman *in extremis*, but did not go or send a substitute, which he had the means of doing) exercise a wise discretion in summoning him (Mr. E.) as a witness? Be it understood that there are three other qualified surgeons in Belper besides Mr. E. and myself. Was it possible for Mr. E. or any other surgeon to give an accurate judgment of the case, by merely viewing the dead body (there was no *post-mortem* examination asked for or allowed), and not having any evidence as to the deceased's symptoms, save that of the midwife, a woman totally devoid of education, and somewhat self-willed withal? Would it not have been desirable that the evidence of the neighbours, who were present on the day preceding the unfortunate event, should have been taken touching the strength and frequency of the labour pains, and the progress made towards delivery on that day? Presuming that there had been any neglect on the part of the midwife, in not requiring medical assistance at an earlier stage of the case, was it to be expected that the midwife would criminate herself? Could Mr. E. or any other surgeon (not having seen the patient until twenty hours after death) form a correct judgment as to whether the midwife was blamable or not? Was it not desirable that the messenger sent by the midwife (Mrs. S.) to summon the aid of Mr. E., surgeon, should have been examined touching the time at which he arrived at Mr. E.'s surgery, and the answer which he received from thence? It has been stated to me by a juryman in respectable circumstances, that the midwife (Mrs. S.) was first summoned to the deceased on the *Thursday night*, and not *on the Friday morning* as she gave evidence on oath to the coroner; and further, that she, on the Saturday, said to the neighbours (who had begged her to send for the deceased's mother or a doctor) "she wanted neither mothers nor doctors." Is not such conduct, if proved in evidence, worthy of a severe censure from the coroner or jury?

GOSSIP OF THE WEEK.

APOTHECARIES' HALL.—Gentlemen admitted members May 13: William Thomas Gaye, Joseph Delves, James Lewis Holloway, Richard Dechamp Ball, Joseph Williams, William Watts, jun., Benjamin Daniel, Thomas Robinson, and Thomas Bridgwater.

COMPLIMENTARY TO THE MEDICAL PROFESSION.—The Board of Guardians of the Thame Union have furnished their afflicted poor with printed forms, for the medical officers to note in the sick chamber their respective visits after the manner of the excise, as a check in the weekly returns they officially make to the boards!

The trial of the two keepers belonging to the Grove House Asylum, Bow, for the manslaughter of a pauper lunatic, named Rank, took place in the above court on Thursday, the 13th inst. As the facts of the case have been already stated in our columns, it is only necessary to add that the men were sentenced respectively to *three* and *six months' imprisonment.*

No. 400. **SUMMARY.** May 29.

COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the THEATRE of QUEEN'S COLLEGE, Birmingham.

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Dirt-eating, details of a case of; enormous quantity of Fuller's earth eaten in the space of a year and a half; effects produced by it; treatment; comments upon it; this form of indulgence the result of opportunity, acquired appetites and habits; progressive results of gratifying them; another case of dirt-eating terminating fatally; a third case, less remarkable, and still in continuance; further examples of acquired habits; comments; intentional eating of unwholesome or indigestible food; illustrations; treatment; similar indulgencies, the result of depraved appetite from morbid state of stomach; illustrations; treatment; depraved appetite the consequence of uterine disorder, or peculiarity of condition—amenorrhœa, pregnancy; illustrations; treatment.

GENTLEMEN,—In the beginning of November last year, I had a singular case of dirt-eating, in the person of a hospital patient. I will give you its details, with a few comments.

Mary Redding, aged 20, a light, complexioned, leuco-phlegmatic girl, came under my care, for what seemed to be dyspepsia complicated with obstinate costiveness. At the time of my first seeing her, she had a sallow emaciated look; tongue pale, slightly furred, and trembling when protruded; epigastric tenderness on pressure; pain in the region of the left extremity of the stomach, when this organ was empty, and also shortly after a meal; appetite bad; incessant thirst; frequent eructations, and troublesome intestinal flatulence; bowels confined, often not moved for four or five days together; motions hard, and sometimes nearly round and clay-coloured; urine scanty, with a lithic deposit; there was frequent pain along the course of the transverse colon, but there was no dulness on percussion here, and no evidence, discoverable by the touch, of fecal accumulation. She complained, further, of occasional cramps in the legs, chiefly during the night, which often prevented her sleeping.

On inquiring into the history of her complaint, I learned that she had suffered, in a milder degree than at present, from these troublesome symptoms for the last twelve months: previously to that time she had enjoyed average good health, though she had not menstruated for four years past. Another girl who was with her, and who works alongside her at the business of glass-polishing, informed me that she was certain my patient had gradually begun to fail in her appetite and strength "ever since she took to dirt-eating." This announcement opened a fresh train of inquiry, and I then discovered that for the previous eighteen months the girl had been in the constant habit of eating large quantities of rotten stone (Fuller's earth), an aluminous material that is used in the polishing of glass. The average amount which she had regularly eaten during this time, as I learned by her own confession, that of her companion, and from other indirect sources, was from twenty to twenty-four ounces weekly. So eager was she for it that she systematically took away a supply on the Saturday afternoon to last her until the following Monday morning. Now, taking the lowest estimate given, viz., twenty ounces weekly, and allowing that, for the first six months, she ate only half the quantity that she consumed during the subsequent twelve (and on careful inquiry I was assured from good authorities that this was much under the mark), even at this rate *she had swallowed in a year and a half no less than twelve hundred ounces of aluminous earth!* I am satisfied, from the variety of ways in which I obtained my information concerning this girl's practices, from the corroborative testimony of different parties, and from her own confession, which she made the more readily when I intimated how necessary it was to the correct understanding of her case, that I have rated below reality the amount of gratification of her filthy appetite.

It was more than probable that her dyspepsia and constipation were the issue of her unnatural indulgence: the amenorrhœa could not have been consequent upon it, for the menses had been absent for two years and a half prior to her occupation as a glass-polisher.

On the occasion of my first seeing this girl, she was incapable of following her business, and though "pining," as she said, for her favourite ingesta, I advised her to give up the employment that had led to her partaking of it. This I was induced to do, as being the most likely means of preventing a continuance of her baneful habit. Happily I had not much difficulty in persuading her to resign her situation, and felt, additionally, greater satisfaction in endeavouring to remedy the evils under which she was labouring. She was enjoined certain restrictions in diet, was ordered regular exercise when the weather permitted, and the following were her medicines:—

℞. Infusi gentianæ comp., ℥viij.; ammon. carbonatis, ℈ij.; spiritus etheris nitrici, ʒiij.; m. ft. mist. cujus capiat coch. dua ampla ter in dies. ℞. Pil. coloc. comp., ℈ij.; pil. hydrarg.; assafœtidæ, aa. ℈j.; misce in massam, dividendam in pilulas xx. quarum capiat ij. nocte maneque.

On visiting her two days subsequently, I found that she had experienced some relief from her treatment. Her bowels had been copiously emptied of scybalous fæces, having little odour, and very much the appearance of rotten-stone. Flatulence was less troublesome, and there was less tenderness in the epigastric region, and in that of the transverse colon. The kidneys were secreting more plentifully, though there was still some lithic deposit; the tongue had a better appearance, and the appetite had slightly improved: in particular, the "craving sensation," which she had previously felt when wanting a natural meal, or her favourite apology for it, was somewhat lessened. She informed me that she still longed, though not so extravagantly as aforetime, for the rotten-stone, but that she had no desire to take any similar material as a substitute. I was told by the inmates, who had carefully watched her, that she had strictly obeyed my orders concerning diet and exercise, and that she had never, since my first visit, sought after any food not suited for her.

At the expiration of three other days I again visited her, and found her still further improved in most particulars. Her appetite had become much more regular and natural, and she had very little epigastric tenderness either before or after a meal: she had less craving for her favourite ingesta, but confessed that, if placed in her way, she did not think she could avoid eating it. Her motions had become natural in colour, but, the purgative action being now stronger than necessary, the following pills were ordered:—

℞. Pil. coloc. c., ℈ij.; assafœtidæ, ℈j. Misce et divide in pil. xij.; quarum capiat ij. omni nocte. The mixture was directed to be continued as before.

I paid her three or four subsequent visits, at each of which I found either fresh improvement, or a further establishment of that which had already taken place. I finally transferred her to the care of my able clinical clerk, Mr. Leacroft, under whose judicious management she became fully restored.

The case of this girl is a good illustration of what trifling things may lead to the formation of a bad habit, and what serious things a bad habit may tend to. There can be no doubt whatever that the practice in which this girl indulged was mainly, if not solely, the result of the circum-

stances in which she was placed. Though she was the subject of amenorrhœa for several years, which state often leads to morbid appetites, and to very odd ways of gratifying them, yet this could scarcely be considered as suggestive of he indulgence, for, prior to her occupation as a glass polisher, she had no depraved desires, though she had not menstruated for two years and a half of that time. She assured me that she never in her life had the least desire to put anything not eatable into her stomach, until it occurred to her one day, she knew not why, to bite a piece of rotten-stone. She occupied herself some time in chewing it and turning it about her mouth, and at last, when liquefied, swallowed it. This led to the taking of another piece, and to another, and so on, until the practice became agreeable as a mode of pastime. From this it grew into a pursuit of gratification, and at last the indulgence created a positive appetite. The desire became so strong, and the necessity for its satisfaction so urgent, owing to usage, that even the eating of substantial food did not atone for the absence of the filth longed for. Thus, whenever the inclination grew dominant, it was answered by an immediate partaking of the material sought; and thus, also, was the morbid appetite increased and confirmed. It will hence be seen that, but for the different circumstances in which my patient was afterwards placed, how few would have been the chances of restoring her to health, or of prevailing upon her to avoid a practice which had deranged it.

The remedies which I prescribed for her were just those which I should have given in any other case presenting similar features, whatever might have been the cause of them. The first object, in this instance, was to relieve the immediate distress under which the patient laboured: this was accomplished by the dietetic rules, and the medicines (simple enough) which were given; the second was to prevent a recurrence of the cause—this was happily answered, as I told you, by persuading the girl to employ herself differently to aforetime. I saw her after the complete cessation of her gastro-intestinal ailment, and the commencement of her fresh occupation, and was agreeably informed that she was in good health, and had no desire for a renewal of her old habit.

I learned from this girl, and from others working in the same manufactory with her, that one of their co-operatives had previously, and for a lengthened time, indulged in the same practice of dirt eating. Like my patient, she began quite idly the habit, but persisted in it so determinedly that at last her life was a sacrifice to the sad usage. For some time prior to her death, she lost her appetite, and the only thing her stomach would retain was this aluminous earth. At length obstinate constipation resulted that defied all remedies, and she died, according to report, from inflammation of the bowels.

I know of another instance, at this time, of the same habit, though the quantity of rotten-stone consumed is small compared to that in the two preceding cases, being not more than six or seven ounces weekly. Yet even this one would consider enough to satiate an ordinary stomach after a short trial. This woman, though sickly-looking, says she is in good health, and has no desire to decline her dirty practice. She tells me that she began to chew the rotten-stone more than a year ago, to clean her teeth, and that the habit gradually grew upon her until now, and to forsake it would be the forfeiture of a real pleasure.

So much for custom, and the causes of it! What makes the drunkard, but the first glass? What the inveterate smoker, but the first pipe? What the snuff-taker, but the first pinch? What the most loathsome of indulgers in tobacco, but the first quid? Nay, few are the bad habits or vices that are plunged into at once. Small beginnings generally make good men or wicked ones. A little lie, told in fun, has led to a great lie told upon paper, which the law calls—forgery. "Murder in jest," practised upon a harmless fly, has been the foundation of a growing love of bloodshed, which has had the gallows for its recompense!

This morbid appetite, *the result of habit*, you often see in different classes of society. I once knew a shoemaker who, from transferring his "wax-ends" to his mouth for convenience, "got so completely into the way of it," as he said, that he was never easy, in the absence of food, without having this said material to chew. You remember the anecdote of a celebrated barrister, who never could plead without having a ball of packthread in his hand, calling it the *thread of his discourse*. No doubt the one, like the other, had begun as an *insignificant* habit, but at length became a very *obstinate* one. Some studious men are not capable of prosecuting a train of thought unless they have some particular physical occupation at the same time. Pitt could best reflect when walking to and fro in his room, or in the open air; Sheridan, when staring at a number of lighted candles; Fox, after the immediate exhilaration of friends and a bottle; Gibbon, in the perfect quiet of noonday; and Byron in that of midnight. Some men cannot study without biting their nails, and will obstinately continue the practice, heedless of pain and disfigurement. A few months ago I was consulted by a celebrated dramatic writer and comedian, during his temporary sojourn in this town, for a soreness at the crown of his head. This part I found to be quite bald, and covered all over with a papular eruption. It immediately occurred to me that there must be some irritating cause. He laughed when I put the query, and confessed that, when in process of thought, he was perpetually plucking the hairs from the spot in question. Of course, I could only advise him to leave off this practice, which he did, and the part became sound again. Some years ago I was acquainted with a man who, though professedly a smoker, yet regularly ate his pipe. Whilst inhaling the tobacco-fumes, he would continue to nibble one bit after another off his pipe, until at last it became too short for service. A relative of mine in this town is in the habit of demolishing the handles of his whips in the same way. These, as I have said, are habits.

Cases are not unfrequently met with in which indigestible or unwholesome materials are conveyed into the stomach with some particular *design*. It is said of the Athenian youths that they were in the habit of eating cumin-seeds, to give a paleness to their faces, and convey an idea of their studious habits. With the vain intention of preserving his pallor and preventing obesity, Lord Byron was accustomed to use a variety of eccentric means, such as taking a hot bath and a cigar at the time; eating, for days together, nothing but ship-biscuit, and drinking plentifully of soda-water, seltzer-water, gin-and-water, or claret. You sometimes meet with instances of young girls—ay, and old ones too, when they happen to preserve the vanity of early life—eating and drinking all sorts of odd things to clear their complexions, or give them a delicate whiteness. One will gorge great quantities of chalk, another magnesia, and a third starch, to make their faces pale; some will drink vinegar, some brine, and others even their own renal secretion, to answer the purpose of this silly conceit. When a feeling of personal consequence is uppermost, there is no end to the lengths that youngsters will go in the cause of their favourite gratification.

When cases of this kind come before you, your first object should be to persuade your patient to leave off the mischievous indulgence. You will rarely accomplish this by ridicule, or by using harsh measures: either will be likely to confirm the invalid in the bad practice, or to induce a personal dislike to yourself. One of these will be quite sufficient to set aside all chances of your curative treatment. Rather reason with patients of this class: show them, in the first place, the empty, worthless phantom they are pursuing; and next show them the value of an opposite course of procedure. By rational means, judiciously used, you will be able to do far more in these cases than by harsh or intemperate measures. The one may, and most likely will, reclaim the foolish adventurer; the other will only make him more stupid and determined in his folly. Should remedial measures be required, they will, of course, receive their suggestion from the particular features of each case.

Again, you will find the bad habits I speak of, the issue of a disordered state of the digestive organs. It is seldom, indeed, that you meet with a confirmed dyspeptic who is not perpetually desiring some solid or fluid that is not fitted for him. The generality of your practice will show you that most of those who suffer from disturbance of the alimentary organs are craving for one or other of the particular eatables which your judgment has interdicted. Let the exceptions be very few to a deviation from your original dictate! Not only, however, will unwholesome materials be sought in these cases, but even unnatural ones will be pursued and swallowed with avidity. There is nothing too strange or too dirty for some dyspeptics to encounter. Common earth, dung, cinders, decomposing animal and vegetable matters, and various such things, are amongst the catalogue of edible curiosities in which the gastric depravity delights to revel. There is no end to cases of this kind: in a greater or less degree you will find them perpetually showing themselves in your practice.

Your chief business in these instances is to reason with your patient on the absurdity and evil of his indulgence, and next to endeavour to correct the cause of it. To persuade him by moral means of the vice of his habit is a cardinal point: for if he persist in its continuance all your remedies will be useless. The dirt-eaters of the East and West Indies defy all curative measures so long as they persevere in their filthy practices. These stupid creatures, being only partially approachable by rational agencies, can seldom be induced to leave off dirt-eating, when once having begun it; and thus the generality of them are discarded as worthless, after having acquired their destructive habit. Sometimes your patient will make grave promises of abstinence, but not keep his word. When this is the case, you must try one stratagem against another, and, according as your charge attempts to deceive you, find some means or other of detecting him. It is rarely that you can trust to promises in these cases: your patients are bountiful in their intentions, but very barren in the executing of them. Be always upon your guard when subjects of this class come under your care.

The remedial measures to be pursued under the circumstances I speak of are simply those which any particular case of dyspepsia would call for. Look into all the leading features, and your inference therefrom will be your best guide. One will bear one kind of tonic and aperient, and another a different one, and so on. A notion has prevailed, that the material eaten might be taken as a guide to the medicament needed: so that the one who drank vinegar, or ate green gooseberries, should be treated on the acid plan; and the other, who devoured chalk or magnesia, should be treated on the alkali plan. There is no truth in these things. Never let patients' oddities dictate to your judgment: act from your own unbiassed reasoning, and you will generally be on the safe side.

Other cases you meet with in which a morbid appetite is consequent upon uterine causes. In the condition of pregnancy, women sometimes take very queer fancies into their heads, and suggest to you that, if these are not gratified, there is no saying what the condition of the offspring may be. The craving I speak of is technically called "longing"; and by those who are wise in the wisdom of these things, the non-indulgence of this said "longing" is regarded as a sad sin against hereditary rights. Deformities, distortions, mother-marks, and such like, have usually a little history, in one silly mouth or another, reflecting upon ungratified desires. If the various odd whims of people in these conditions were unceremoniously to be

granted, there is no saying what lengths their sympathies and antipathies might reach. I am not disposed to say that any harmless inclination, even though eccentric, should not be indulged, it being provided that the indulgence is fraught with no difficulty; but my experience has taught me that the less conceits and fancies are encouraged in these cases, the better. Once give them latitude and sympathy, and there is no saying where they may end: and depend upon it, they will never want aiders and abettors amongst the kind frie ds and nurses that con stitute the chief company of a sick-room.

The morbid appetite of pregnant women you must control by rational means, as best you can, and trust to a change of circumstances to effect a cure.

In cases of amenorrhœa, you meet with a great diversity of depraved appetite. All kinds of odd things girls will eat, when the stomach sympathizes with a disordered uterus. Coal, coke, sand, dirt, slate-pencil, chalk, paper, book-covers, and other such, are amongst the fantastic crudities in which they indulge. The quantities of these which are consumed are sometimes enormous. Great stomach or intestinal disturbance has often been the issue of the unchecked habit.

Here, again, moral control, in the first place, is of paramount consequence; and secondly, should come medical measures. The latter, of course, should consist with the particular indications to be fulfilled. Whether a vegetable tonic, with an alkali or with an acid, or a chalybeate tonic, be necessary, will be determined by the specific features of each case. Aperients you will also give according to the need of them. Horse and other exercise, and change of air, are general propositions which you must apply discretionally.

A COURSE

LECTURES ON SURGERY,

BY

SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London; Consulting Surgeon to London University Hospital, &c.

LECTURE VII.

The treatment of inflammation, gentlemen, is the next part of our subject to which we must devote our attention. Resolution, as the most desirable of the terminations of inflammation, must be the object always to be kept in view in the treatment of this disease. The hypothesis of Drs. Wilson and Hollis, that the proximate cause of inflammation is debility of the capillaries, and that resolution is effected by the removal of this state by the increased action of the larger vessels, affords by no means a satisfactory explanation of the phenomena. I should imagine, on the contrary, that such increased action of the large vessels would produce a diametrically opposite effect, by propelling a larger quantity of blood into them, and gorging them to the utmost. Our aim, too, in the treatment of inflammation would lead us to employ those measures that we know are capable of producing increased action of the heart; whereas all experience shows that an opposite plan of treatment is the proper one. It being admitted that inflammation is kept up by an excessive flow of blood to the part, the main indication for its removal must be to diminish the determination of blood; and this cannot be affected by any consideration of the exact state of the capillary vessels, or of the motion of the blood in the inflamed part. Indeed, were we to be influenced by such a consideration of the condition of the vessels, the most rational deduction would be to diminish the flow of blood to them, and give time for a return to their natural state. Experience, however, is the best arbiter in this matter; and if we are unable to ascertain the proximate cause of inflammation in a satisfactory manner, or to reconcile the theories of it with general observation, it is better to dismiss such uncertain hypotheses from our practice, and trust to the results of experience.

The first object of inquiry in any case of inflammation must be the exciting cause, which it is our first indication to remove: for unless this be done we cannot expect to effect a speedy or permanent cure. When, for example, inflammation is produced and kept up by the presence of extraneous substances in any part of the body—when a fragment of glass or a thorn is lodged in the finger—the first indication, and one which would suggest itself to ordinary persons, is to remove the offending substance. When inflammation of the eye arises from exposure to cold, such exposure must be avoided. The removal of the exciting cause will not in all cases stop, or even retard, the progress of inflammation. All living parts are capable of reaction after injury, as shown in the inflammation itself, which is in some cases a salutary process whereby the restoration of the injured parts is effected. Thus we see that, after severe injury of a limb by a bullet wound, or by compound fractures, sprains, or falls, which produce a solution of continuity of the part, certain processes are required to restore it to the natural condition, or to repair the injury as far as practicable.* In such cases inflammation is absolutely essential to the completion of these processes, and we must therefore adjudge it to be a salutary operation. You are now in a position to determine the importance of the study of inflammation to the surgeon, since it is more or less connected with almost all diseases, either as a cause, a complication, a consequence, or even as a means of cure; and, however difficult it may be to investigate its intimate nature, the rules of practice, founded on extensive experience, will always remain the same, namely, to lessen the flow of blood to the inflamed part, by bleeding and other antiphlogistic measures calculated to diminish the force of the general circulation.

We have now arrived at two of the most important indications in the treatment of inflammation—the removal of the exciting cause, and the diminution of the flow of blood to the inflamed part. Although we have seen inflammation is, to a certain extent and under particular circumstances, a salutary process, yet it usually happens that from its extent, violence, or situation, it cannot be viewed in this light; but, becoming a dangerous or even fatal disease, demands all our attention to diminish or subdue it. We know that serious results are produced by inflammation, when violent or of great extent, or, again, when situated in important parts, unless quickly subdued by active treatment. The functions of important organs are thus impaired or destroyed, abscesses of considerable size are produced, and the patient often succumbs, under the constitutional disturbance, or local mischief. Even when fatal results do not follow, evils are frequently produced by the situation, violence, and extent of the inflammation, which cannot afterwards be repaired. From what I have already stated, you are aware that it renders transparent textures opaque; that it thickens, hardens, and enlarges the parts attacked by it; that effusions of coagulable lymph are frequent results, which sometimes become vascular and organized, producing permanent adhesions of parts which ought to be capable of free movement. Ulceration and mortification are among its consequences. The structure and functions of organs are either destroyed, or so impaired by such changes that they go on in an irregular and uncertain manner. These changes are well illustrated by inflammations of the eye, in which, if not prevented by timely attention, opacities are produced; the pupil obliterated by coagulable lymph; the iris thickened, or rendered immovable by adhesions; the cornea destroyed by sloughing, so as to permit an evacuation of the whole contents of the eyeball, and collapse and final destruction of the eye itself. In some cases where the iris is inflamed, adhesions are produced between it and the cornea, or the capsule of the crystalline lens, which prevent the natural dilatation and contraction of the pupils. In fact, the eye furnishes you with a good example of the effects of inflammation: transparent parts are rendered opaque; parts which, in their natural state, are movable become fixed by adhesions; thickenings of the textures; the colourless conjunctiva becoming of a vivid red, the retina paralyzed, and the whole functions of the organ irrecoverably destroyed.

It is not only the destruction of the functions of parts which, however valuable, are not absolutely essential to life, that we have to dread as the result of inflammation, but the injury of those without which life cannot be sustained. In inflammations of the vital organs, activity of treatment is still more necessary, because, if neglected, such injury is sustained as results in death, or the misery of the patient during every subsequent stage of his existence. When the brain, the lungs, the pleura, or the peritoneum are inflamed, you will allow your patient to perish if you do not at once adopt sufficiently powerful antiphlogistic measures.

It, therefore, becomes the imperative duty of the surgeon to adopt the most prompt and efficient measures to subdue inflammation whenever it is of a serious nature. The two principal indications in commencing the treatment of inflammation are, as I have already told you, to remove the exciting cause, and to lessen the determination of blood to the part. The exciting cause is not present in many causes of inflammation; its action, which was only momentary, having altogether ceased. Thus, in the inflammation following mechanical injury, the exciting cause continues no longer than the time required for the infliction of the wound; but a reaction follows which produces the inflammation. In other instances the exciting cause continues, as when sand or other extraneous substances are lodged under the eyelids; and in all such cases it is necessary to remove them as soon as possible: for, until this be done, we cannot expect to effect a cure.

The second indication is to diminish the flow of blood to the inflamed part, and so to remove the perverted action by which the disease is kept up. This indication may be fulfilled either by measures which act directly on the affected part, or by others which act in an indirect manner. Other means of treatment also exist which operate on a different principle, and are founded on a knowledge of the sympathy of different organs. Counter-irritation is an example of this kind of treatment which is often of immense utility in the removal of inflammation, when used with proper precaution. Those measures which act directly on the part are called local, or topical; while those which act indirectly on the system at large are called general, or constitutional. The general or constitutional remedies are bleeding by venesection, cupping, and arteriotomy; purgatives; salines; tartar emetic in diaphoretic, nauseating, or even sometimes in emetic doses; perfect mental and bodily quietude, and the careful removal of all stimulants. The patient is, therefore, to be kept quiet, carefully removing all sources of mental irritation or anxiety, which might agitate him and excite the circulation. The local measures are bleeding by leeches or cupping; the application of cold lotions, poultices, or fomentations; and blisters, after depletion has been sufficiently practised. Blisters act in another way, which I shall take a future opportunity of explaining.

Bleeding is the first remedy that should be employed in all acute inflammations of any extent or violence, and such a quantity of blood should be removed as to produce an effect on the whole system. The experience of many generations has demonstrated that this is the most powerful and best antiphlogistic plan on which to rely; and the preservation of life often depends not only on the speedy and free use of blood-letting, but also on its repetition as frequently as the circumstances of the case may

require. In inflammations of all the important organs, of the brain, lungs, pleura, liver, or bowels, the patient must be freely and promptly bled, or life will be lost in a few hours; and, indeed, the omission of blood-letting would give only the poor chance of an accidental recovery. If there were no blood-vessels in parts, or no blood in the vessels, inflammation could not occur; and, if we add to these that the continuance of inflammation is dependent on fresh supplies of blood to the affected part, we shall see good reason for diminishing the mass of the blood in the circulation. By blood-letting the action of the heart and arteries is moderated, the quantity of blood flowing to the inflamed part is proportionally diminished; and in the same proportion the impetus of the blood flowing to the seat of the disorder is checked. There is no case which is more convincing of the great efficacy of blood-letting than inflammation of the tunica conjunctiva of the eye. If we have recourse to bleeding in severe inflammation of this membrane, we observe, that in exact proportion to the removal of blood, the redness decreases, the scarlet colour is reduced to pink, the vessels appear to shrink, and the redness often disappears before the blood ceases to flow from the vein. Here you have a positive demonstration of the power of blood-letting over severe inflammation. In wounds of the head, chest, and abdomen the chief danger to be apprehended is the occurrence of inflammation, and if the patient be not bled to a sufficient extent, after the first signs of inflammation appear, he will soon succumb to the disease. In these cases the surgeon must make up his mind to bleed at once, freely and repeatedly; he must not be deterred by the apparent weakness or smallness of the pulse, for this is commonly a sign of high inflammatory action; nor must he content himself with abstracting small quantities of blood, which will exercise no influence in checking the progress of the disease. Cases have occurred in which so much as three hundred ounces of blood have been removed, and I have myself seen similar quantities of blood abstracted in a short time.

Bleeding is not always necessary in moderate inflammations of parts not absolutely essential to life, although it is necessary in the treatment of all inflammations of important parts. You must also take into consideration, when determining on the propriety and amount of blood-letting, the age, strength, and constitution of the patient. You would not think of bleeding an aged or infirm person to the same extent as a young, robust, and vigorous individual; yet, notwithstanding this, if it be necessary to check inflammation of an important organ, we must rely on bleeding, whether the patient be young, old, strong, or weak, although these conditions would modify very considerably the amount of depletion. You must remember that a small quantity taken from a debilitated or aged person may be equivalent to a large quantity abstracted from a young or strong subject. The utility of removing blood in inflammation is so well established that we do not confine ourselves to general bleeding, but aid its effects by the application of leeches or cupping as near to the part affected as possible.

There are a few persons who, being neither old nor debilitated, are unable to bear the removal of blood to any considerable extent. These persons are characterized by excessive nervous irritability. Andral states that persons who have already lost a considerable quantity of blood during the course of a previous inflammation, or who have been kept on low diet during a tedious convalescence, and are suffering from chronic inflammation as a sequence of the acute form, are apt to have the nervous system violently disturbed by the removal of the smallest quantity of blood. Under such circumstances delirium, coma, and peculiar spasmodic affections may be induced by incautious abstraction of blood; and he mentions a case where the application of a single leech sufficed to bring on symptoms of tetanus. In all cases, gentlemen, it is necessary to study the constitution of your patient, and to adapt the depletion to his individual circumstances. It is only at the commencement of inflammation that bleeding can be useful to this class of persons, and, if bleeding be not then employed, it must be altogether abandoned.

I have already told you of the assistance to be derived from inspection of the condition of the blood, and from the buffy or cupped appearance presented by the surface of the coagulum. These appearances, joined with other circumstances, such as the state of the pulse, the nature and degree of the fever, and the kind of pain, will usually enable you to judge of the existence, extent, violence, and seat of the inflammation, and to form a correct opinion of the necessity of further blood-letting. In very severe cases it is sometimes useful to bleed to faintness; or, as we say, *ad deliquium*; because, during the state of fainting, all the operations of the system are suspended for a time, and among them, the action of inflammation. In order to induce this state with the greatest promptitude, certain circumstances must be observed. It is necessary to make a large opening in the vein so as to permit a very rapid flow of blood: for the fainting depends in great measure on the quickness or suddenness of the abstraction. It is also proper to place the patient in the erect or, at all events, the sitting position, if not too ill to sit up, and if so he should be supported by the attendants. If placed in this position, the removal of a much smaller quantity of blood produces fainting. In severe cases topical bleeding is used as an auxiliary to general blood-letting; but we must not omit the latter, because topical bleeding alone will not suffice for the subdual of the inflammation. In cases where the symptoms are not sufficiently severe to need general blood-letting, we may content ourselves with topical bleeding; or when, from some accidental circumstance, the patient cannot bear bleeding from the arm. Local bleeding by leeches and cupping is often of great service in cases of inflammation of a chronic rather than acute form. The effect of topical bleeding, where no plethora exists, is greater than might be anticipated from the quantity of blood abstracted. This is accounted for by the proximity of the bleeding to the affected part, by which its vessels are unloaded. We can, however, produce an effect on the system by large local bleedings, either by cupping or leeches. When this is the case, the bleeding may be considered as general. Thus, when several dozens of leeches are applied at once, they remove a considerable quantity of blood, and produce a corresponding effect on the whole system. I have often seen as many as fifty or sixty leeches applied at once; and this is done to a large extent by the French practitioners, who place less dependence on internal remedies than we are accustomed to do in England.

The symptomatic fever which accompanies severe inflammation usually produces more or less constipation. The removal of this constipated state of the bowels is, therefore, another indication in the treatment of inflammatory diseases. We generally prefer mild saline purgatives for this purpose, such as the sulphates of magnesia or soda, or the tartrate of potass and soda. In particular cases more active purgatives are required, and calomel with colocynth, or with James's powder, is preferred. Clysters are sometimes required to aid the operation of these medicines. Mild purgatives have the effect of diminishing the strength and frequency of the pulse, and thereby lessening the power of the circulation. They are useful, also, in producing an increased secretion from the mucous membrane of the intestinal canal. They produce a large amount of secretion from this membrane and when you take into consideration the enormous extent of the mucous membrane, and the quantity of fluid abstracted from the blood vessels, you must perceive the manner in which purgatives produce such beneficial effects.

Mercury is a remedy which exerts a most powerful influence on the progress of inflammation, and more especially in retarding or preventing the effusion of coagulable lymph. This effect of mercury was, I believe, first observed in Germany, but has been insisted on more strongly by Mr. Saunders and Dr. Farre, who found that mercury acted very powerfully in preventing the effusion of lymph in inflammation of the iris, and in promoting the absorption of the lymph when effused. Mercury proves useful in the same manner in acute laryngitis or croup, by promoting the absorption of the lymph effused in the larynx and preventing its further effusion. It is chiefly in these and inflammations of serous membranes that mercury is of such great utility; but in many other forms of inflammation its use is objectionable. It is useful also in chronic inflammation, where there has been a great effusion of coagulable lymph producing thickening and induration. In general the use of mercury should be preceded by depletion—by means of bleeding, purging, and other remedies, I shall hereafter have occasion to notice.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), M.B.S., Physician to the Royal Infirmary for Children, &c. &c.

(Continued from p. 250.)

At my last lecture, gentlemen, I was speaking to you of the diet proper to be adopted as regards scrofulous children a diet not exactly *curative* of disorder, but rather *preventive* of its more important outbreaks. Now, after proper diet comes due protection of the body from cold and wet. Of course you know that man in some respects evinces great tenacity of organic power, since he can, under favourable circumstances, maintain his proper temperature in all climates, in some of which even *native* animals can alone exist; in the extreme north, or under the line. But even man, when deprived of the necessary covering and is acted on by severe cold, sinks into a state of stupor, and he does this the more readily according as his food is, or has been, of an improper or insufficient kind. In extreme cases, where the vital energy has been by the latter circumstance considerably lowered, and the loss of heat by external cooling is formidable, a condition of sleep ensues, the vital and voluntary motions cease, and syncope or death result to the sufferer. An analogous, though of course more moderate, condition of low vital energy is seen to take place in scrofulous and delicate-constitutioned children, as in the retardation of the circulation in the extremities; chilblains of the fingers, toes, or even nose; the blueness of the nails, cold lobes of the ears, numbed feet and hands, shrivelling of the skin, and the almost agony some suffer on the accession of winter.

The want of proper clothing to protect the body of scrofulous children not only gives rise to that vital depression of the nervous energy, and retardation of the circulation in the smaller vessels, which sooner or later takes on those low grades of scrofulous inflammation I have before spoken to you of, but at the same time induces such a bad state of action of the digestive assimilation—in fact, of the whole nutritive and formative powers that tuberculous disorder is excited to unfold itself determinately and fatally in such a child.

The addition of *moisture* to external cold, and deficient or bad food, add yet more to the aggregate excitement of the scrofulous outbreak.

I advise you to make delicate children wear flannel next to their skin when they are old enough, or the skin not too irritable, to bear it, and not on any account to recommend or even tacitly to sanction the "hardening system." Naked legs and open chests are perhaps, *pictorially* considered, not unworthy of notice, but *hygienically*, in this climate, must be held to be ruinous to a delicate constitution. If a parent attempts the conversion of his child into a diminutive Highlander, or one of the Spanish boys of Murillo, ask her, before she does so, to endow it with the necessary constitution *for* such a meta-

morphosis. It is especially necessary that the *thighs* be well covered, and, in older female children of the better class of society, highly necessary to see that the feet be kept warm and dry. This, I know from experience, is often no very easy matter, as the progressive education of such a patient is that chiefly of appearances: the worsted stocking is ugly, looks yellow, it is thick, and requires a larger shoe—objection is therefore made; but it may be found that a flannel sock reaching only to the ankle will be submitted to, the cotton or silk being worn over it. Sometimes, instead of flannel being worn as bedclothes of different kinds, a sort of compromise is effected by the adoption of delicate merino. Most men would shrink from paddling through the slop and water which a young female does in winter with stockings and shoes altogether no thicker than her elder brother's dancing-boots.

The only part which I admit of being exposed is the head, from birth (draughts of cool air being avoided); I prefer children to have it uncovered indoors both by day and by night, and out of doors *very lightly* enveloped. The hair should be kept closely cut too, and then many of the troublesome scalp affections, &c., will not be so likely to happen. Constantly keeping the head covered you may depend is a very bad thing. I have been in a Mahommedan country, where of course all the better class of men wear turbans continually, and amongst them scalp affections were very common. The lower orders did not, and they were free from them. I have even seen some of the latter—camel-drivers after having journeyed from Tumbucktu to Swearah, with the scalp exposed to broiling sun, the hair being closely cropped, and yet the scalp was quite healthy. I forget where I read it, but I did, that one great cause of the frequency of baldness in Englishmen was the practice of our mercantile gentlemen wearing their hats so constantly in their warehouses, &c. Whilst, then, you take care that ample protection is afforded the delicate constitution from climatorial vicissitudes, you will not of course run into the opposite extreme, of making children hothouse plants. This would be overdoing the mark, and lead to results detrimental in the extreme. One of the greatest errors in this country with regard to clothing, is, that persons dress themselves more in relation to a definite time or period of the year, than in a ratio with the temperature, &c. They leave off a part, or certain article, of clothing, not because the temperature has increased or diminished, but because, according to time, it is the beginning of summer or of winter; whereas, as far as the season is concerned, it may be quite different in one year to what it is in another. But they follow the rule notwithstanding.

After the adoption of properly-regulated clothing, to obviate the cold and damp air of climate like our own, comes exposure to the fresh air, solar light, &c. The necessity of breathing fresh and pure air, in order to promote a healthy condition of nutrition, &c., is at once apparent; and no worse state can a scrofulous child live under than that of a contaminated, deteriorated air. Therefore, whether I refer to the mere ventilation of sitting and sleeping rooms, or the constant exposure of the child to a pure country air, the rule holds good; and you may at once deduce that the removal of a strumous constitution from the atmosphere of a great town to that of the seaside or country is the thing to be desired. A very good illustration of the great preventive and preservative power of pure air from scrofulous disorder is afforded by some late improvements in the Zoological Gardens at the Regent's-park. There, monkeys were dying continuously of scrofulous diseases; the monkey-house was badly ventilated and overheated, but when it was well ventilated and not overheated, they recovered quickly. The results, also, of the new terrace-dens for the carnivora, exposed to the open air, have been affirmed to be wonderfully satisfactory, authorizing the expenditure of nearly £3000. Scarcely, it is said, had the lions, tigers, leopards, &c., been a month in their new abode, than a change for the better became apparent. Their eyes assumed a vivacity hitherto unknown, their gait and attitude became more free and unconstrained, their coats acquired the sleek and glossy appearance of their natural state, and their appetite became so much improved that it was found necessary for the council to order increased rations to meet the wants of the animals.

I would recommend you never to allow bed-curtains where a draught can be avoided, and to require that not more than two sleep in the same room. The sleeping-room should be large, airy, and with a fireplace, and the latter not closed by a *register-stove* or a chimney-board. Where two sleep in the same room it is, of course, better that there be two small beds than one large one; where possible, it is of great benefit to be able to dress in a room adjoining the sleeping apartment, and not in the close atmosphere of the past eight hours.

I am satisfied of this, that full exposure to solar light is one of the most important hygienic measures. Far too little stress has been laid upon this, perhaps, partly because it requires a knowledge of some collateral branches of medicine to be able to appreciate its importance in its full force. Those of you, however, who are botanists or zoologists will know what I mean. Still, to others who will call to their recollection the peculiar condition of body, of the glandular structures, &c., of those who live in the deep valleys of mountain chains, of those who reside in narrow, dark streets of northern climates, in mines, of those crowded together in dark cellars and sunless rooms, will easily bring before their eyes pictures illustrative of the effects of the negative of that important vital stimulus—light.

In some manufacturing places the working classes live wholly in cellars, or in courts apparently constructed on purpose to show with how little light a man can just vegetate. It is an often-quoted fact, that monstrous births were very frequent amongst the miserable occupants of the dark dungeons under the fortifications of Lille. The experiments of Edwards on the spawn of frogs and tadpoles clearly demonstrate the agency of light on the formative processes of living organisms; as also those of M. Costa, who placed a number of animals in dungeons without light or space for motion, exposed to cold moisture by means of wet sponges hung up in their cages. Those animals which were not fed upon ferruginous bread became tuberculous. Of course, in many of such cases, other circumstances are in operation detrimental to the economy besides the mere negative of solar light, but every physiologist will be able to appreciate how much is to be laid to the influence of the latter alone.

The child born, then, of strumous parents should be exposed to strong light, often to the direct rays of the sun; if a girl, no such things as parasols, garden-bonnets with long flaps hanging down behind, veils or shades of any description, being permitted to come between her and heaven's beams. The bedroom should be well lighted, and the shutters and blinds never closed, so that the earliest dawn may penetrate the apartment. Undoubtedly, during the sleeping hours, the stimulus of light is not proper, but then Nature has removed it by her natural dark mantle. When she withdraws that mantle, no artificial one should be had recourse to. There is a practice, especially amongst the more educated classes and those of "taste," to sit during the daytime in what is artistically denominated "a subdued light"—that is, the sun and light of heaven are excluded from the room by means of green Venetian blinds and such-like contrivances. However pictorial or poetical such arrangement may be, or agreeable the softened and verdant light which thus enter an apartment, it is physically, hygienically, and medically most improper in a climate like our own. No scrofulous person should be thus treated: let there be no poetizing of him at all.

In the greater number of cases, of course, when you put into force exposure to fresh air and solar light, you will also involve an amount of *exercise*, more muscular motion—a point important in the extreme. It should be strongly impressed upon the mother of every scrofulous infant that the moment it can use its legs without danger, when left alone, it is to be allowed to move about in the open air as much as possible; and, if the child be properly fed and clothed, very little attention, *comparatively within certain limits*, need be paid to the state of the weather. In the better class of society it is a very good way to educate a boy so that he becomes something of a botanist, geologist, and entomologist, as, in following these pursuits, *exercise* and full exposure to fresh air and light are attained in a manner most beneficial to body and to mind. I need, however, scarcely detain you with impressing upon you the enforcement of exercise; but I may just state that violent forms of it, like certain kinds of gymnastic procedures, which give rise to temporary local congestions of important organs during their performance, are not to be permitted.

Now, gentlemen, if in the hygiene of a child derived from scrofulous parents, or of itself distinctly inclining to the diathesis, due regard should be paid to *diet*, *clothing*, and *fresh air*, &c., a great number of other more or less essential points will necessarily follow in their train. They will of themselves spring out of the others, so I need but *hint* at them. Thus, if due exposure to air and exercise, &c., be followed, it will be difficult that over-exertion of the mental faculties ensue, or that early or too much schooling, with undue exertion of the mind, be fostered. If proper attention is paid to clothing, the due change of body-clothes will follow, and the highly detrimental custom of allowing garments wet with perspiration, after exercise has been taken, to dry upon the body, will, of course, be avoided. If bathing and swimming for such children be adopted simply as muscular exercise, all that I might say about the value of ablution and cleanliness, at any rate in summer, will be implied. The regulations of nurseries, of schoolrooms, of dormitories; the value of residing in the country or suburban districts, to that of living in great towns; the choice of a business to bring up either a boy, or when necessary a girl, to; or modes of life in which the great hygienic elements exist in greatest perfection, will be all immediately deduced by your attending to the general principles I have already laid down.

Besides, however, the foregoing *hygienic* preservative or preventive means, there are a few to which I shall just allude, and which may be *therapeutic*, preventive, &c., measures. The one in which most faith is to be placed is the breathing of an atmosphere which has blown over the sea, and living on the sea effects this most effectually.

The latter part of advice, of course, under present circumstances, can apply only to males, who should be sent to sea very early. But if the advice of a late writer could be acted upon, of having vessels fitted up purposely, and kept constantly moving about at sea, the female children of the richer portion of the community might be kept upon the water; and where, perhaps, two or three children have died from tuberculous disorder, such a mode of life would readily be practised with the remainder until stability of constitution was apparently to be hoped for.

The next is a proposal of the practice of which *I* know nothing, but the theory of it is not bad, and has been supported by the experiments of M. Coster, and has the authority of Dr. Ranking and some others. It is to give children, decidedly of scrofulous diathesis, ferruginous bread to eat. If I recollect rightly—for I cannot exactly turn to the reference at this moment—children have been fed upon *iron bread* in some parts of Germany, and with, it is said, great success. Of course, such daily use of iron must be carried on by small doses only; and it could only be under particular circumstances and circumspection that it could be persevered in for any length of time. *Onions* have been recommended as an article of diet, being supposed to

possess a great virtue in counteracting the effects of a scanty and unnutritious food. The French writers, like Rilliards, Barthez, &c., advise the employment of *iron water*, sulphurous and alkaline baths, as also iodurett d ones. In cases in which there is supposed to be special tendency to affections of the meninges, the hair should be always kept closely cut, very little covering allowed on the head, and the feet kept as dry and warm as possible. Some, however, go so far as employing, as mere *preventive* means, setons in the neck and repeated blisters behind the ears; but these, in my opinion, are more to be considered as *curative* ones, or attempts at such. Sponging the chest, spine, and abdomen with turpentine embrocations, spirituous and other lotions, is, however, practicable in particular cases, and also the very admirable resource of effusion of the body downwards from the umbilicus with water holding salt in solution, gradually lowering the tenderature. When debility of the spinal muscles and inferior extremities exists, and there are no particular contraindicating circumstances, it should be dashed quite hard upon the back. The last advice I shall give is the avoidance of wholesale or continuous purgation, the more especially with mercurials: of the detrimental action of the latter agents I shall again speak.

I shall now pass to the consideration of the *curative* therape a of scrofula. You would find, perhaps, many who would say that it is chiefly by following out a judicious hygienic regimen, rather than by the use of any direct medicinal agents, that we can hope to effect a salutary change in any scrofulous disorder; I believe, however, that the aid of medicines is far more important than such an opinion would be thought to justify. We know, of course, that all the medicines in the world, without attention to such regimen, would be of no avail; but, at the same time, it is true that the subjection of the patient to a course of medicine whilst under such regimen will greatly tend in the majority of cases to accelerate the cure. In fact, there are plenty of instances daily coming before us in which, although the best rules of hygiene were followed out, yet without medicine recovery would not ensue. There are others, again, who run into the opposite extreme, and who persist in disregarding hygienic therapeutics, trusting alone to the agents of the Pharmacopœia. And if one notion is worse than the other, this certainly is the one which is so. So, again, do we find scrofulous dis eases treated as if they were entirely of a local nature, instead of being viewed as the external expressions of a great and fundamental constitutional cachexia.

On entering upon the curative therapeia of scrofula, you are to hold the same great doctrine in view which I laid down when speaking of its preventive therapeutics, namely, that you have to deal with a disorder where the main element is that of constitutional debility accompanied with a perverted performance of the offices of nutrition and assimilation. The same conditions, then, of a scrofulous patient having plenty of good food, clothing, air, light, exercise, &c. (no *special* contraindication existing) are to be as continually kept in mind now, as before; and you will constantly find that an additional allowance of meat and some porter will work wonders, whether the patient be a puny, blue-eyed, flaxen-haired little girl, with glandular enlargements or chronic eczema, or a dull-eyed, long-eyelashed, pale-faced, cachectic boy, with a deposit of tuberculous matter. Of course you will meet with plenty of cases in which the powers of the body or of the digestive organs will not bear all the hygienic resources in the energy in which we can employ them when treating scrofula *preventively*. But the question is one only of *degree* the same *principle* holds good in both. You may know that until late times we have always been in the habit of keeping a patient suffering under scrofulous conjunctivitis under a very diminished intensity of light, or of making him always wear a shade over his eyes; but that now we discard the shade and keep him out of doors, when and where practicable. So do we confine a diseased knee-joint in lateral leather splints, after we have strapped it or otherwise treated it as circumstances demand, and send the patient out with a stick or crutch, to hobble about in the serene and fresh air, instead of keeping him motionless upon a bed or couch, as formerly. You will observe, then, that some hygienic modes of procedure, at first sight apparently improper to be enforced, are, notwithstanding, of high importance. To these points I shall again allude.

Now, if it be necessary to keep so constantly in view, that the essential nature of the malady we have to deal with is the constitutional cachexia I just alluded to, it will follow that those remedial agents which will be found most serviceable are to be met with in the class of *tonic* remedies, or are those drugs generally admitted from experience to be able to impart strength and vigour to the system, as the constitutional affection makes itself known by peculiar external manifestations, as shown by glandular enlargements, affections of the skin, the deposition of tubercle, &c., in the texture of organs; certain other remedies, besides what are more strictly called tonics, are resorted to in order to overcome such local signs, and these remedies are such as are considered *deobstruents, resolvents,* or *liquefacients.* Some of the agents made use of have also a reputation for an *alterative* action, as it is termed, and which action is exerted upon the constitutional disorder at the same time that a resolvent or deobstruent one is in force in reducing or dispersing indurations, enlargements, or deposits. Hence, some are given to alter the general marked tendency as well as to cure the local affection.

Although you see we are at no loss in bestowing names upon remedies indicative of particular powers they are supposed to exert, yet I must confess that it is easier to use these names as if they meant a great deal, than to show we have a clear and distinct notion how they do, or that they really do, so act. Still this matters little in practice, after all. *Iodine,* for instance, is said to be all sorts of things, and to act in all sorts of ways--the truth is, it is very difficult to know what to call it; but not at all difficult to say, and to be sure of this, that under its proper employment glandular enlargements become lessened, chronic indurations dissolved, scrofulous ulcers healed, diseases of the joints improved, chronic hydrocephalus and peritonitis materially alleviated; and not only this, but we can affirm that the tendency of the constitution to the further progress and development of the general malady is altered or put a stop to.

DUMAS ON ORGANIC CHEMISTRY. No. XXI.

(Continued from page 251.)

CHEMICAL PHENOMENA OF DIGESTION.

The theories propounded by physiologists, with the view of explaining the phenomena of digestion, have been, at various times, modified according as the progress of chemistry, by enabling us to resolve, experimentally, some of the difficulties attached to this study, may have introduced into science more positive and precise notions. The hypotheses based on the supposition that the aliments were digested by the effect of trituration, coction, maceration, putrefaction, fermentation, &c., were raised upon data altogether inexact, or at least of too vague a nature, and, consequently, they maintain at the present day, a merely historical interest. We may, however, remark the well-characterized tendency of most of these hypotheses, which incline to reduce the phenomena of digestion to actions of a purely chemical character. In this point, at least, they do not wander far from the truth. In fact, if there be anything clear in physiology, it is that the digestive operations are accomplished without the intervention of that vital force, that unknown agent, heretofore so often and so empirically invoked. But modern researches have clearly established that the changes which the aliments undergo in the digestive tube are due to a series of reactions of a purely chemical character. These reactions are exercised by the different liquids which are being continually poured out into the alimentary canal.

The ideas held by the ancients as to the transformation of the aliments, and the creation of substances fit for assimilation, could not, nowa-days, be maintained; properly speaking, no organic substance is created either i tive tube or elsewhere in the economy. principles which ought to pass into the blood, to be subsequently added to the substance of the animal, pre-exist in the aliments, or undergo in the digestive tube mere modifications for the purpose of rendering them soluble or of more intimately dividing them. Digestion is, then, a mere solution of the aliments.

This definition is not new. Some of the ancient physiologists asserted that the digestion liquefied the aliments—a fact fully demonstrated by experience, but which required for its explanation the most accurate and extended chemical deductions. In fact, this liquefaction of the aliments is not a simple solution, in the most ordinary acceptation of the term, but a solution of a peculiar nature which is effected by a true action of contact, under the influence of an azotized matter analogous to diastase. This azotized principle, or species of ferment, is met with in the saliva, the gastric juice, the pancreatic juice, &c., and, according to its origin, so has it received different names, although, perhaps, it is but one and the same matter throughout. Thus the aliments do not contain in themselves the ferment capable of dissolving them; this is found in the juices with which they necessarily become impregnated in the digestive tube. If such be the case, if digestion is accomplished only by virtue of the chemical action which these liquids exercise over the aliments, we can at once see that it may be effected even outside the organism. This has been shown by the celebrated experiments of Spallanzani, as also by the numerous and conclusive researches of Beaumont.

Spallanzani procured some gastric juice by causing birds to swallow small pieces of sponge attached to threads. He expressed these after withdrawing them, mixed the juice thus obtained with finely-cut food, and introduced the whole into small glass tubes which he exposed to the heat of the human body, by carrying them under the armpit. After the lapse of fifteen hours, the aliments were transformed into a homogeneous pulp.

These experiments of Spallanzani have appeared to me perfectly accurate. They have been confirmed by MM. Tiedemann and Gmelin, and especially by M. Beaumont, who was enabled to procure gastric juice in abundance by collecting it directly from the stomach of an individual affected with fistula of that organ. By digesting meat, bread, and vegetables in this liquid, and exposing the whole to a water-bath at the temperature of the human body, these aliments were quickly transformed into a semi-liquid gelatinous mass, in which some traces of vegetable matter were still found floating. These experiments, while clearly demonstrating the solvent power of gastric juice, indicate neither the special principle which effects this solution, nor the manner in which it ought chemically to be regarded. MM. Tiedemann and Gmelin were led to view the free acids contained in the gastric juice as the specific agents in this matter. Having digested fibrine, boiled albumen, mucus, and different animal tissues, with very dilute acetic and hydrochloric acids, they remarked that these substances swelled up, became soft, and appeared partly to dissolve. Still their experiments, and those since made with the same view by MM. Beaumont and Müller, have been far from removing all doubts on this subject, but rather authorize the conclusion that the solution of the aliments is effected under the influence of some organic principle.

Such was the state of the question when, in 1834, the experiments of M. Eberle threw a new

light upon the phenomena of digestion, by showing that the solution of the fibrinous elements is effected by the undoubted concurrence of an organic matter along with an acid. M. Eberle found that by digesting the mucous membrane of the stomach, previously washed in water weakly acidulated with hydrochloric or acetic acid, and subsequently dried, he obtained a liquid capable of dissolving coagulated albumen or cooked meat. Some comparative experiments which he performed convinced him that these aliments were dissolved neither by the action of the acid alone, nor by the exclusive influence of the animal membrane. More recently, M. Schwann has shown that the active principle of this membrane is soluble in pure water, and MM. Pappenheim and Wasman have found it to retain its remarkable properties after being isolated and precipitated by alcohol.

On the other hand, M. Leuchs has discovered that the saliva possesses the property of dissolving starch, and transforming it into sugar; his experiments have been confirmed by MM. Schwann and Lehmann, and more recently by M. Mialhe.

All these facts permit us to explain in a satisfactory manner the modifications which the aliments undergo in the digestive tube. Whilst mastication reduces them to a state of suitable division, the saliva, when secreted in abundance, permeates the mass and facilitates the formation and gliding of the alimentary bolus. But the function of the saliva is not limited to this purely mechanical action. According to the experiments of MM. Leuchs and Mialhe, we are authorized in admitting that it may aid in the solution of the starch, which, moreover, explains the fact already observed by several physiologists, that in the stomach starch is partially transformed into sugar. However, the action which the saliva exercises upon starch is, according to MM. Bernard and Barreswill, speedily arrested. These observers have, indeed, shown that acidulated saliva no longer possesses the power of dissolving starch. It then behaves after the manner of the gastric juice, which, they state, dissolves only the fibrinous aliments. Now, the alimentary bolus remains for a very short time in contact with pure saliva, whence we may conceive that this fluid can exercise but a limited influence on the starch; as soon as it arrives in the stomach it changes in nature by becoming acid from its admixture with the gastric juice, and can now act only by seconding the solvent power of the gastric secretion itself.

However this may be, we must admit that the saliva exercises, in a chemical point of view, but a secondary influence in the act of digestion: and this is proved by the fact that in the fish the salivary glands are entirely wanting; while birds, some species of which invariably feed on amylaceous grains, secrete this liquid in but a very minute quantity indeed.

The function of the gastric juice becomes much more important. It is in the stomach that the fibrinous aliments lose their consistence, are softened, and finally dissolved; and these changes, as the experiments on artificial digestion have amply proved, are due to the action of the gastric juice alone. Whilst this solution is being effected, we see the aliments become gradually transformed into a greyish pulp which has received the name of chyme, but of which the composition must necessarily vary according to the nature of the ingested matters. It is, however, certain that the chyme contains in solution the albuminous matters which have to be absorbed by the veins of the stomach to be carried directly into the current of the circulation. There is no doubt but that all the matters which are soluble in water become dissolved by the ingested drinks, and are absorbed with them by the veins of the stomach.

Whilst these reactions are taking place the gastric juice invariably presents a very acid reaction. This acidity is a condition necessary to the action of the gastric diastase upon the albuminoid matters. I have observed that, by filtering gastric juice through chalk, it almost entirely loses its solvent properties, but that these may be restored by acidulating it anew with hydrochloric acid. MM. Bernard and Barreswill have, moreover, found that, by rendering it alkaline we may destroy its natural action and make it capable of dissolving starch.

In its normal state the gastric juice dissolves the fibrinous aliments with great facility without touching the fatty matters: such, at least, is the conclusion drawn from numerous experiments performed by MM. Bouchardat and Sandras. With regard to the starch, it appears that its solution may commence in the stomach; but, according to the same observers, it is transformed neither into sugar nor dextrine, but gives birth to a certain quantity of lactic acid. However, the greater part of the starch escapes the pylorus with the fatty matters and the residue of the stomachic digestion, and it is in the duodenum and the small intestine that the absorption of these matters is accomplished.

The bile, which in its nature and properties greatly resembles soap, is eminently suitable, if not for dissolving the fatty matters, at least for forming an emulsion with them, and thus presenting them to the orifices of the chyliferous ducts in a state of division favourable to their absorption. To deny the active part taken by the bile in the phenomena of digestion would show a perfect misapprehension of the nature of its functions; we should indeed equally wander from the truth, in regarding it as a product of excretion useless to the organism, as in admitting that it is destined to be entirely absorbed in the digestive canal.

Undoubtedly it is possible that a portion of the elements of the bile may re-enter into the current of the circulation. This appears to be proved by the fact that the excrements of serpents and of some kinds of birds are but slightly coloured, and appear to contain but a very minute quantity of bile. On the other hand, the excrements of the carnivorous and herbivorous mammiferæ are invariably of a yellow or greenish-yellow tint; and this coloration is undoubtedly due to the bile. But it is difficult to determine whether the quantity of bile which is thus rejected with the excrements corresponds to that which has been poured into the digestive tube, inasmuch as it is almost impossible to attain any precise data in reference to the amount of this fluid secreted by an animal. M. Liebig has asserted, from some experiments performed by Schultz, that the ox daily secretes thirty-seven pounds of bile; and on this unsatisfactory ground he draws a conclusion that the elements of the bile are absorbed anew to serve the requirements of respiration. We say that the result obtained by M. Schultz is unsatisfactory: for this physiologist has arrived in but a very indirect manner at a calculation of the quantity of bile necessary for neutralizing the free acid of the chyme. Everybody must see that the basis of this calculation has no solidity. for how are we to estimate the quantity of acid liquor secreted by the stomach which really passes into the intestinal tube, or how take account of that which, being formed in the stomach, is, on the contrary, directly absorbed by the veins of that organ?

From the foregoing facts we can readily understand that doubts may still remain as to the function of the bile in the economy: for, although it may be certain that this liquid serves to form an emulsion with the fatty matters which should be absorbed by the chyliferous vessels, it is not so easy to say what becomes of its elements, when once this first-named function is accomplished. With most animals, a portion of the bile is rejected along with the excrements; but it is far from impossible that another part may be absorbed anew by the organism. The bile is a liquid very rich in carbon, and which contains sulphur as a non-oxidized body; it is in some sort a combustible product very different from the urine in which we meet only with oxidized bodies. This peculiar constitution appears to support the opinion which invests the elements of the reabsorbed bile with an active influence in the phenomena of respiration. If such be the case, it must be absorbed by the mesenteric veins: for the chyliferous ducts are never found to contain bile; and indeed these latter vessels appear to absorb from the digestive tube merely the fatty matters, and perhaps the products resulting from the solution of starch.

In fact, it is principally in the intestine that the fecula is transformed into dextrine and sugar, and this transformation is accomplished by the action of the pancreatic juice. The pancreas, which in its anatomical conformation so greatly resembles the salivary glands, like these latter secretes alkaline liquor which, according to the experiments of MM. Bouchardat and Sandras, rapidly transforms starch into dextrine and glucose. We may then affirm that the action of the pancreatic juice is in some sort supplementary to that of the saliva.

The following is the mode in which the solution of the principal substances contained in our aliments is accomplished. In the stomach, the albuminous matters are chiefly digested; in the intestine, the fatty and feculent matters. This digestion is effected under the influence of an azotized principle analogous to the ferments, the properties of which are modified according as it may be dissolved in an acid or in an alkaline liquor. We thus see that the phenomena of digestion are closely allied to those which have been long known under the name of fermentations, or actions of contact.

Such are the most evident consequences which may be deduced from the numberless researches which have been instituted on the subject of digestion, and among which, beyond the classical writings of Spallanzani, Tiedemann, Gmelin, and various other physiologists, we must particularly instance those due to M. Blondlot and to MM. Bouchardat and Sandras.

ORIGINAL CONTRIBUTIONS.

OBSERVATIONS ON THE ACTION OF MERCURY IN INFLAMMATION, AND ITS EFFECTS ON THE SYSTEM.

By HENRY SMITH, M.R.C.S.,
Late House-Surgeon to King's College Hospital.

(Continued from page 215.)

In the last paper I mentioned some of those diseases in which mercury acts beneficially; and it was found that these diseases consisted of inflammatory attacks, either acute or chronic, brought on by various circumstances, causing the formation of certain products which quickly tend to spoil the part attacked. There are certain forms of inflammation, however, in which it would be useless and injurious to give mercury: I mean those which are caused by a poisoned state of the blood, are accompanied by a low state of nutrition, and an unhealthy formation of those products which are essentially the characteristics of inflammation.

I have already mentioned that, in scrofulous inflammation, mercury is likely to do harm, and have quoted the opinion of Sir Benjamin Brodie, which is to that effect; at the same time it must be confessed that some high authorities recommend it in certain forms of this peculiar inflammation, amongst whom we find that justly celebrated physician and acute observer of disease, Dr. Graves. He recommends the adoption of the plan of speedy mercurialization in scrofulous affections of the lungs, and asserts that he has been able to check incipient phthisis in this way; and Dr. Munk has written a paper on the same subject, and gives cases of this disease in which a cure was brought about under this plan. Dr. O. Beirne has also called the attention of the profession to the good effects which mercury has over scrofulous affections of joints; therefore, although we know that the mercurial action on a system depressed by scrofula must be in many cases theoretically and practically bad, and that the practitioner is by no means warranted to give it indiscriminately, certain cases may be

sec[ond] [st]age in which, as these authorities certify to, it may be productive of benefit.

Certain formidable inflammatory attacks of the serous membranes are liable to arise during the course of some diseases of the kidney, and are dependent upon some material which is retained in the blood, and is exerting a baneful influence on it. In consequence of the severity and rapidity of these attacks, mercury has been employed as in other cases; but if we consider for a moment of what nature is the inflammation, from what cause it has arisen, and what is the particular state of the system thereby induced, we shall be led to question the propriety of giving mercury at all.

This inflammation, as I have stated, is the consequence of a poisoned state of the blood, and the products formed are abundant, mostly of a fluid nature, and of an imperfect and unhealthy character. The condition of the blood itself is much altered in consequence of the disease of the kidney. Its albumen has been draining away in large quantities, and the red globules have been destroyed. As we might expect, then, the symptoms attending such attacks are often of a low form, and the constitutional powers are much depressed. Mercury must necessarily prove deleterious in such a state of the system; the blood is already somewhat in the same condition as that produced by mercury; it has been noticed, also, that salivation is very easily produced, and is with difficulty checked, and yet, notwithstanding, little benefit has resulted.

Opinions, however, on this point, as on others, differ much, and it is but fair to state the opinions of those who are best calculated to give them. If we look into the writings of the three most celebrated authors on medicine of the present age, we find the following. Dr Watson, whilst speaking of renal dropsy, says: "It is yet an unsettled question whether mercury be advisable or even admissible in these cases; the current of medical opinion sets against it, perhaps too strongly. It has been observed that salivation is apt to be produced by a small quantity of this drug, and to be unusually troublesome and severe, without bringing any commensurate advantage. I mentioned to you formerly, Dr Farre's opinion that mercury has the property of rapidly destroying red blood; if so, it must be considered rather as an ally than an antagonist of this malady. On the other hand, some patients have appeared to recover altogether after passing through a furious salivation." Thus he hesitates to give a decided opinion, either for or against it.

Dr Graves, in his "Clinical Medicine," article "Scarlatina," gives the description of a case of renal disease accompanied with chest affection and effusion into the peritoneal cavity, in which, after using other treatment, he says:—"I then ordered mercurial frictions to the abdomen and axillæ, and gave mercury internally."

Dr Copland, whilst speaking of the treatment of pleurisy as a consequence of renal disease, says: "The disposition to effusion requires the prompt use of suitable means; but these means are not the same as are generally found serviceable in the early stage of common pleurisy; bloodletting and mercury must be sparingly, cautiously, or *not at all* prescribed."

I myself have attended one or two striking cases of inflammation from renal disease in which, from the severity of the symptoms, mercury appeared to be indicated, and it was given; but in these cases the use of this remedy was attended with results which would make me cautious in its employment again.

Certain inflammatory attacks arise during other diseases dependent upon morbid poisons—as erysipelas, phlebitis, and measles. The lungs and pleura are chiefly the seats of inflammation. Mercury, as a general rule, may be dismissed from the list of remedies in such. We must recollect upon what the inflammation depends, and act accordingly, by treating the general complaint rationally and skilfully. The local inflammation will yield. As an instance, I may mention that I have seen most intense inflammation of the lungs, caused by the poison of erysipelas, cured chiefly by the exhibition of brandy and other stimuli, and local counter-irritation.

There are also other inflammations dependent upon morbid poisons, in which the use of mercury is not followed by that benefit which we might expect; for, although these attacks appear to be of the same nature and attended with the same results as those produced by ordinary causes, it is found that the same treatment is ineffectual. As an instance I may mention the difference between the treatment of two varieties of iritis—syphilitic and rheumatic: in both forms of this disease the same structure is affected, and the same products are effused, yet the one most imperatively demands the use of mercury, whilst the other is cured by colchicum and quinine, and very frequently resists the mercurial treatment.

Thus we see how essentially different the causes of the same disease are, and consequently how different their treatment should be; and it is by finding out these causes, and adapting his practice to the knowledge thereby he has acquired, that the rational practitioner differs from him who, led by a blind empiricism, merely treats a disease by its name, not heeding the varieties it may assume when acted upon by peculiar circumstances.

Having thus shortly reviewed some of these diseases in which mercury may or may not be employed, I shall conclude these observations with a few remarks on the mode of administering it, and for meeting those immediate ill effects which sometimes arise during its administration.

Undoubtedly the success of any remedy depends much upon its being properly given, and in no one is this held so much as in mercury. We have a powerful mineral, possessing most useful qualities, at the same time able to do an immense deal of mischief. Dealing then with such a formidable weapon, we should show more than usual caution in administering it, and take care that we turn it not into one of destruction, instead of one of defence and salvation.

The grand object we wish to effect in the administration of mercury is, to get the system affected by it; in fact, in other words, to get it absorbed into the blood, and thus to change its constituent parts.

The system may be affected rapidly in two ways, namely, either by giving a large dose at once, or by employing small doses at frequent intervals. There are some who use the first method, and Dr James Johnson was an advocate of it, and Dr Graves has written in favour of administering large doses of calomel in acute inflammation, and he says that this practice was attended with no danger, and that "the curative effects of this mode of giving calomel were most striking."

The objection to this plan is, that we cannot in any case judge beforehand what precise effect mercury will have on any single individual, and thus, in giving a large dose of mercury, we are making a bold stroke in the dark, and are using a weapon which cuts on both edges, and over which we may lose our control. For how severely will ten grains of calomel sometimes salivate, and what distressing effects will it produce! and should there be any peculiar susceptibility of mercury, such a dose might destroy life, or produce lasting ill effects.

There are some cases, however, in which it is necessary to affect the system in a few hours, and, as it can be done in this manner, it would be advisable to put it into practice. In such a case, as in most others of acute inflammation, calomel is the best preparation. One scruple is the dose generally recommended, and, if that fails to produce the desired effect, it should be repeated. Ten grains will frequently fairly and fully salivate within a few hours of its exhibition.

But the mode which is generally used, and which appears to be the safest, consists in the administering of small or moderate doses at short intervals. This plan is perhaps inferior to the other, for this reason, that the object we wish to gain is not so quickly obtained; but, on the other hand, it is superior inasmuch as small doses are not so liable to produce such severe effects as large, and the remedy in that form is more under control. The dose employed varies from gr. j. to gr. iij., repeated every two, three, or four hours, according to circumstances. Calomel, as I have before stated, is that generally used in acute cases, from reasons which are obvious.

To produce a decided effect, other remedial means should be used, which will promote the absorption of the mercury, and which will render the system more capable of its influence. Thus to give mercury every three or four hours by itself, without any other treatment, during the height of an acute disease, when the powers of absorption are at a stand-still, is injudicious. If the case will admit of it, blood should be previously taken away, the bowels should be well cleared, and medicine be given which may diminish the action of the heart, and lessen that febrile disturbance which is inimical to a proper action of mercury. In many instances we shall be able easily to affect the mouth by this method; the period will vary according as the disease is more or less severe, for doubtless the nature of the attack possesses influence over this mineral. How striking to any observer is the difficulty of mercurializing a patient with rheumatic fever! Dr Budd first called my attention to this point, and I have since noticed it particularly. This difficulty is also apparent in some acute attacks, and it must be looked upon as of bad augury. If such should be the case, the medicine must be steadily persevered in, if there is no contraindication. The dose may be increased, or rendered more powerful by the admixture of blue pill. By persevering properly we shall in many obstinate cases be able to affect the system, and when this takes place, there is found to be a marked abatement in the symptoms; the heat of skin is less, the action of the heart and lungs less embarrassed, and a general feeling of relief. The practitioner has gained his object, [illegible] his chief anxiety; but [illegible] the case he feels that the disease is to a certain extent brought under dominion, and in many cases he can look forward to a fortunate termination. Any one who has been anxiously attending a severe case of inflammation, and has relied chiefly upon the use of mercury, must have experienced this feeling, when he has seen the amelioration which takes place on the mouth being affected.

There are some who say that the improvement is not due to the mercury, but that the abatement of the febrile symptoms is the cause of the system becoming affected, therefore denying any benefit to the remedy. The fact however is certain, that on the mouth becoming affected the symptoms in a great number of cases decrease in violence; therefore we must be content with that, if we cannot perfectly understand the explanation. If a person is about to undergo a course of mercury for any chronic disorder, it is essentially important to employ some preparatory treatment, as the successful issue of the case will much depend on this. How often is mercury given to persons labouring under some syphilitic affection, merely as a matter of routine, and as though the mineral was as lazy of action and as harmless as any other agent, how frequently does it disagree with the constitution, and fail to produce its desired effect, from a neglect of those cautions which should always be given to any one taking mercury!

The preparatory treatment I need not dwell upon, but there is one point I will make a few remarks upon. Sometimes it is found extremely difficult to salivate a patient in the ordinary manner, although the mercury may be carefully given. In such a case the functions of the various organs should be well attended to; the skin should be particularly looked after, by allowing the patient to take a warm bath, and combining a sudorific with his pill, the difficulty will be in many cases got over; at the same time the diet

must be carefully regulated, and the clothing of the body be carefully attended to.

There is no doubt that an increased action of the various secreting organs is a part of the great specific action, and that, unless this takes place, the beneficial influence which we expect will not take place: for instance, if, during the employment of mercury, the skin becomes hot and dry, the salivary glands become excited without secreting, and at the same time an over-secretion from the bowels takes place, the remedy is not acting properly, and it will be useless for us to look at the gums day by day; we should examine the state of other parts and functions, and not be content with looking at the mouth only. I will quote a passage from the work of a man, who perhaps attends more to the action of mercury than any other, which bears upon this point. Matthias, speaking of the exciting causes of what he called the mercurial disease, says, 'Among the exciting causes of this disease we must reckon that kind of constitution which resists the action of mercury on the secretions, particularly those of the salivary glands, or rather in which mercury acts on the mouth, skin, and kidneys in checking, instead of increasing, the secretion. This kind of habit of all others is the most unfriendly to mercury, and the soonest takes on the specific disease of the mineral; and it cannot too strongly engage our attention, as much of the knowledge of the disease, of its phenomena, and of its treatment depends upon it: indeed the specific diseased action of mercury is always connected with this check on the secretions; for although the venereal virus is not destroyed merely by evacuations, we know that except the secretions are in some measure excited by mercury, the virus will not be removed; and we find that in all cases mercury is the least liable to run into its morbid action when the secretions are increased, and especially those of the mouth and of the skin.'

(To be continued.)

PRACTICAL OBSERVATIONS RELATIVE TO THE MANAGEMENT OF THE INSANE.

By WILLIAM SMITH M'KEST,
Formerly House Surgeon at the [illegible] Lunatic Asylum, and to the County Hospital at Lincoln.

"My chief task [illegible] truth [illegible] it trample it under [illegible]."—ARMSTRONG.

(Continued from p. 136.)

Manslaughter in a private madhouse; free admission of the public eye the only real safeguard to the lunatic; advantages in this respect of public hospitals for the insane, over private madhouses; great improvements in the treatment of patients in the Royal Hospital of Bethlem, and progressive diminution of mechanical restraint, as shown by the official reports of that establishment.

The newspapers contain an account of manslaughter at a lunatic asylum. The prisoners were committed to Newgate for trial, bail being refused. Considering what has lately been published, relative to the improved treatment of the insane, and the humane measures said to be adopted towards those unfortunate individuals, we are scarcely prepared for such an outrageous and disgusting scene as is here presented to the imagination. In our public hospitals such outrages are now, I believe, extremely rare; but in the *lu[illegible] houses*, the *private madhouses*, such occurrences (or something little better), I fear, are still frequent. That many and very gross abuses do still exist in these same *private madhouses*, we need only refer to the infamous state of the Haydock-lodge Asylum (under the kindly auspices and humane control of an ex-assistant poor-law commissioner and poor law auditor), so thoroughly exposed in the *Times* newspaper for August 27, 1846, and the official report of the commissioners in lunacy—a combination of individuals chosen on the *lucus a non lucendo* principle. Having given this matter a considerable degree of attention, and been somewhat of an *amateur* in all matters relating to *madhouses*, or, as they ought to be, *hospitals for the insane*, I will give my opinion why the *private madhouses* are so much inferior to the *public hospitals for the insane*. In the former establishments (in too many instances) the *patients* are looked upon as matters of *commerce & trade*: the longer they remain, the better for the proprietor; if this proposition be correct, *the more they are beaten, the worse they are clad, and the more fluid and innutritious their diet*, the better; for upon these points most materially does the cure of an *insane person* depend. *If they are bled and blistered and setoned* (*vide* Commissioners' Report of West Auckland Asylum: "The medical attendant considered that 'bleedings, blisters, and setons,' were the principal resources of medicine for relieving maniacal excitement'), and kept upon low diet, no doubt the proprietor will be enabled to retain them for some time. Again, the *keepers and nurses* (an expensive item in a madhouse) are not allowed very high wages; and *strait waistcoats*, being much more *economical*, will frequently be substituted for an extra keeper or nurse. And last, though not least, *the public eye is most carefully excluded* from these *private madhouses*. Should a medical man who is practically acquainted with insanity request permission to inspect the establishment, he will assuredly meet with a denial, and the plea urged against it will be the following: "*The friends of the patients have given us strict charge not to allow them to be looked at.*" Poor deluded mortals! they are like a flock of sheep who have placed themselves at the mercy of the wolf, having first taken the precaution to sacrifice their proper guardian, the dog. In order to prove that public inspection is the greatest safeguard from abuse which the lunatic possesses, I will refer to the deliberately recorded opinions of a physician who has for more than *twenty years* devoted his talents and energies to the cause of the insane—Dr. Charlesworth, the senior physician of the Lincoln Asylum, in a letter addressed to a General Board of Governors, October 12, 1828.

"If the public eye may be deemed necessary to prevent or counteract defective treatment in public hospitals for the insane, how much more is it absolutely required in the case of a private madhouse, where the unhappy lunatic is subjected (in too many cases) to the tender mercies of an ignorant and rapacious proprietor, and a set of brutal and uneducated keepers and nurses, who have no more practical acquaintance with the treatment of insanity than has the Pope of Rome? That there are many gentlemen of honourable character, and great professional ability, now superintending private establishments for the insane, I will most readily admit. But whilst we have so fresh in our recollection the horrors and atrocities of Haydock lodge,—whilst we can peruse, in the other ad report of the learned commissioners in lunacy, the numberless abuses existing in the private asylums at West Auckland, Wreckenton near Gateshead, Derby, *et id omne genus*,—so long as these things continue, I shall incline to the opinion, that public hospitals, such as Northampton, Gloucester, Lincoln, *cum multis aliis*, are preferable for the cure or retention of insane persons, let their condition in life be what it may.

So strong is my opinion on this subject, that, were insanity to afflict any member of my family or connections, my most strenuous exertions should be used to prevent their admission into a *private asylum*. It may be all very fine to boast of the efficiency of our commissioners in lunacy (a hybrid race of *briefless barristers* and *aged physicians*), but, until that board shall be constituted of very different materials to what now enter into its composition, until it be composed (as undoubtedly it ought to be) of men who have gained a practical acquaintance with insanity in the wards and at the bedsides of patients in our large public hospitals for lunatics, until that happy day arrives, I shall beg to retain my present opinion, that *the free admission of the public is the only real safeguard from abuse which the unhappy lunatic possesses.*

Having had occasion last week to remove an insane female to the Royal Hospital of Bethlem, I took advantage of the opportunity to inspect that fine national establishment, which I did in company with its physicians, Dr. Monro and Sir A. Morrison, who kindly allowed me every facility of observing the condition of the patients. I have thought it right on several former occasions to expose what I considered objectionable features in the management of Bethlem: my present task is a much more agreeable one—that of almost unqualified approbation. The patients, with one or two trifling exceptions, were remarkably quiet and orderly; the walls of the wards, and, in fact, every part of the house and offices scrupulously clean, and (what is rare in many asylums) devoid of bad smells. There were not more than three or four patients under seclusion. One male patient was restrained, his arms being secured in a kind of slop, so that he could not make use of his fingers. I must confess now, as heretofore, my unconquerable dislike to any system savouring of mechanical restraint. If insanity be a disease wherein the patient labours under accumulated nervous excitability, can it be reasonable, or accordant with physiological principles, to repress the free movement of the limbs? There is a great analogy between children and insane persons: confine a child in the house, on a wet day for instance, what is the result? Why the child becomes fretful, restless, and troublesome, and, ten to one, annoys every person about it; but let the shower pass over, and the sun break out afresh, the child eagerly petitions to go out and play; so soon as the limbs can have their free exercise, the accumulated irritability, like *Bob Acres's* valour, oozes out at the fingers' ends. Now, a knowledge of this peculiarity in the insane, and acting in conformity with it, will just make the difference between a good and bad attendant. An experienced attendant, like a wise physician, will give nature fair play, and interfere only where his services are absolutely required. The medical superintendent of an hospital for the insane stands in a similar position to his attendants to that occupied by the colonel of a regiment: he it is who must manœuvre them and put them through their different evolutions; if he wish to do any good with them, he must study their various dispositions and capabilities as a schoolmaster scrutinizes those of his pupils: a correct knowledge of these particulars, and many others equally important, is the only sure basis upon which he can ground his management. Now, if my views be correct, and I think really practical men will bear me out in them, what must that man have to encounter who is called upon to preside over a leviathan establishment like Hanwell? That one man (even gifted with the conjoint wisdom of Nestor and Ulysses, and possessed of the united powers of Ajax and Achilles) can exercise the necessary control over such an establishment of attendants (putting aside the patients), is morally and physically impossible. That the visiting magistrates of Hanwell, assisted by that doughty champion, the *Looker on*, have done much towards benefiting the insane, I will most readily admit; but that the present system of filling the house with *incurable patients*, frequently, I fear, almost to the exclusion of *recent* and *curable* ones, can be advantageous, no one practically acquainted with the subject will admit. The commissioners in lunacy, on these points, have certainly done nothing more than their duty. As it is quite evident that further accommodation will shortly be demanded for the insane in the county of Middlesex, I would respectfully suggest that a new hospital or two (each capable of containing not more than 200 patients) be erected for the recent and curable cases, and that the present establishment be used for such as have become chronic and incurable. But to return to the Royal Hospital of Bethlem. Many improvements have recently been effected, amongst which I would mention

the admission of pupils. On one point, however, I am not agreed with the governors of Bethlem: why restrict the pupils to two, and why confine the boon to the two royal hospitals of St. Bartholomew and St. Thomas? Are we to understand that there is only a royal road to learning? What have the pupils of St. Bartholomew or St. Thomas done to signalize themselves above the students of other schools? Have not most of the honours distributed at the London University been carried off by students of University College, King's College, and Guy's Hospital? Why not admit a pupil from every metropolitan hospital? The number would be no disadvantage. Let the two physicians, Dr. Monro and Sir A. Morrison, give a regular course of clinical lectures on insanity; they have ample materials, and either of them is, I imagine, fully competent to the task. The valuable lectures of Dr. Conolly, the talented physician of the Hanwell Pauper Asylum, have given great satisfaction, and will prove beneficial in imparting practical knowledge to country surgeons who have not had an opportunity of studying the disease. As this branch of medical science becomes better understood, there will be fewer accounts of *bleeding, blistering, setons, tartar emetic*, and other antiquated remedies, now (very properly) almost exploded from the list of scientific remedies. In place of *strait waistcoats* and *leg-locks, restraint-chairs*, &c., we find *workrooms filled with orderly and contented patients*, wards formerly echoing back *shrieks* and *execrations are now decorated with fancy garlands, and anon resound* to the merry dance. The *goddess of discord* has taken flight, and what was once a *pandemonium* may now, comparatively speaking, be likened to the *elysian fields!*

In the matter of *restraint* the governors of Bethlem made rapid strides. In their General Report for 1841 they observe—

"It is almost unnecessary to say that restraint has diminished just as the means of occupation and amusement have been increased, and that without such means and appliances it would be injudicious to attempt to dispense with mechanical restraint; and in judging of other institutions this ought to be carefully borne in mind, to prevent a hasty and unintentionally unjust conclusion."

Although the Lincoln Asylum has many defects, the most glaring of which is, the difference of opinion prevailing amongst its medical officers, I will venture to assert my belief that this small establishment, containing under 120 patients, has introduced a greater variety of, and more really valuable, improvements in the treatment of the insane than any single establishment in this or any other country.

Belper, South Derbyshire, April 21.

STRANGULATION OF THE INFLAMED SPERMATIC CORD SIMULATING SYMPTOMS OF STRANGULATED HERNIA.

By Dr. MONNOT.

Translated for the MEDICAL TIMES by ALFRED MARKWICK, Esq., Surgeon to the Western German Dispensary, and formerly Externe to the Venereal Hospital, Paris, &c.

The silence that has been observed on this subject by the authors of the various works on surgery is no doubt to be attributed to the very few examples that have been met with of cases of this kind. Nowhere do we find any detailed description of them, and even in the writings of Sir Astley Cooper we find merely a passing allusion to the fact which leads one to suspect the possibility of such an occurrence. We think, therefore, that it may be useful to awaken the attention of surgeons, in order that this hiatus may be filled up at some future time, when a sufficient number of cases have been collected and published.

In the month of March, 1816, a patient placed at No. 30, Ward St. Jean, Hôtel Dieu, Paris, under the care of M. Blandin, was attacked with blennorrhagic orchitis on the right side; the cord was swollen and painful, and the swelling extended into the inguinal canal. Suddenly, this man became seized with very violent pains in the abdomen; there were constipation, hiccough, and nausea; and to any one who had not previously seen the patient, the tumour which existed in the right groin would have appeared, on carelessly examining it, as if formed by a strangulated hernia. Probably in this case some doubt might have existed, notwithstanding the utmost attention was paid in its examanation, had not precise information been given respecting it. Besides, it was possible for an error to have been committed, inasmuch as in a similar case MM. Dupuytren and Margolin were deceived by the symptoms. Sent for to a patient who had been suffering for two days past from nausea and vomiting, and who complained of very acute pain in the abdomen, but more particularly in the inguinal region, and perceiving a swelling in this region, and feeling an enlargement in the inguinal canal, they were of opinion that a portion of the epiploon, or else a small loop of intestine, had become strangulated in the canal, and that an operation ought to be immediately performed. Dupuytren made an incision along the course of the canal, opened it, and found nothing but the tumefied cord, and they were greatly astonished to find all the symptoms disappear after the operation, which they believed to have been unnecessary. M. Margolin then put forth the idea, that, without supporting it, all the symptoms above mentioned might probably be due to the compression of the cord. It was he, also, who related this case case to M. Blandin, on seeing, a few years afterwards at Beaujon, a patient whom the latter professor had operated on from the same cause, and in whom the symptoms had likewise disappeared on the opening of the inguinal canal.

Such is a summary of the only facts I am acquainted with relative to the question under consideration. I think that in practice similar cases are sometimes to be met with, which pass unnoticed, or unexplained, and this is why I am induced to mention them, in order that they may all be collected, and the question more throughly investigated.

As will be seen from the foregoing observations, it may happen that the testicle and the spermatic cord become inflamed and simulate a scrotal hernia (orcheocele), particularly the congenital variety; or that the cord alone becomes swollen and resembles bubonocele. It may here be stated, that it is in the latter case that an error of diagnosis is most likely to occur, since it has been committed by the justly celebrated surgeons I have already mentioned.

If a man falls on his abdomen and receives a violent blow on the inguinal region which gives rise to very acute pain along the course of the canal, and a very painful irreducible tumour—moreover, if he complains at the same time o violent colic, and there are constipation, hiccough nausea, and vomiting—where is the surgeon who would not at first attribute the symptoms to strangulated hernia rather than to an inflammation of the cord, more particularly if they made their appearance after a violent effort And such an occurrence may take place, for on three different occasions in hospital practice we have met with cases of orchitis and inflammation of the cord which arose from no other cause indeed it has already been referred to by several authors, the majority of whom consider it to have been occasioned by the cord having been violently constricted by the inguinal canal, in consequence of the energetic contraction either of the external oblique or of the rectus abdominis muscle. M Velpeau even admits only the action of the latter. He says:—"The disposition of the muscles and aponeuroses of the iliac region appears to me to explain that fact without difficulty If we carefully follow the fibres of the rectus abdominis muscle, we then see that some of them detach themselves inferiorly from its external border, in assuming a fibrous character, and, passing outwards in the form of a loop beneath the vas deferens, terminate on the internal border of the iliac crest. These fibres form the lower half of the abdominal opening of the inguinal canal, being thus more elevated by their extremities than by their centre. the rectus muscle cannot contract without their concave portion being raised by becoming straightened, and consequently reacting from below upwards on the vas deferens, the vessels and all the constituent parts of the spermatic cord, which thus become pinched in a kind of button-hole whenever the man makes any violent effort. I consider it, therefore, very natural that a certain number of cases of acute orchitis may be occasioned by strong muscular action."

In a patient affected with hernia it often happens that a violent degree of inflammatory action takes place in the sac, and that under the influence of this inflammation the reduction of the hernia becomes very difficult, and that symptoms of strangulation even make their appearance. If, in a case like this we succeed, after a prolonged and forcible employment of the taxis, in reducing the intestine, it may possibly occur as a result of the manipulations, that inflammation attacks the testicular cord, that the symptoms do not cease, and that the surgeon, fancying he has not effected a complete reduction of the hernia, performs the operation.

A man has had for some time an inguinal hernia which he has never supported, and which has become irreducible; after an impure connection he is attacked with blennorrhagia, and towards the end of the affection, when the pain in the canal has subsided, and he scarcely pays any attention to the discharge, suddenly experiences pain in the scrotum, and perceives that the tumour, which he has had for a long time, increases in size, and becomes very sensible. One or two days afterwards, the pain he feels is intolerable; there are fever and constipation; hiccough, nausea, and vomiting soon supervene, and he sends for a surgeon, but says not a word to him respecting the urethral discharge, because he imagines that it has nothing to do with his present disease, or because the urethra is no longer painful, or even because the discharge has become suppressed. He tells him that for a long time a tumour has existed in which he hears a gurgling noise; that he has frequently colic, and that it is only since the last few days that he has experienced all the symptoms we have just enumerated. From this description should we not be disposed to believe that all the symptoms are occasioned by the hernia? whereas they are entirely the result of inflammation of the cord. And in this case they would probably make their appearance still more rapidly than in another individual who has no hernia, inasmuch as the ring, already occupied by the displaced intestine, will offer less space for the development of the cord.—*Revue Medical de Bezançon.*

19, Langham-place.

SINGULAR TUMOUR OVER THE SACRUM OF AN INFANT.

Communicated by C. W. CHEBB, Esq., Torpoint, Cornwall.

On the 19th of April, 1847, I delivered Mrs. C. of a fine female child. It was her first accouchement, and perfectly natural in every respect. On my calling at the house the next day the nurse told me that there was something unusual about the lower part of the child's back, which they wished me to see. On examination I found, quite at the lower part of the sacrum, and about an inch to the left of the median line, a fleshy mass about two inches long, and a quarter of an inch in diameter; it more resembled the penis of a child about five or six years old than anything else; in fact, that gives the most correct idea of its appearance; and the resemblance was still further kept up by its having an orifice at its extremity, and a canal through the greater part of its length, although I could not detect that any fluid escaped from it.

Another peculiar feature worthy of notice in this case was, the tumour being frequently re-

tracted to half its length, and this occurred more particularly when the child cried, although the retraction frequently took place independently of crying. It continued much in the same state until the 8th of May, when I passed a ligature round the tumour at its connection with the body, and, May 12, it dropped off, merely leaving a small tubercle, as it were, but this tubercle still possessing the orifice in the centre as the original tumour had, but nothing escaped from it. For the first twelve hours after the ligature was applied the child cried most violently, and would not take the breast; but from that time to the present there has not been a single bad symptom, in fact, the child is thriving most admirably.

I had some hesitation at first about applying the ligature in consequence of the possibility of the tumour communicating with the spinal cord; but, from watching it carefully, I became firmly convinced that such was not the case, and I then determined on pursuing the treatment already recorded, and with the most perfect success.

I am the more anxious to give this case publicity, inasmuch as there are on record the histories of several cases of tumours much in the same situation as, and of a similar character to, the one which I have now related; but in almost all of those with which I am acquainted, on the application of the ligature symptoms of spinal irritation rapidly made their appearance, and the child's life was speedily at an end. And in most of the recorded cases of which I speak, a very small quantity of fluid escaped; in the present case, from beginning to end, there was nothing of the kind; and this mainly, added to some other symptoms, led me to believe that there was no connection between the tumour and the spinal cord, and consequently induced me to apply the ligature.

PROCESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of May 17; M. BRONGNIART in the Chair.

AMERICAN INVENTORS.

A letter, dated May 1, was received from Mr. Morton, of Boston, claiming the undivided honour of the first application of ethereal inhalations to operative surgery. The singular tone of the recriminations contained in this trans-Atlantic effusion warrants us in publishing a short extract—leaving, of course, the entire responsibility of the abrupt mode of expression, and of its uncourteous tone, to the proper author:—

"Before I had fully realized the importance of the results of ether, I was advised to associate with me my former instructor in medicine, Dr. Jackson. In an unlucky moment I gave my consent: he was to share the honours—not the emoluments—save ten per cent. on the net receipts. For some time all seemed to go on well. Imagine, Sir, my surprise, when I saw the French papers brought by the February steamer —in those papers, *cet animal engourdi* [we cannot otherwise translate the term but 'that dull beast' !]—had claimed the whole discovery as his own, not mentioning *me* in the matter! In November he wrote to his friend M. Elie de Beaumont, saying he had, with the assistance of another, made a great discovery, and wished my name kept out of sight as much as possible. Accordingly, his friend Beaumont took the liberty of striking my name out entirely, &c. * * * * * As to M. Horace Wells, who also claims the credit of the discovery, his letters to me, before he thought of claiming it, will dispose of him: I have published them in the last number of 'The Boston Medical and Surgical Journal.'

"I have the honour to remain, &c.,

'(Signed) "MORTON."

AUTOPLASTIC OPERATIONS IN VESICO-VAGINAL FISTULA, BY M. JOBERT.—In a former communication (see *Medical Times*, vol. 15, 1 344) we related in detail three cases of cure of ancient vasico-vaginal fistula, cured by this operation. The present paper of M. Jobert contains six cases in which it was likewise performed with success. The operative process—now again described by M. Jobert—does not differ from that which we recorded in the columns of the *Medical Times* (January 30, 1847), in an article to which we beg to refer our readers.

ACADEMY OF MEDICINE.

Meeting of May 18; M. BOUILLAUD, V.P., in the Chair.

CAMPHOR.

The commission appointed to report in M. Cottereau's case brought before the academy an amended list of resolutions, which, after a long and confused debate, were adopted in the following order:—

1. M. Cottereau died of pneumonia, and was in bad health a long time before the development of his last illness. 2. Although the pneumonia, gastritis, and cerebral hypertrophy, proved by the *post-mortem* examination to have existed, cannot be attributed to the agency of the camphor, still it is probable that the prolonged use of camphorated preparations placed the patient in unfavourable organic conditions. 3. With regard to the so-called camphor cures, the academy considers it a duty to guard the public against the dangers of so active a medicine in the hand of unprofessional persons. 4 and 5. That M. Pradagnel receive the thanks of the academy, and that his paper be honourably deposited in the archives.

INTRODUCTION OF STONES INTO THE BLADDER.

M. Lepelletier de la Sarthe, a corresponding member of the academy, related the case of a lady, aged thirty-five, from whose bladder he had extracted, by operation, nineteen calculi formed of pure silicic acid. These concretions had been introduced, according to the lady's own account, which M. Lepelletier fully believed, during somnambulic attacks, and had remained about eight or ten years in the vesica. Their introduction had left no traces, the urethra not presenting any dilatation, and noincontinence of urine having been observed. On the surface of the stones a very thin layer of phosphate of lime had been deposited.

M. Nacquart remembered a case of the same kind in a lady, who complained of violent pains in the abdomen. Examination of *per verginam* betrayed the presence of calculi in the bladder, and so dilated was the urethra that a spoon was introduced, and five or six calculi easily extracted. They were examined chemically by Vauquelin, who pronounced them to be of a silicious nature.

M. Moreau said that instances of the kind were not uncommon; as to the manner of introduction, doubtless the calculi had been forced into the urethra—most probably not during somnambulic attacks; the narrowness of the duct was explained by the time which had elapsed since the stones had been lodged in the bladder.

M. Lepelletier could not admit with M. Moreau that the stones had been voluntarily introduced: the patient was a woman of the highest respectability, and a nun. (General and prolonged laughter.)

M. Nacquart said that the well-known dilatability of the urethra in women could leave no doubt of the manner in which these foreign bodies had been introduced. It was, in certain women, susceptible of being enlarged to a degree which had permitted the accomplishment of matrimonial purposes in the vaseal cavity.—Meeting adjourned at five o'clock p.m.

HOPITAL SAINT ANTOINE.

CONTRACTION OF THE EXTREMITIES IN A CHILD AGED NINE MONTHS. BY M. GRISOLLE.

The few cases on record of this malady refer to children more than twelve months old. The following instance shows the possibility of the occurrence of the malady at an earlier period.

E. L., a little girl, aged nine months, was admitted into hospital on the 6th of April. The mother, aged thirty-seven, had observed in her other children no symptoms resembling, even in a remote manner, those at present existing. Two months before admission, the infant, otherwise in perfect health, was suddenly seized with contractions of the hands, which lasted nine days without interruption, during which time she continued to take the breast as usual. On the 3rd of April the disease reappeared, the child having been weaned six days previously. When brought to hospital and examined, some slight rhonchi were detected in the chest, the countenance was calm, the shoulders and arms free from any appreciable contraction. The forearms were slightly bent, and both hands strongly flexed on the forearm, almost at right angles. The articulations of the fingers were also partially closed; and on the dorsal aspect of the hand was noticed a serous puffing of the cellular tissue, and a slight redness of the integument. The knees, ankles, and toes were also in a marked state of contraction; œdema of the instep was likewise present, and the muscles of the thighs evidently contracted. It was easy to straighten by a gentle effort the contracted extremities, but the parts resumed their original position when the hand was removed. These attempts caused pain, and no intermittence was observed in the contraction. The pulse was quick, and the skin hot. One grain of tartar emetic was exhibited, but on the morning of the 7th the child expired. On dissection, one anatomical alteration alone was found, viz., considerable condensation and hardness of the spinal cord.

ASCITIS—CURE BY THE IODINE INJECTION INTO THE PERITONEAL CAVITY. BY M. LERICHE, OF LYONS.

CASE.—A girl, aged seventeen, of weak constitution, has regularly menstruated since the age of fourteen, and became affected in the month of January, 1846, with ascitis, after a slight pulmonary affection. Diuretics and drastic medicines had been unsuccessfully resorted to. The circumference of the abdomen measured one mètre seven centimètres (three feet eight inches). On the 11th of March paracentesis was performed, and eleven quarts of fluid withdrawn. The following solution of iodine was injected immediately afterwards into the peritoneum (℞. Tinct. iod., ℥j.; potassæ hydriod, ʒj.; aquæ fontanæ, ℥viij.). Four ounces only of this solution returned after injection; the remainder was abandoned in the abdomen. The following night the patient complained of some slight pains and borborygmi. The urine was increased in abundance, and on the third day considerable flatulency was observed. Up to March 21, the nights were sleepless, the urine clear and abundant, and great weakness was present; but the strength and appetite returned from that day forward, the abdomen continuing to decrease in size, and a complete cure was finally obtained on March 30.—*Journal de Médecine de Lyons.*

FOREIGN BODIES IN THE BLADDER.

The case reported to the academy by Dr. Lepelletier (*vide* the first part of the present communication), is one which appears to us of sufficient interest, in a scientific and practical point of view, to warrant some further remarks on the subject.

Instances of introduction of foreign bodies into the bladder may be found in Al. Benedictus (lib. 22 de Medend. Morb.) in the Memoirs of the Academy of Sciences (1735); in Morgagni (epist. 42); in Sir Astley Cooper's works, and elsewhere. In the "Descriptive and Illustrated Catalogue of Calculi," contained in the museum of the London College of Surgeons, no less than eleven cases are recorded, with illustrations, of foreign bodies passed into the bladder, and there becoming the nuclei of concretions. Pieces of bone, steel, and silver pins, a portion of bougie, masses of margarate and oleate of lime, resulting from injections of solutions of soap, and the depositions of the earthy bases of the urine, in combination with the fatty acids of the soap, peas, portion of a tumbler—such are the substances

around which saline deposits have formed, and which are preserved in the museum. The M... Dupuytren preserves an immense calculus deposited on the surface of a Biscayan bullet which had struck a soldier in the back at the battle of Wagram, and, not being extracted, gradually worked its way to the bladder, whence it was removed by lithotomy. M. Jouberthelle was the operator, and presented the calculus to the faculty. Hence the foreign bodies found in the bladder may proceed from two distinct origins; they may have been introduced through the urethra, or have been conveyed to its cavity from a wound in the integument. The diagnosis between these two origins must naturally be established on the consideration of the vast length of time necessary for the accomplishment of the latter process, as well as on the recollection of the patient.

The saline deposits on foreign bodies almost invariably consist of the earthy phosphates of the urine, the consequence of the formation of pus in the bladder, and of its alkaline nature. Dilatation of the urethra, the operation recommended for cases of this description in women by Sir A. Cooper, is more generally resorted to than cystotomy, and is ... preferred to the use of vaginal instruments, invented for the purpose, which are always complicated and ... liable to break. If the surgeon has the good fortune of being called shortly after the accident, rapid dilatation of the urethra with ... with the finger will most probably permit the removal of the foreign body. Unfortunately ... sense of shame often prevents the ... ment of the real nature of the case, and much precious time may be lost, at a later period the superficial crusts of calculus may, as it is recommended by M. Leroy d'Etiolles, be crushed with lithotriptic instruments and the nucleus afterwards ... by the method ... Sir A. Cooper. Further details on this subject may be found in a most interesting inaugural thesis by Dr ... Paris, May, 1840.

INFLAMMATION ... M. ... Beau's paper, published in the "Archives Générales de Médecine," relates to symptoms of every day occurrence, the nature of which has not been hitherto, in his opinion, perfectly understood. In pleurisy the pain is usually most intense under the breast, while the seat of the inflammation is more usually the ... of the pleura. What is the cause of this difference of seat of the symptom, and the disease which produces it, of the inflammation, and of the pain? M. Beau attributes it entirely to inflammation of the intercostal nerves which lie in close apposition with the pleura ... the ... the circumference ... Dissections ... shown, in that first part of the course of the nerve, that in all cases ... the ... and even the substance of the nerve ... congested, and that ... parts where the ... not separate them ... Irritation of ... determines pain in the ... tribution ... fourth and fifth ... of the cubital nerve at ... of the station in front ... flammation ... region. The seat of pain ... cording to the precise ... is inflamed, but ... intercostal nerve which ... rib, because it is that ... in the respiratory movements.

RETURN OF CONSCIOUSNESS ... PERIOD OF ACUTE DISEASE ... TION.—We find in the ... article on the subject by M. Hervieux ... lowing is an abstract. M. Hervieux ... with M. R... in ... death, and on some patients in the ... of departing life had applied the m... recommended by M. Mayor for the production of rapid blisters—viz., a hammer heated in boiling water and placed in contact with the skin. To his great surprise, the patients awoke from their ... of ... worldly matters ... for ... in the comatose state ... respiration was accomplished only by convulsive inspirations, the pulse was miserably small, and had acquired that rapidity which precedes its final arrest, the extremities were cold, the mouth gaping, the eyes turned upwards, the patient seemed neither to see nor to hear, and appeared still more incapable of speaking. On various parts of the ... the heated hammer was applied instantaneously the eyelids were raised, a slight expression of pain showed itself in the countenance, and suddenly, as if awaking from a trance, the patient sat up in his bed, answered all questions ... and after two hours, consciousness ... from which ... From several ... in which the same results were obtained, M. Hervieux concludes that ... which ... acknowledges to be of no advantage ... to the ultimate termination of disease ... of the greatest possible use ... restoring temporary consciousness ... great temporal or spiritual interests ...

PRESERVATION AND ... LEECHES, BY MM. BOUCHARDAT ...

The authors of this paper ... have ... tion at the Hôtel-Dieu ... other hospitals of P... ... of ... and ... good effects ... which ... pecuniary results ... been applied ... sixteen per cent ... which facilitates the removal of ... they contain ...

... of May 1 ... Medical T... May 15 ... a ... made by ... Savory and Moore, of Bond street. We must inform Mr Brenchley that no French preparation contains one and a half per cent. of anhy-

he is lying ... that the prescription of the codex contains eight parts in weight and seven ... of water to one of anhydrous acid, and, lastly, that a copy of the prescription, together with a statement of the nature of the acid used, ... by the chemist who prepared the medicine, lies at the office of the *Medical Times* for Mr Brenchley's inspection, in confirmation of our statements. We did not say that the doses exhibited were large, but mentioned merely their ... amount: our opinions any one has a right to call into question; as to *facts*, we are too ... of the accuracy of those we lay before the readers of the *Medical Times*, to permit a flat denial to pass unnoticed.

D. M'CARTHY, D.M.P.

Tinea ...—Dr ... recommends, as a local application in the treatment of this disease, tincture of iodine. It is right to observe that when any solution, whether of sulphate of copper, nitrate of silver, or tincture of iodine, is to be applied to the scalp or skin, it ought to be done, not with a camel's hair pencil, but with a brush of hog's bristles, such as house painters use, the brush portion being about the thickness of the middle finger. This renders the application at once ... and efficacious.

... of the Hair.—This, says the above author, may be most beneficially influenced by the application of stimulants to the skin, and it is more than probable that numerous cases of baldness and want of colour would yield to such an application of stimulants, if we only knew how to proportion the quantity to the exigencies of each individual case. Many popular ... which enjoy a great reputation contain ... stimulating substances, ... castor oil, goose grease, and tincture of cantharides. This composition, with the addition of ... sweet ... oil, often exceedingly beneficial effect when rubbed ... the roots of the hair by means of a piece of ... The quantity of tincture of cantharides ... not exceed ... our object ... to produce ... redness ... When ... desquamation ... epidermis ... the best ... with tinc... every third or fourth day. A good ... for the hair consists of equal parts of ... with the addition of attar of ... drops to four ounces.

... Wasting and Scrofula.—If the ... the most marked ... remarks Dr. ... it will be found that in the first ... by filling up ... in the second, the same object is ... by decreasing the number of globules; ... Andral has shown that the ... of the liver ... active the ... instead of becoming, as is usual, ... by ... retaining the size and appearance ... possessed in infancy. In ... use of ... the scrofulous liver is frequently met with, the blood globules are diminished, and lastly, the air-cells are occluded by tubercular matter. Nature, as it were, ... each measure is occasion ... forces her, commencing with an increased ... and ... with the desperate attempt at partial destruction of ... vicious

Convulsions in Infants.—In a large proportion ... Dr Charles West says, convulsions in the infant answers to delirium in the adult. The reason of their frequency is to be found in the predominance of the spinal over the cerebral system in early life. At birth, the brain is but imperfectly developed, and convulsions are then so frequent that they are computed to occasion 74 per cent. of all the deaths which take place during the first year of existence from diseases of the nervous system. In the next two years the brain more than doubles its weight, the deaths from convulsions sink to nearly a third of their former frequency. In proportion as the

brain increases in size, and its higher functions become developed, convulsions grow less and less frequent, until, from the tenth to the fifteenth year, they cause less than three per cent, and above fifteen less than one per cent, of the deaths from diseases of the nervous system

Aneurism of the Subclavian Artery.—A gentleman received a wound near the axilla, by the button-shaped end of a foil, and from the wound there was a very copious flow of blood, which was imperfectly checked by compression. Afterwards a tumour appeared at the spot the size of an egg, having all the characters of an aneurism. The tumour increasing in size and pulsating violently, M. Gensoul resolved on tying the subclavian artery *beneath* the clavicle. An incision was made through the skin, beginning at the clavicle, and extending to the axilla, to the point where the fibres of the great pectoral and those of the deltoid come in apposition, the arm being somewhat raised at the time. The muscular fibres were then displaced with the finger slowly, till the vessel was reached and separated from the vein and nerves. A strong ligature of waxed silk was applied, and tied with a double knot, when pulsation in the tumour, and brachial and radial arteries, [illegible] time. The eleventh day after the operation hemorrhage, not arterial, occurred from the wound, which was arrested by [illegible]. On the twenty-[illegible] day the band [illegible] were removed, and the ligature came away with copious discharge [illegible], and on the sixth the [illegible] third knot. [illegible]

Iodine [illegible] *from the Cornea*.—A man at work having a small piece of steel stuck in the eye which [illegible] in the cornea, and could not be removed by the forceps, needle [illegible] solution [illegible] iodide of potassium was used [illegible] first application [illegible] the [illegible] of the collyrium the metal [illegible] the [illegible] removed [illegible]

[illegible] *Currents in the Nerves* [illegible] Dr. Budd [illegible] possible [illegible] freely [illegible] in the [illegible] current [illegible] angles to [illegible] this [illegible] contraction [illegible] with it [illegible] the [illegible] that such [illegible] currents [illegible] as magnets [illegible] thus accounting for [illegible] the existence of electric current in certain organs [illegible] their [illegible] upon the integrity of the nervous influence on the part

Cure of [illegible].—Dr. S. A. Bardsley recommends the following plan for adoption, which he has proved to be decidedly successful. [illegible] inclined plane, which is effected by having the lower feet of the bedstead cut down so as to form an inclination of about twelve inches from the head to the lower part. He recommends at the same time, that as this complaint is generally connected with a weaker and imperfect state of the digestive organs, there should be some caution used in taking luxuries

New Method of Suspending Sensation. M. Dauriol has used successfully in bringing about insensibility during operations, the freshly expressed juice of the solanum nigrum, hyoscyamus niger, cicuta minor, datura stramonium, lactuca virosa. A sponge is well moistened and dried, and after two or three times is fit for use. When it is to be employed it is soaked for a short time in hot water, and afterwards placed close to the nose of the person to be operated on, who is quickly affected, and the insensibility is proportioned to the susceptibility of the nervous system. The patient is readily aroused by the application of a rag dipped in vinegar to the [illegible]

Chancre and Gonorrhœa the Results of the same [illegible].—M. Cazenave is decidedly opposed to the doctrine of a double virus as regards the venereal disease. He asserts that, in a great number of cases which came under his notice of secondary symptoms of syphilis, the general infection of the system originated in a gonorrhœa, and invokes the testimony of M. Baumès, who asserts that syphilitic diseases of the skin are very frequently the result of a blennorrhagic discharge, and altogether independent of syphilis

Phosphorescence of Organized Beings.—Professor Matteucci has experimented upon the luminosity of the glow-worm, and the conditions under which this interesting phenomenon occurs. When several worms are placed in a limited amount of air for some time, the light gradually becomes more and more dim, and is at last extinguished, and, on examining the air, it is found that the oxygen has nearly disappeared and is replaced by carbonic acid. There can be no doubt, therefore, that the phosphorescence is due to a combustive process in the peculiar substance found beneath the integument of the luminous segments. Of this substance the following, he states to be its physical and chemical [illegible]. It has a granular aspect and yellow [illegible] and is traversed by a great number of [illegible]. Its [illegible] resembles the [illegible] It is neither acid nor alkaline, desiccates quickly in air, [illegible] when treated with dilute acid, is not soluble in alcohol, ether, or [illegible] alkaline solutions dissolved it [illegible] concentrated sulphuric and hydrochloric acids with the [illegible] of the appearance of albumen. [illegible] in a tube the [illegible] phosphorescence [illegible] substance made up [illegible]

[illegible] *Gastric* [illegible]

John Hunter first [illegible] the [illegible] dissolved after death by the fluid which it secretes. Dr. Budd observes that the [illegible] powers of the gastric [illegible] require a certain temperature. The first effect of this fluid [illegible] the mucous membrane [illegible] softer, [illegible] the [illegible] softened [illegible] [illegible] and in a still higher [illegible] mucous membrane [illegible] thin layer of mucus [illegible] The underlying tissues [illegible] highest degree [illegible]

Organic Matter in Water.—M. Dupasquier recommends chloride of gold [illegible] fluid sufficient to give a yellow tint. Upon boiling, if there [illegible] quantity of organic matter [illegible] brown [illegible] from the reduction of the chloride by the carbon and hydrogen of the organic matter

Source of [illegible].—Mr. [illegible] King, of Bath, having been called to make a *post mortem* examination of a woman who had hung herself, on removing the abdominal viscera, was struck with the size and appearance of the uterus. On laying it open it presented a most beautiful and velvet-like appearance, the whole internal surface was covered with a dark sanguineous mucus, which seemed to be exudating from it, and could be easily scraped off. This was suspected to be the catamenial secretion, or the commencement of the process of menstruation. There was no appearance of any discharge in the vagina, and it was ascertained that once since her confinement, about three months before, the [illegible] a short time afterwards, she had menstruated *once*, and that she was expecting again in a day or two. There is then, indisputable evidence, and the strongest corroborative proofs of the fact, that the source of the menstrual discharge, once so much disputed, is the inner membrane lining the uterus.

Organic Changes of the System in Scurvy.—Professor Piorry, in his clinical remarks upon a case of scurvy with purpura hemorrhagica, communicated to "The Provincial Medical and Surgical Journal" by Mr. S. Lowe remarks the terms employed to designate this disease do not indicate in the least degree the actual condition of the organs. We have here—1. Hypoplastæmia, or diminution of fibrine in the blood. 2. Hydræmia, or watery condition of the blood. 3. Hypohæmia, or diminution of the blood globules, commonly called anæmia. 4. Cardiasia, or dilatation of the heart. 5. Phlebemphraxia, or obstruction in the venous circulation. 6. Hemorrhagia, or effusion of blood under the skin. 7. Hydrothorax, or effusion of serum into the cellular tissue

Scrofulous Disease of the Eyeball resembling Malignant Disease.—M. Soden brought a child before the Bath Pathological Society with a [illegible] pathological condition of one eye, in which the appearances presented were very much [illegible] that would lead to the idea of malignant disease of the eyeball, but which, in fact, consisted of scrofulous deposit in the iris, with a series of purple vesicles surrounding the choroid [illegible]

Morphological Stages observed in the Repair of a Fractured Bone.—Dr. Addison, of Malvern, describes them as first, a viscid protoplasma, or lymph derived from and mixed with colourless incoherent cells or corpuscles, then a very vascular texture, excreting cells, then a fibrous texture less vascular and not excreting cells; then [illegible] cartilaginous, and lastly, osseous texture. The [illegible] in all respects the same with that observed in the growth of the textures from the embryonic state, is therefore regular.

PATHOLOGICAL SOCIETY OF LONDON.

[illegible] EXHIBITED THE BRAIN OF A WOMAN WHO HAD DIED SUDDENLY FROM APOPLEXY.

The patient, aged 62, who had suffered for a long time from chronic bronchitis and asthma, was taken suddenly ill after her dinner, dropped down insensible, and in a few moments expired. On the *post mortem* examination, the encephalon was found about the twenty-sixth part in weight of the body, and a pound in excess, its convolutions being flattened, around the under surface of the right cerebral hemisphere, the crus, and right side of the pons and medulla, was observed a layer of blood, thicker rather in the latter than in the former situations, enveloping the origins of the nerves. No blood was found in the cerebrum, ventricles contained two ounces of reddish serum, the cerebral convolutions were flattened, air-passages congested, the lungs being slightly emphysematous, slight pleuritic adhesions, with cicatrix at the apex of the left lung, the heart weighed fifteen ounces, being generally hypertrophied, liver, spleen, and pancreas large. Dr. Clendinning remarked, that in this case of hemorrhagic apoplexy the brain had suffered compression without laceration or softening, the condition [illegible] being attributable partly to enlargement, and partly to incidental congestion, and hemorrhage at the base of the encephalon, the principal remote causes being the state of the heart and lungs and the recent meal.

Dr. Clendinning also submitted

MODEL OF THE LUNGS OF A MAN WHO HAD SURVIVED THE OPERATION OF TAPPING FOR PURULENT EFFUSION SIX YEARS.

He was thirty-two at the time of his death,

which occurred after a severe attack of influenza, of six weeks' duration. Six years prior to his fatal illness he had been under the care of Dr. Harrison four months, in the Marylebone Infirmary, and was there tapped for pleurisy, four or five pints of fluid coming away. The aperture was left open, and daily exudation of one or two pints continued for a week; it closed at the end of the second week. Three several times it opened afterwards spontaneously. He went out at the end of four months, and was at work till his last illness. There was observed, on the *post-mortem* examination, general bronchitis of the right lung, with emphysema; the left lung (the tapping having been performed on this side of the chest) was much reduced in size, being fleshy and like spleen in structure.

Dr. Little exhibited a specimen of

CARCINOMATOUS TUMOUR, INVOLVING THE UPPER PART OF THE RIGHT LUNG, AND CAUSING ENTIRE OBLITERATION OF THE VENA CAVA SUPERIOR,

taken from a woman, aged 31, who had suffered from supposed morbus cordis for nineteen months previous to her admission into the London Hospital.

Mr. Prescott Hewett presented five preparations of

RUPTURE OF THE HEART AND LARGE VESSELS, THE RESULT OF INJURIES.

Dr. Peacock exhibited a specimen of

LACERATION OF THE AORTA.

A powerful man, 35 years of age, was assisting several others in moving a frame of wood, about ten feet high and six broad, and of about three hundredweight, when a gust of wind overbalanced it, and it fell so as to press him beneath it. He immediately turned deadly pale, gasped a few times, and expired. The exterior of the body displayed no mark of violence, except a slight scratch on the left side of the neck. When, however, the integuments were removed from the front of the chest, the upper part of the sternum, and the sternal ends of the fifth, sixth, and seventh ribs, on the right side, and the cartilage of the seventh left rib, were found partially fractured, so that the whole point of the chest had been depressed. The intercostal muscles between the fifth and six ribs were extensively torn. Some bloody serum was effused into the sac of the right pleura, and the cavity of the left side contained nearly two quarts of blood; much blood was also infiltrated into the mediastina. The blood was found to have escaped from the aorta, which, about half an inch behind the origin of the left subclavian artery, was entirely torn across, so that the ends of the vessel were only retained in apposition by its cellular sheath. There was no evidence of direct injury to the vertebræ, or of any part in the neighbourhood of the ruptured vessel. The rest of the organs in the body were natural. Dr. Peacock remarked, that, in the absence of any proof of direct injury having been sustained by the vessel in this case, its rupture could only be ascribed to the violent action of the heart, consequent on the effort to resist the fall of the frame, in the peculiar position occupied by the man at the time. This inference is confirmed by the state in which the heart was found when removed from the body. Both ventricles, but especially the left, were extremely contracted, so that their walls were much increased in thickness, and their cavities entirely obliterated; the organ thus afforded a very characteristic example of the condition described by Bertin as concentric hypertrophy. After, however, it had been macerated in water for two or three days, and the contraction had subsided, the cavities returned to their normal dimensions, and the walls became proportionately thinner. The heart was considerably above its natural size, weighing between eleven and twelve ounces avoirdupois. It is well known, that at the point of union of the obliterated end of the ductus arteriosus with the coats of the aorta, it is very usual that the canal of the latter vessel is found somewhat constricted; and this point is generally, also, one of the earliest seats of atheromatous degeneration. The existence of these changes at that point, in the present instance, seems to have determined the occurrence of the rupture of the vessel. Elsewhere, the coats of the aorta, though perhaps somewhat thin, were free from disease.

Dr. Hensley exhibited a specimen of

ALVEOLAR (?) CANCER OF THE STOMACH,

taken from a patient of Dr. Protheroe Smith, aged fifty-six, who had suffered for five years from an obscure affection of the stomach, and had at several periods had acute attacks, characterized by great hypochondriac and dorsal pain, constant vomiting, and excessive eructation, accompanied with constipation and much febrile disturbance. In the intervals of the attacks, general debility, cough, and uneasiness in the left hypochondrium, nausea in the morning, occasional vomiting, spectral illusions, and habitual constipation, characterized her ordinary state of health. The acute attacks became severe in proportion to their frequency, and the attack from which she died was of a very aggravated form, the hypochondriac pain having extended to the base of the left lung, and other symptoms having supervened indicative of acute pleuropneumonia, the vomiting also being incessant. The *post-mortem* examination was made twenty-four hours after death. The heart was displaced to the right of the median line by the pressure of two quarts of bloody serum in the left pleural cavity, the lung itself being compressed into a small fleshy mass.—Abdomen:—The peritoneum covering the under surface of the diaphragm was of a deep red colour, and much injected. The stomach was firmly attached to the diaphragm by means of an oval lobulated tumour, of the size of a large egg, which was enclosed within the folds of the small omentum, and was closely connected to the lesser curvature of the stomach, extending from its cardiac to near its pyloric orifice. Externally it was covered by the omentum and fat; when cut across, it presented irregular radiating white fibres, dividing its substance into lobuli, containing a yellowish white substance of softer consistence. Portions of the tumour were more dense, consisting partly, however, of adipose tissue. The stomach was of its natural capacity; its mucous membrane, surrounding the cardiac orifice, was extensively ulcerated. A section of the tumour subjected to microscopical examination presented—

1. A granular blastema
2. Numerous nucleated cells and parallelograms.
3. Other cells, nucleated and circular, in clusters, which, from their high refractive power, appeared to contain something analogous to fat.
4. Adipose tissue and oil globules.

The liver was small, pale, and fatty.

From the history of the case we may justly conclude that the immediate cause of death was perforation of the stomach through the adherent diaphragm into the left pleura, exciting inflammation of that membrane, and rapid effusion. This, however, owing to the state of distention of the pleura with so much fluid, the unsuspected nature of the case, and the short time allowed for the inspection, could not be positively evidenced. With regard to the nature of the tumour, there could be but little doubt of its being that species of carcinoma described by Cruveilhier under the name of the pultaceous cancer. Though it did not present the jelly-like material contained in distinct pouches, described by Otto as the characteristic of colloid cancer, it approached nearer to that form than to any other.

ROYAL COLLEGE OF SURGEONS.—Gentlemen admitted members on Friday, May 14:—Messrs. Arthur Newstead Holmes, Selway, Yorkshire; Benjamin Button, Hopton, Suffolk; Frederick Gardner, Islington; William John Anderson, Brompton; Francis Cornelius Webb, Stonehouse, Devonshire; John Milner, Harrogate; William Copeman, Coltishall, Norfolk; John Lloyd, Corwen, North Wales; James Miller Shain, Perth, Scotland; and William Ellis, Belfast.

REVIEWS.

On the Pathology and Treatment of Scrofula; being the Fothergillian Prize Essay for 1846. By ROBERT MORTIMER GLOVER, M.D., Corresponding Member of the Medical Society of London; Lecturer on Materia Medica in the Newcastle Medical School. London: John Churchill. 1846.

This truly excellent work, the production of a man of genius and of ability—admitted to be such by his collegiate friends and teachers, and highly esteemed by his seniors in the profession—requires but little commendation from us. As we always anticipated, the medical press universally, we believe, has spoken of Dr. Glover's work on Scrofula in the highest terms; and we feel assured that the profession will be pleased and instructed by its careful perusal. Of a work which should be, and no doubt will be, read by all interested in the progress of pathology, more especially of pathology as investigated by a refined chemical method (applied, we think, for the first time by Dr. Glover), a mere passing notice ought to be sufficient; and to this for the present, from a press of other matter, we shall confine ourselves; but a more laboured analysis is due to the work, and this we promise our readers on a future occasion.

While we quite agree with Dr. Graves, of Dublin, as to the paucity of real results obtained by chemical analysis in the investigation of disease—to which may be added, we think, at present, the positively few real results arising as yet from microscopic research applied to pathological changes in morbid structures—we naturally subscribe also to Dr. Glover's opinion, that (*as yet*) this forms no real objection to the necessity and propriety of pushing these methods to their very utmost. We may not thereby discover a *specific* for scrofula, nor may we advance a single step in our knowledge of the innate nature of this terrible malady; but still the methods must be employed—must be exhausted before we presume to object to them. Problems of the first magnitude, as regards human welfare and existence, remain to be solved: let us be thankful that there are minds so constituted as to trouble themselves with the philosophic solution of such problems. "Henceforth," says Dr. Glover, "morbid anatomy must not be confined to the picture-maker; but chemical and microscopical analyses should form the more important elements of this branch of pathology." It is not much beyond the period of a year, when a remark similar to this, but not so clearly expressed, was made to us by an illustrious pathologist, M. Cruveilhier, himself a great "picture-maker" of pathological specimens. The method, we admit, has failed to a great extent—failed to preserve to the profession trustworthy models of pathological change; still it is a valuable method, and by no means to be despised.

We strongly recommend to *practical men*, as they are called, to read over pages 6 and 7 of Dr. Glover's work: their confidence in "the iodine," "the arsenic," the "black draught," and the "hydr. c. creta," might be shaken with great advantage to the public. Dr. Glover is a rationalist in medicine, and so must every educated and correct mind continue to be until the connection between *practical medicine* and physiological science be *proved* not to exist, and the whole affair be exploded.

At a very early period the intimate connection existing between scrofula and phthisis pulmonalis came to be observed and admitted; but even the researches of the illustrious Morgagni did not throw much new light on the pathology of scrofula. This is stated, and no doubt correctly, by Dr. Glover. In ascribing to Dr. Matthew Bailie, a Scotsman settled in London the merit of being the real founder of modern pathology, we believe we do him no more than justice. His small work on "Morbid Anatomy" is an immortal work, never to be excelled. From this point, we may notice, with Dr. Glover, the pathology and the treatment of

scrofula. The conflicting evidence on these points is no doubt astounding, and that, too, on matters which one might suppose ought to have been decided centuries ago; but this, we shall find, arises as well from the extreme obscurity involving the essence of the disease, as from hasty observation.

These great points, the Pathology and the Treatment, touch the whole question of every disease: the pathology concerns solely the profession, the treatment the public. What is the internal nature of the disease? says the professional man. What is its cure? says the patient. As regards scrofula, much yet remains to be discovered—much doubt and uncertainty to be removed—much that is profoundly obscure requiring elucidation.

Scrofulous or tuberculous matter is a peculiar morbid formation, the product of a particular modification of the inflammatory process. This is Dr. Glover's opinion, as so expressed in the commencement of Chapter I. It is a practical and good opinion, and has been maintained under various forms by others. The errors to which it may lead in practice, familiar no doubt to most medical men, arise unquestionably from the physician not attending to the words—"Inflammatory process particularly modified." On the grounds logically reasoned, as is always the case with our author, that no very good, or at least all-comprehensive, definition of a *metal* could be given by any one, Dr. Glover prudently declines a rigid definition of scrofulous formations. But the following passage, quoted from the work itself, will best explain our author's meaning:—

"Tubercle, in the sense in which the term is here used, includes all scrofulous formations, whether in the lungs, heart, brain, bones, &c., in short, in every conceivable tissue or organ; and we distinguish the scrofulous matter by its microscopic characters, with a certain not very definite chemical constitution, and a physical structure apparent to the eye, and which is well known."—P. 25.

We need not follow the author through his careful and candid critique of preceding and contemporary authors; he agrees in most points with Lugol and Valleix, confirming the researches of these distinguished observers by personal researches; the variety in mere mechanical form, presented by tuberculous matter in various organs, is ascribed to the nature of the tissue in which that matter has been deposited.

The extremely difficult point as to the vascularity or non-vascularity of tubercle, is of course carefully examined in this chapter. We have, for our own part, been always convinced that *tubercle* is not a vascular body.

Whether tubercle should be ranked among the cell formations, or whether it should be considered beneath this ultimate and essential degree of organization, is a question carefully considered by our author. Its solution, in some measure, must depend on the microscope.

Dr. Carstall, a careful and exact observer, concluded at first against the cell theory *in toto*; and, further, denied to tubercle matter every trace of organized structure. "Tubercle is not a tissue"; "tubercle grows not by intussusception, but more like inorganic bodies." But he afterwards, on reading Vogel's views, recanted, in part at least, his opinions. Upon the whole, Dr. Lebert's opinions seem the best founded—namely, that tubercles present microscopical elements proper to themselves, and distinguishing them from all other morbid products.

Thus it would appear that, as yet, the microscope has failed to give us any clear idea of the essential nature of tubercle; by improved methods future observers may prove more successful.

On the chemical examination of scrofulous products, Dr. Glover's work, as was to be expected, furnishes the most minute and recent, and in so extremely difficult a point, the most exact information. Our limits, confined to a very brief analysis, forbid us entering at any length on this important section.

L'Allemand and Cruveilhier thought tubercles to be merely concrete pus. If by this was meant the ordinary purulent deposits, then most assuredly these distinguished men were mistaken. But, after all, they may be composed of pus *peculiarly modified*. This is not our opinion, but it is one which might readily and consistently enough be mentioned by those who esteem tubercle or tuberculous matter to be the product of inflammation peculiarly modified. Our own observations (not chemical but simply pathological) lead us to think highly of the chemical results to be drawn from the analyses of Prout, Preuss, Boudet, Scherer, Dr. Glover, and others; the following are the general conclusions arrived at by the author:—

"1st. The results of the chemical analysis of tubercle, and its after-products, of scrofulous bones, &c., although they may not as yet warrant very decisive conclusions, yet furnish some useful information, which will be found to bear upon the pathological propositions advanced concerning the essential nature of scrofulous and tubercular affections.

"Thus the large quantity of fat and extractive matters in tubercle has a direct bearing upon the theory supported by many of the advocates of the use of cod-liver oil in the treatment of these diseases. The existence of pyin is important, and, could we be sure of that of casein in quantity, we might to a certain extent explain the unorganizability of tubercle. But we have never been able to satisfy ourselves that the protein constituent of tubercle, as examined by us, approaches much nearer to casein than to albumen. Nevertheless, the researches of Preuss, Boudet, Scherer, and others must be held decisive of the existence, at least in some cases, of casein; although the last-named observer is far from confirming former writers in the statement of a large proportion of tubercle matter being composed of this substance. We have made other examinations for casein than those recorded, and have never been able to detect its presence. Whoever considers the very doubtful power of the tests which we possess, for distinguishing these different substances in the animal body, will be very doubtful of the precise nature of the protein basis of tubercle. Nevertheless, we may, perhaps, conclude that there is great probability of this protein compound having a certain approach to casein, or at least of a portion of it exhibiting a tendency to take on the characters of this latter substance. (a)

"2nd. The ultimate analyses which have been made can lead to no very definite conclusion, although Scherer infers, from a comparison of his formulas of lung and liver tubercle, that the difference which exists between them may arise from the substance in the latter situation being less exposed to the air. (b) Thus he says—making the azote the fixed quantity, we have:—

The lung-tubercle ... $C_{43}\ H_{70}\ N_{12}\ O_{13}$

The liver-tubercle .. $C_{15}\ H_{72}\ N_{12}\ O_{13}$

showing an excess of carbon and hydrogen.

"Our analyses would give to the protein compound of tubercle a much smaller per-centage of azote in general than those of Scherer; only 12·31 in the first analysis of mesenteric tubercle, while the proportions of carbon and hydrogen show that the substance had been completely freed from fat. But when we find analyses of normal protein differing almost as much from the ordinary standard, what inference can we draw? Since we wrote as above, Liebig has called in question the protein theory, but the use of the word protein, in this essay, is not hypothetical; it is used to signify a basis of an albuminous or, perhaps, partly caseous nature, which undoubtedly is at the bottom of the constitution of the greater portion of tubercle.

"It does not, however, follow that these ultimate analyses are useless, because we cannot at present draw many inferences from them. We see at least the close approximation which they enable us to make between the basis of these morbid formations and protein compounds.

"3rd. The analysis of the concretions which we have made does not bear out in the least the statement of M. Boudet, which makes these bodies contain seventy per cent. of soluble salts. On the contrary, even in the tubercle, which may be supposed to form a transition-stage on the way towards the conversion into the calcareous substance, we find only about one-third of the ash composed of soluble salts; and in the perfect concretion there was merely a fraction of these substances. In this respect our results agree with those of Scherer and Mulder.

"A doubt has arisen, whether these concretions should be regarded as the remains of absorbed tubercle; and this doubt is supported by Rayer, who maintains them to be oftener the residue of pus.(a) The presence of these concretions may not improbably serve to attract towards them, once formed, more osseous matter.

"4th. The analysis of scrofulous bones requires no comment.

"5th. Scrofulous pus appears to differ from ordinary pus, chiefly in the fluid part being thinner and mixed with albuminous granules proceeding from a decomposition of scrofulous or tuberculous matter. The pus globules appear also, as stated by Mr. Gulliver, to be fewer and less distinct than those of healthy pus.(b) We have found them also more irregular in their form."

The section on the humoral pathology of scrofula abounds, as was to be expected, with discordant views, to which we need do no more than advert; the examination of the bile, lymph, chyle, and stomach secretions in scrofula occupies about twenty-five pages of the work. Some important questions are here considered, and various hypotheses set aside on what seem to be sufficient grounds. But the occurrence of tubercular matter in the lacteals and mesenteric absorbents apparently is an important fact which admits not as yet of any satisfactory explanation.

No particular affection of the urine was detected by Dr. Glover.

The brief analysis offered of the first and second chapters of this excellent work will suffice, we trust, to convince our readers of the extremely careful manner in which the author has examined each point of interest. Chapter III. is on the scrofulous diathesis; some of the practical men who jump to conclusions should peruse this chapter carefully. The comparative pathology of scrofula is discussed in Chapter IV.; and in the following chapter is discussed the identity of scrofulous and tuberculous diseases. But here we may conclude by venturing to assure our readers, that as well in these as in the subsequent chapters on the essential nature of scrofula—the etiology—the treatment—no important topic has been left untouched by Dr. Glover.

The work does much credit to author and publisher, and cannot fail to be always esteemed, whatever discoveries may hereafter be made on the nature and treatment of this terrible malady. We, with every confidence, recommend this philosophic and original work to the most favourable notice of the profession.

The Treatment of Strictures of the Urethra by Mechanical Dilatation, &c. By JAMES BRIGGS, Senior Surgeon to the Lock Hospital. 8vo. London: Longmans. 1845; pp. 62.

A very sensible summary of our general knowledge on this important subject. It is one which has clearly engaged much of our author's attention, and that attention has evidently not been bestowed in vain. Many valuable suggestions flow through the pamphlet, and many judicious references are scattered amongst them. Mr. Briggs is well at home both in the practical and literary part of his subject.

(a) From the reviews of the recent work of Mr. Simon, we learn that this writer regards the protein basis of the thymus gland as intermediate between protein (albumen?) and casein.

(b) *Op. cit.* s. 228.

(a) "Archives de Médecine Comparée," Nos. 4 and 5, p. 203. 1843.

(b) *Op. cit.* Explanation of plates, p. 62.

The instrument which he advises in cases of stricture of the urethra is a steel sound, so shaped as to combine the advantages of the wedge and the lever. This he considers to be preferable to the ordinary sounds or bougies in common use.

"By giving an obtuse edge to the cone of the instrument, which by the flattening of the two sides is nearly triangular, less resistance is made to its passage through the stricture, and a dilatation of the part is far more readily effected than by the mere conical sound, and more especially in the denser kinds of stricture, the removal of which cannot be effected without great perseverance in the ordinary and tedious process of treatment by the common bougie.

As a steel instrument admits of a high degree of polish, it passes with far more ease to the patient than a bougie, can be guided with more certainty to the contracted portion of the canal, and the point so directed as to act successively on any part of the canal in the line of its axis, where the constricted part, as most frequently happens, is seated at the curve of the passage, the weight of the handle alone acting as the long arm of a lever, greatly increases its mechanical power, and makes a more uniform and steady pressure on the part to be dilated than any force applied to it by the hand of the surgeon. It is also more easily withdrawn, and with less pain to the patient, where it has been grasped by the stricture and allowed to remain in the passage for some time, than the common or cylindrical sound." (Pp 34, 35.)

The further observations of our author on strictures of the urethra, and their attendant affections, on fistulous openings, enuresis, and retention of urine, display the researches of a very practical mind, and are well worthy of perusal.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half yearly Subscription, 12s., Quarterly, 6s. 6d*

Amicus Justitiæ, Sampford — *According to professional etiquette, the patient should remain under the care of the first medical gentleman in attendance*

Mr C. W Chubb, Torpoint, Cornwall — *The case is an interesting one, and will receive due attention.*

Dr Shirley Palmer, Birmingham, *is thanked for his kind communication. We shall feel obliged by his intentions being carried out*

W. W, City — *We shall not fail to use every means in order that so desirable an end may be accomplished.*

Mr. A C. Marsh — *The operation for strangulated femoral hernia appears to have been skilfully performed, though the patient did not survive the operation many hours. Surgeons cannot insure the lives of those upon whom they are called to operate*

B. B, Knightsbridge — *The case [illegible] ulceration has been received, and [illegible] consideration.*

Indiscretion — *If parties will place themselves in the hands of advertising quacks they must expect to suffer both in pocket and constitution. There is no remedy. We do not prescribe in the way our correspondent wishes. The better plan is to consult some respectable medical practitioner.*

Philanthropist, Park-lane — *There [illegible] dent [illegible] in all large hospitals, [illegible] are admitted upon the receipt of an [illegible] recommendation of a subscriber*

A Borough Student. *The Universities of Oxford and Cambridge do not rank high as medical schools, though they have the power of conferring degrees in medicine.*

A Member of the National Institute. — *We are aware of the means employed to induce members to withdraw, very few, however, have done so. The Council is doubtless aware of the misrepresentations alluded to, and will not fail to enlighten the profession upon many important matters connected with our welfare.*

Mr S. J Bengough — *The Government measure of Sanitary Reform has not yet, we believe, become law. It is the forerunner of some good legislation on behalf of the public health.*

A General Practitioner, Oxford — *Certainly under two hundred, though the most extraordinary means have been employed to make a great show with but few resources. Sir George Grey has good intentions towards the profession, if the members are true to themselves.*

A Member of the College of Surgeons, England — *The manifesto of the Council was a mere* brutum fulmen, *and the parties referred to are laughing in their sleeves.*

Mr Edward Thomas — *A person not accustomed to use the microscope may be very easily deceived. We would recommend our correspondent by all means to persevere.*

An Extra-Licentiate of the London College of Physicians — *The per centage system is not [illegible] up by any of the class referred to [illegible] [illegible] [illegible] The league is an unholy one, and must be especially injurious to a certain class of patients*

Delta — *The case was [illegible], but it is not properly authenticated, or probably it would have been inserted*

Mr Jacobson' [illegible] [illegible] *though the [illegible]*

Amicus, Liverpool, *says [illegible] very singular views in supposing that a [illegible] [illegible] [illegible] one, which they [illegible] [illegible] thanks [illegible] that, as the poor law guardians have manifested such an attachment to pounds, shillings and pence, the [illegible] of [illegible] must be looked upon with suspicion [illegible] acquainted with the facts he mentions*

A M, Southampton, *asks if [illegible] of Mr [illegible] We reply, only that [illegible] the Taunton [illegible] who obtained the [illegible] diploma, and is now practising as an homœopathist in the same [illegible]*

Kil [illegible] [illegible]

An Assistant, Wandsworth — *The [illegible] [illegible] by the Hall and College, and a student may there obtain a good [illegible] anatomy and operative surgery*

Fides [illegible] *notion of medical [illegible] if he will take our advice, would reserve his activity till he finds a better cause, and more suitable companionship. It everything is to act [illegible] itself, the maxim he suggests for us [illegible] stronger reason for his own inactivity.*

Mr Jackson of Liverpool, *requests Dr [illegible] to describe the instrument used by him [illegible] [illegible]*

We have received communications and letters from Mr S. Bengough, Dr. Shirley Palmer, Birmingham, Mr A C Marsh, Mr C W Chubb, Torpoint, Cornwall, Philanthropist, Park-lane, A General Practitioner, Oxford Mr Edward Thomas, Mr Jackson, B B, Knightsbridge, W W, City, M D, An Assistant, Wandsworth, A College Member, Amicus, Liverpool, A Member of the National Institute.

THE MEDICAL TIMES.

SATURDAY, MAY 29, 1847.

THE HOUNSLOW INQUEST, AND POSITION OF THE MEDICAL OFFICERS OF THE SERVICE BEFORE CORONERS' COURTS

In last article we adverted to the suppression of the evidence of Captain Shirley and Private Rising. We showed that their testimony—though important—was suppressed not only *judicially*, but through the public journals; and, while we hinted how much the double suppression helped to raise—to propagate and maintain a gigantic delusion, invited an explanation of the extraordinary circumstances. We have yet had none. It may be feared we shall have none. We come now to other circumstances in Dr. Warren's charge just as strange, and which, following his affidavit, we shall dispose of just as briefly.

Pending the inquest, instructions were sent to a barrister in the Temple to draw up a formal verdict in anticipation of that of the jury. The barrister's name being mentioned in the affidavits which were submitted to the court by Dr. Warren's counsel, we can have no hesitation in announcing that he is the eminent Mr. Peacock, of Raymond's buildings. Mr Peacock declined the fee, and refused to draw the verdict. At the bar, of course, there is but one opinion of the propriety of that refusal.

Shall we indicate the nature of the verdict? It is done when we mention that the jury, on the last day of the inquest during a mid-day adjournment—hiccoughed over their drunken cups to strangers, with whom they were allowed to drink and discourse, that on returning to their box they would give a "stunning verdict, and that their 'stunning verdict' would be either murder or manslaughter!"

So much [illegible] [illegible] [illegible] [illegible] much [illegible] the sober impartiality [illegible] the coroner and jury. One word on [illegible] [illegible] given. During the third sitting, there was a mid-day adjournment [illegible] refreshment. [illegible] was it spent? Mathewson [illegible] [illegible] had been previously examined, [illegible] [illegible] [illegible] as well as [illegible] [illegible] [illegible] [illegible] [illegible] in question. This [illegible] spent the adjournment-time [illegible] private room with the coroner and [illegible] doubts [illegible] [illegible] being pre[illegible] [illegible] continuation of the inquest they were [illegible] [illegible] [illegible]. What took place? What was said? What was promised? [illegible] [illegible] witness though his character [illegible] [illegible] [illegible] both impugned; hence [illegible] is patronized by the judge during the examinations; hence he is honoured by the judge with a private consultation; hence he is be-praised by the judge at public meetings; hence a sum of money is got up for him by the judge; and hence, finally, after the inquest, the coroner takes all the trouble to reach Hounslow, in order to see his witness, and hand him over money assistance. Such are the things which an English judge may do for a useful witness of indifferent repute!

A thousand facts and conclusions and condemnation attend every moment's further attention to this case, but disgust withholds us from that further and thorough investigation which, now inevitable elsewhere, cannot but remove from the defiled seat of justice its most daring as well as foolhardy of desecrators. Society would, indeed, be brought to a strange pass by the dandyish virtue of our time, if such enormities are to receive from our legislators no worse rebuke than would become the utterance of a false quantity, or the breach of a grammatical concord—viz., suppressed laughter and quiet contempt.

THE COLLEGE OF SURGEONS AND ITS CLIENT

The Councillors of this ill-fated club have begun the work of purgation. They have cleared

themselves of the burden of Mr. James Dore Blake's collegiate iniquities. They have seized—condemned—doomed him. Wicked Mr. James Dore Blake! *Innocent* Councillors of the College of Surgeons!

Æsop tells us of a pestilence that once filled the brute creation with alarm and penitence. A great council of quadrupeds was invoked; the unanimous opinion fixed the plague as a visitation for some huge animal iniquity; confessions became the order of the day; for a time there was suspense about the relative enormities of the lion's murders, the tiger's devastations, the fox's larcenies, till the ass—its turn coming—avowed a summer day's weakness under the temptation of a rich church pasture! Alas, poor ass! The cry of sacrilege and monster became universal, and the vulgar, defenceless animal atoned by his death for the crimes of his genteeler fellows.

The old fable has met its most recent realization. There is a great purification of the [illegible] community, but the lions, the tigers, and the foxes of the Council count for nothing in it! Sanctimonious souls! they have no thought, no consciousness, save that of horror at the enormity involved in the confession of the poor ass of Taunton.

We care little for Mr. Blake's institution of itself; it wins from us no sympathy. [illegible] not justified with us [illegible] where [illegible] one year is not the man who should assume physician's vital responsibility the next. A few months ago, when we brought the case under professional observation, [illegible] the practice sanctioning such rapid metamorphoses is as bad for the public as for us. Still, if we have no defence for him, yet less have we encomiums for his judges. They have sacrificed to public justice, 'tis true, but they have selected the less culpable for the victim.

If Mr. Blake was so guilty in getting into practice without that knowledge which society requires from its surgeons, why [illegible] the [illegible] of the College, which for a fee of twenty guineas, gave him the privilege? If [illegible] incompetent, why attest his competency? [illegible] so discreditable a candidate, why admit him to communion with you? If he be so bad a practitioner, what are you as examiners? If his private character be condemnable, what are you in your public functions? What! all we [illegible] cross, shall [illegible] another a deacon, the choleric word of the other is blasphemy; in the private [illegible] on this principle [illegible] gentlemen remain councillors, while Mr. James Dore Blake is pilloried as a vile and unworthy practitioner? Are there no men in the Council who have obtained their bad eminence there by "imposition and false statements"? Is the history of its very President so like his surgical repute that we have already forgotten how the imposition and false statements of the Freemasons' Tavern demagogue of to-day were exchanged for the imposition and false statements of the crowned placeman to-morrow? "Imposition and false statements" indeed! Go thy way, Mr. Blake, conscious that for every vice the collegiate whip touches in thee, it would flay a dozen if turned on those who now in such sanctimonious terms wield it.

THE LIVERPOOL SELECT VESTRY—THEIR MEDICAL OFFICERS, AND SICK POOR.

There are two classes of persons who deserve especial sympathy—sick paupers and parish surgeons, because they are under the superintendence of guardians who have very little regard for either. It appears from the statement of a Liverpool poor-law functionary, that no sooner does an unfortunate being become the inmate of a workhouse, than life is depreciated below half its original value, and consequently that the successes of the medical attendant, when working for its preservation, are reduced also in exact proportion. This doctrine, which has been so boldly promulgated at Liverpool, has there also received a practical exposition. In the Lock-ward of its workhouse was an unfortunate girl labouring under extensive mortification of both hips, with a large sore on the back, her weakness also being such as to be unable to turn herself in the bed, and when any attempt was made to move her she uttered the most piercing cries. Of the medical gentlemen of the town Mr. Inman was the first who had [illegible] this afflicted woman. [illegible] Mr. Mullett Davis [illegible] her reduced to the [illegible] he ordered her [illegible] a mutton [illegible]

[illegible]

Our [illegible] insult offered to the members of the [illegible] Liverpool, and at the [illegible] to [illegible] human suffering [illegible] it is not [illegible] that his professional [illegible] and the general [illegible] neither does it appear that he offered [illegible] rebuke to the [illegible] conduct [illegible] expense of pauper [illegible] philanthropy, and he was in duty bound at once to repress it. Though the sick woman was a Magdalene, it did not make her less an object of compassion, but offered an additional motive to save, if possible, her life, in order that he might have time given her for repentance. Charity inquires not first into the causes of suffering, nor are its efforts proportioned according to supposed desert; but, a stranger to evil thoughts, it is prompt in the performance of good actions. If reverend gentlemen are to secure the affections of the poor, they must carry into the board-room, when they become poor-law guardians, a noble principle which is known in a certain book of indisputable authority by the name of *ἀγάπη*, a word which the chairman of the select vestry at Liverpool ought to understand in all its important bearings.

The workhouse committee has offered a very great insult to the gentlemen who constitute the honorary medical staff; the public and the profession, however, will support them, to the discomfiture of individuals who think more of their money than pauper life.

THE PASTRYCOOK AND HIS DIPLOMA.

We have heard that there have been ingenious mechanics who have puzzled their brains to invent a machine by which old women might be metamorphosed into young ones; such an instrument, however, has never yet been discovered, and sober-minded individuals begin to imagine that the much-desired process will only be brought to light with the philosopher's stone. Spinsters of a certain age are, therefore, still compelled to have recourse to "borrowed plumes," in order that they may hide the ravages of time, and simulate the bloom of youth. While, however, Science has showed her weakness in her endeavours to shield the softer sex from the rude attacks of [illegible], she has recently manifested her power by revealing a process, at once speedy and effectual, of turning pastrycooks into surgeons. She has made known her secret to the illustrious priests of her temple in Lincoln's-inn-fields, and they have, within a very short time, tried the experiment with eminent success upon a Mr. James Dore Blake, of Taunton, in Somersetshire. For the space of thirteen years this renowned individual exercised his talents in making certain palatable compounds, in the shape of pies and tarts, to gratify the tastes of the inhabitants of the town in which he dwelt. Whether he was as skilful as one of the same calling immortalized by the poet because

> he "deftly show'd his art
> In much fold dough to make a savoury tart,"

we are unable to declare, but this one thing is certain, that in the month of May, 1845, he shut up his pastrycook's shop, and journeyed up to the metropolis with the laudable intention of manufacturing himself into a surgeon. Here he walked or ran through an hospital, attended lectures, received abundance of cramming, and, having crammed the council of Lincoln's-inn-fields, he presented himself before the College examiners, and forthwith they send him out with their redoubtable paper, by which all men were to know that he was fit and capable of exercising the art and science of surgery. Armed with this valuable document he retraced his footsteps to the town of Taunton, where he now physics the inhabitants with the infinitesimal doses of homœopathic medicines. Here, doubtless, the *ci-devant* pastrycook esteemed himself as safe under the protection of the College diploma as Achilles did behind his celestial shield. The surgeons, however, upon whose domain he intruded, while they were filled with astonishment at the rapidity of this metamorphosis, resolved, if possible, to pluck him of his diploma. Accordingly, they addressed the ruling powers of the College in London, representing the scandal which the circumstances were calculated to produce, as well as the extreme hardship to those members who, by the regulations of the College, had been obliged to go through a lengthened period of regular study, and a great deal of expense, in

order to obtain a diploma which had been granted to a retail shopkeeper after a period of only one year of alleged study, and at a comparatively trifling outlay of money; and, further, called upon the authorities to prosecute inquiries into the testimonials and certificates produced by Mr Blake, before the court of examiners, as should place the matter in a position satisfactory to all concerned in upholding the honour and credibility of the College of Surgeons.

In due time an answer was returned with a list of all the certificates which the candidate had presented, and the additional discovery was made that the ruling powers had broken their own laws in order that more sovereigns might be added to their coffers, and another member enrolled in their books. The Taunton surgeons having now got Messrs. Lawrence and Co. into a corner, there it was determined they should be kept till they had eaten their own words by recalling the letters testimonial which the pastry cook had received. This they at length did in a very humble manner, by requesting Mr. Blake "to return the diploma granted him, he having ceased to be a member of the College."

Ever watchful over the interests of the profession, we announced some time ago the insult that had been offered to its members by this disreputable transaction; and, though a certain pseudo-reformer shortly afterwards endeavoured to call our veracity in question, it is now placed beyond all doubt This is only one case amongst many others which go to prove how very easily the College testimonial may be obtained. Some years ago we knew a young Frenchman who came over to this country in order to procure the English surgical diploma. He furnished himself with proper certificates, and in addition was a diligent attendant at two or three grinding-shops. There was some defect about his intellect, however, which made even the grinders despair of his success. Up to the College, however, he had determined to go, and at the appointed day was accompanied by some of his fellow-students, who waited outside the doors, curious to know his success.

After a time the little Frenchman made his appearance, triumphantly flourishing the surgical diploma; and when the astonished pupils asked him how he got through his examination with so much success, he laughingly replied, "When they put a question to me which I could not answer, I spoke French to them!"

We talk about reform, and we feel its necessity; let the pastrycook's diploma teach us where we must begin. The College of Surgeons is not like its own laws - made to be altered; but like those of the Medes and Persians—unalterable. It becomes the surgeons, therefore, in general practice, to seek a new incorporation for themselves, if they hope to retain their respectability. Let no fuss about registration draw them away from this one object. It is that upon which their eyes must be ever fixed, and towards which their energies must be constantly directed: its attainment is then certain; and, once secured, future good legislation will be no difficult matter.

WHAT IS THE VALUE OF REGISTRATION?

TO THE GENERAL PRACTITIONERS OF MEDICINE, &C.

GENTLEMEN,—I apprehend that the large mass of the general practitioners, are in agreement with the Council of the National Institute in reference to the destructive effect of the Registration Bill on their particular interests. Two or three dissentients, only, have had the temerity to raise their feeble voices against the decision of this Council, though I am sorry to observe that there are many who, unable to refute the justice of their objections, nevertheless pursue a different policy, and thus exhibit in themselves lamentable examples of the sacrifice of honourable principles to assumed personal advantages. These men are few in number, but they must be answered, and, if possible, reclaimed. I do not allude to the members of the National Institute, who have, I believe, almost unanimously, adhered to their original principles, but to those men who have at earlier periods been the loudest declaimers in favour of particular objects, and are now prepared to discard them for others more suitable to their present feelings or purposes.

Let us confine ourselves, gentlemen, to the simple question of registration, and trace out the results that are the necessary consequences of its operation. I can remember, and I believe that some of the most active members of that highly independent body, the Medical Registration Committee, can remember also, that the *Medical Protection Assembly* was called into existence by the grant of an unjust charter to the College of of Surgeons.

The *representative principle* was the soul of that movement; the profession felt then, as they know now, that they have no barrier against oppression, no resource against injustice, except in the full operation of this principle in the government of our corporate institutions. That movement failed because it was a body without a head, or because the head it had was more interested in its ruin than in its success. Mr. Wakley held that docile flock by a short tether, or gave them just rope enough to twist a noose round their own throats.

All these men, however, with Mr. Wakley as their leader, are compromised to this principle: whether it be Mr. Ross of the National Institute, Mr. Simpson of the Registration Committee, or Mr. Lynch of Common-Council fame, all are pledged to the achievement of this great end—independence and self-government in relation to our corporate institutions.

Now, gentlemen, some of you are reviling the Council of the National Institute because they oppose a bill that will confirm the hateful charter which you have heretofore so indignantly denounced, and because they contend for a principle to which you are the unworthy apostates! It is natural, very natural, but not the more honourable on that account. We can comprehend the enmity, but we cannot understand the folly that discloses it. "Hope deferred maketh the heart sick;" and it is probable that, like the fox in the fable, you are sick of watching what you cannot seize: you now pretend to despise it, but you are resolved in your hearts that, since you could not appropriate the boon, it shall not be the prize of another. You are prepared, like rival lovers, most cordially to detest the successful suitor.

Let me ask the question of any candid man, if the Council of the National Institute is to be guided rather by the treacherous and uncertain counsels of these incoherent declaimers, than by the consistent and avowed principles on which it is established, and by which it has been governed? Is the policy of the Institute to veer about in accordance with every fleeting gust of public folly, or to pursue a direct course to its declared end? Amidst all the shiftings, the vicissitudes, and the contentions of public opinion, the National Institute will, doubtless, be true to its principles, and stand at last a beacon to guide us to the only rational, the only probable, object of our attainment.

Again, gentlemen, there are many licentiates of the Society of Apothecaries who imagine that by means of this bill they shall redeem the unconditional privilege to hold appointments in poor-law unions which they possessed prior to the passing of the Poor-law Amendment Act, which most shamefully robbed them of their purchased right; and also to hold offices as surgeons in public institutions where now a surgeon alone is eligible. I regret the duty that compels me to dissipate this delusion. It is true that the bill proposes to enable every qualified man to practise in all branches of the profession; but, then, look at the CERTIFICATE of the Registrar, and what are you denominated? —An *apothecary!* You, as an apothecary, can already practise in every branch of the profession, and break no law; and you expect that the privilege—the honourable distinction of registering as an *apothecary* will qualify you to hold a public appointment as surgeon! The first surgeon that competes with you, although probably not otherwise equally qualified, will infallibly drive you from the field.

Nay, gentlemen, you will be constituted an inferior class—the *lowest class* of general practitioners of medicine. The surgeons will stand above you in public estimation, and the practitioner who can produce no other evidence of his qualification but a degree, acquired with too much ease to be honourable, will establish his respectability upon the ruin of yours. The pure licentiates of the Apothecaries' Society in this country are upwards of 4000; if they consent to this degradation, they will deserve it.

But what are we to think of the individual who thus knowingly and deliberately, in violation of all his former pledges, and in contempt of all the professions of his previous life, can devise, publish, advocate, and force on a scheme that will infallibly degrade, stigmatize, and injure one half of the large body of educated gentlemen whom it pretends to serve? Nothing but the most subtle and persisting malevolence could have dictated such conduct towards men who have been guilty of no other crime against him save that of helping him to his character, and establishing his fortunes. I leave it with his own conscience to decide whether this be a crime or not. If it be, the members of the profession have certainly been unwitting accessories.

Every lie, gentlemen, told in every shape which the subject of Medical Reform will admit of, has been, at various times, published by this person; and you have no greater reason for trusting his asseverations now than you had at any former period.

It is a thankless, nay, a painful, duty for any lover of truth to denounce thus boldly the character or conduct of any individual; but there are times when inclination must be sacrificed to duty, and, however repugnant to our feelings it may be, when obnoxious individuals must be sacrificed to truth. Many, nay, all of you, may say—"But this is not necessary now—we know Mr. Wakley to be habitually mendacious, and we do not trust him. We exercise our own judgments in this matter." Upon the merits of the question, then, let it be tried.

Is it desirable that the *general practitioners* of this country shall continue to be divided into

three grades, and that these grades shall be confirmed by an act of Parliament? When the Council of the National Association first contended for a separate Charter of Incorporation, a great outcry was raised against the scheme because, forsooth! it would establish a *third grade* in the profession! How many grades, think you, this bill will establish? They will be so numerous that I cannot possibly designate them; but, practically, the general practioners, alone, will be separated into the highest grade—the graduates of the Scotch Colleges;—the middle grade, the members of the College of Surgeons; —and the lowest grade, the licentiates of the Apothecaries' Society! Your advocacy of this bill is certainly remarkably consistent. Your intelligence is as discriminating as your simplicity is amiable. It is gratifying to see such a confiding facility of disposition, such an obsequious reverence for the assurances of others, and such a graceful propensity to be cajoled into meanness or folly. Oh! but the regular practitioner will be distinguished from the impostor! Verily, this is a sugarplum that would charm any naughty boy into good humour. It is, without doubt, the most irresistible of arguments. A little wheedling will soften the most obdurate pertinacity. Many a poor sparrow has been caught by birdlime far less adhesive in its properties than this. Registration may be a very good bird-call for young sparrows, but the old birds distinguish too readily between the false note and the true one.

Put the question to yourselves fairly, gentlemen, and answer me whether any one of you is prepared to give information and carry on a prosecution against an individual who may be illegally practising, at this moment, in your own neighbourhood? The Apothecaries' Act is now rendered efficient for conducting such prosecutions in a summary manner. The expense and trouble are so trifling that I apprehend the new bill in this respect will have little or no advantage over it, and yet how few licentiates of the Hall will care to put in force the law which is their protection. They can do it at this moment, they *do not* do it, and they will not do it more energetically under a new law.

Under the proposed bill the whole responsibility of prosecuting offenders will rest with the individual qualified practitioners themselves; under the old law a corporation as well as the members of the profession in their individual capacity, can act upon its provisions, and yet how great is the disinclination to incur the risk and annoyance of a public prosecution! There will be found to be a great defect in the practical working of this bill; and I conceive that its advantages in reference to the power of punishing offenders have, under all the circumstances of the case, been greatly overstated.

There are, however, a great number of gentlemen now understood to be unlawfully practising, although possessed of an educational qualification, who would doubtless feel more at ease if they were legally recognised, and could practise in England without risk, question, or demur. This I believe to be the gist of the argument in favour of this bill. But consider, gentlemen, many of you have been practising in this manner for twenty or thirty years; no one has hitherto interfered with you, or prevented your getting handsome practices, and acquiring considerable reputation. Do you suppose that there is any immediate danger to your interests? Surely not. Are you, then, prepared to sacrifice the respectability and welfare of your profession to the acquisition of a small boon for yourselves? I am quite satisfied that not one of you would have ventured to recommend so unjust and pernicious a proceeding, and now only support it because an individual less conscientious, and more inimical to the interests of your class, has had the audacity to propose it. There is no necessity for this indecent hurry to acquire a right that will be of comparatively little positive advantage to you when you have gained it.

I do not deny the expediency of a general system of registration: it is a necessary component part of any useful measure of Medical Reform; but it must follow, not precede, the recognition of those fundamental principles which are the very vitals of the question. Are you bond or free? The registration will either fix the brand of your servitude, or seal the record of your manumission. You must acquire your rights and establish your principles before you can consent to the passing of a law which shall for a century, perhaps for ever, either confirm or destroy them.

The Medical Registration Committee are labouring assiduously to promote this measure: their efforts must be futile, because they have no lever for their operations but that selfishness which their most ardent followers would be ashamed to acknowledge. They are also men of low mark in the profession: the tainted members of other dead bodies—the mere carrion of professional agitation, galvanized by the secret agency of the member for Finsbury. They are the mere puppets of his will: the showmen of the new legislative monster, by which the honourable proprietor hopes to enrich himself. They exist only on his weekly allowances; and I have no doubt would have no objection to continue their board wages immediately a suitable board can be established to receive them. If this bill receive support, let it be through a committee appointed by the masses of the profession; but this is chimerical. No sensible man would lend his aid to promote such an end.

I have at various times, gentlemen, conjured you to stand by the Apothecaries' Act—I do so still—for I have no faith in Mr. Wakley's ability to carry his bill, with its prohibitory clauses unimpaired, through the House; and if he, for the sake of the honour of passing a measure of this kind, should consent, in committee, to the relaxation of his restrictive clauses, we might find ourselves, when the bill is passed, in a far worse position in reference to our ability to repress illegal practice than we are at this moment. I honestly believe, too, that he *would* suffer an amendment (to speak in parliamentary language) of these clauses for the privilege of passing his bill; and no man of ordinary judgment who knows his character can believe otherwise. What then, gentlemen, would be your position? You might exclaim against the deception; and we, if we were not also sufferers with you, might laugh at your credulity. But this would be a very sorry satisfaction.

Although I still call upon you to defend the Apothecaries' Act, I by no means desire you to defend the Apothecaries' Company. The general practitioners owe nothing to corporations, and acknowledge none. Let them be independent. It may be desirable at some future time to make that rotten fabric resound with the protests of the profession: and when this happens, it must fall. The members of the College scorn it; their own licentiates despise it. The corporation has not been able to achieve a character for itself: it has elevated the profession, but has failed to raise its own respectability. For the present, enough.

I have the honour to be, Gentlemen,
Yours, very faithfully,
VOX VERITATIS.

LETTERS TO THE MEDICAL PROFESSION OF THE UNITED KINGDOM.

LETTER II.

GENTLEMEN,—Since I had the honour of last addressing you (a), I have received, from various parts of England, Wales, and Ireland, communications expressive of the cordial approbation of their respective writers, and conveying the most liberal offers of co-operation and support in the great work of charity, to the execution and complement of which my life and its best energies are henceforth to be devoted. Gentlemen distinguished by superiority of intellect and attainment, both within the pale of our profession and unconnected with it, have testified their warmest approval of my project, and honoured me with their names as subscribers to my intended literary work.

Since the letter to which I refer was written, several afflicting instances of the widows and families of medical gentlemen, left in a state of indigence or almost utter destitution, have come within my knowledge, and given a fresh impulse to the efforts which I am making to wipe off this dark stain from the character of our noble and otherwise beneficent profession. I have, also, established a correspondence with the accomplished and philanthropic Mr. Daniell, of Newport Pagnell, from whose experience and enlightened views I calculate upon deriving the most substantial aid and information in the prosecution of my labours; and I have written, with my own hand, to almost every gentleman of our profession in the United Kingdom with whom I have the pleasure of being personally acquainted, or connected by literary ties.

Whether my project will be amalgamated with that of Mr. Daniell, or whether it will assume and retain a distinct form in connection with his plan, a few days will now determine. Meanwhile, I beg leave to submit to the consideration of my professional brethren the following outline of my own project:—

1. Any regularly-educated medical practitioner in possession of his ordinary health and intellectual faculties shall, by the annual payment of two guineas in advance, be entitled to the annual receipt of one hundred and four pounds in the event of his being disabled by age, bodily or mental sickness, or infirmity, or accident, from the prosecution of his professional labours, and his bringing forward satisfactory evidence that he possesses no other source of income or emolument. If he possesses any income less than one hundred and four pounds annually, the deficiency shall be made up to him from "THE MEDICAL FUND."

2. A regularly-educated medical practitioner, by the annual payment of two guineas in advance, shall, on his decease, obtain for his widow the annual income of one hundred and twenty pounds, which shall be regularly paid so long as she may live, require it, and remain a widow. If she possess a smaller income, she shall be entitled to receive only such an annual sum as will make up for the deficiency.

3. A regularly-educated medical practitioner shall, by the annual payment of one or two guineas in advance, secure to one or two of his children, on his decease, the annual income of forty-five pounds each. To the annuitant, if a boy, the money shall be paid until he shall have attained the age of twenty-five years; if a female, so long as she may require it, and remain unmarried.

4. Any lady or gentleman, whether connected with the profession or otherwise, may, by the annual payment of from one to six guineas in

(a) See *Medical Times* for Saturday, April 3, page 121.

advance, procure for a superannuated or disabled regular practitioner of medicine, or the widow and children of a deceased practitioner, the same advantages, in proportion to the sum annually subscribed, as will accrue to the practitioner who himself subscribes with the laudable view of making provision for his own person and family, in the season of adversity and the hour of death.'

Such is an outline of the comprehensive and munificent plan whereby I hope, with the cordial co-operation of my medical brethren, and of the more opulent and enlightened friends of our neglected profession, to make a permanent provision for its less fortunate yet deserving members, their widows and orphans. Many of the minuter details of my plan remain to be explained; these will constitute the subject of a future letter or letters.

That, by the means which I have here indicated, all the great and beneficent objects in view may be fully carried out, I am quite prepared to prove; especially if the good cause be zealously espoused by the more distinguished and wealthy members of our own profession; and I shall be enabled by the steadfast sanction and support of all grades and classes of our profession, in the prosecution of my literary projects, to contribute a few hundred pounds annually to the "MEDICAL ANNUITY FUND," which I am thus seeking to establish.

I have the honour to subscribe myself, gentlemen, your friend and fellow-labourer,

SHIRLEY PALMER, M.D.

Birmingham, May 24.

P.S. The prospectus of a series of medical works, the emolument of which will be devoted to the augmentation of the "MEDICAL ANNUITY FUND," is now in progress of distribution. By any gentleman who may not have received a copy, or feels desirous to assist in its distribution, any number of these prospectuses may be obtained, on application to myself, or my son, Mr. Charles Ferrers Palmer, surgeon, of Birmingham, or Mr. Edward Fielding Palmer, surgeon, Tamworth.

THE DIPLOMA OF THE COLLEGE OF SURGEONS OBTAINED UNDER FALSE REPRESENTATIONS.

The Taunton and Somerset Branch of the Provincial Medical and Surgical Association, having discovered that a Mr. James Dore Blake had obtained the diploma of the College of Surgeons by improper means, brought the matter before the Council. It appears that Mr. Blake had been for thirteen years prior to May, 1845, a retail pastrycook, and that after one year of medical study he presented himself at the College of Surgeons, London, for examination, and obtained their letters testimonial as to his fitness to practise. The council, after considerable delay, sent the following resolution to Dr. Woodforde, the president of the branch association:—"At an extraordinary meeting of the council of the Royal College of Surgeons of England, Tuesday, the 27th of April, resolved, 'That it appears to the council that Mr. James Dore Blake obtained his examination and letters testimonial by false statements and imposition; and the council does, therefore, recal such letters testimonial, and hereby declares the same to be void; also, that Mr. Blake be requested to return the diploma granted to him, he having ceased to be a member of this college.'—EDMUND BELFOUR, Sec."

CENTRAL CRIMINAL COURT.—MAY 13.

OLD COURT.

(Before Mr. Baron Alderson.)

Michael Sweetman was indicted for a misdemeanour, in having unlawfully practised as an apothecary, without having undergone the required examination, and obtained a license from the Apothecaries' Company.

Mr. Clarkson appeared for the prosecution, and Mr. Ballantine and Mr. Huddlestone for the defendant.

The defendant, who surrendered, pleaded guilty to the indictment.

Mr. Ballantine said that he felt he had no answer to make to the charge on the part of the defendant, and he could only inform the court that there was no imputation upon his moral conduct, or of unskilfulness; but still he had, no doubt, infringed the law, and the Apothecaries' Company were perfectly justified in adopting the present prosecution. With these remarks, he must leave the defendant in the hands of the court.

Baron Alderson said he believed this was the first prosecution of the kind.

Mr. Clarkson said it was, but he thought it right that it should be publicly known that it was the intention of the Apothecaries' Company to prosecute in future in every case, as they were determined to put an end to the system of unauthorized and unqualified persons acting as apothecaries, as such a proceeding was calculated to do great injury to the public.

Baron Alderson said the offence, no doubt, amounted to a misdemeanour, but, as this was the first prosecution of the kind, the justice of the case would probably be met by the defendant entering into recognizances to appear and receive judgement, if he should be required to do so; and if he refrained from carrying on his calling, or obtained a legal license to enable him to do so, he would probably hear no more of the matter.

Mr. Ballantine said that the defendant was anxious he should state that he had pursued a regular course of study for the profession in which he had been engaged, and he would have taken out a license, but that circumstances had prevented him from doing so. He would now, however, immediately take the necessary steps to pass the required examination and obtain a license.

The court then ordered the defendant to enter into his own recognizance in £100, and find two sureties in £50 each, to appear and receive the judgment of the court, if he should be required to do so.

GOSSIP OF THE WEEK.

THE LONDON HOSPITAL.

The annual distribution of prizes and honorary distinctions awarded by the medical officers and lecturers at the conclusion of the winter session took place on Thursday afternoon in the hall of the hospital, in the presence of a large body of governors and friends of the school, when the following were awarded—viz.,

Two gold medals, presented by the governors to pupils for zeal and humanity in attendance on the patients—in the medical wards, to Mr. Squire Sprigge, of Suffolk; in the surgical wards, to Mr. William Foot Vidal, of Aveley, Essex.

Anatomy.—Two dresserships (value 25 guineas each), to Philip William Govett, Plymouth, and Frederick Edward Goldsmith, Bedford.

Practice of Medicine.—Gold Medals: George Clinmenson Day and John Rygate, London. Silver Medal and Books: Edward Haycock; Charles William Latham, London. Honorary Certificates: Thomas Nadauld Brushfield, London; and John Cooper, Stratford.

Chemistry.—Senior Class—Gold Medal: Thos. Nadauld Brushfield, London. First Honorary Certificate: Alonzo Henry Stocker, Sheerness. Second Honorary Certificate: Frederick William Pearce Jago, Bodmin. Junior Class—Silver Medal: Samuel Reynolds, Debach, Suffolk. Honorary Certificate: Edward Foott, Droghmore, Cork.

Materia Medica.—Gold Medal: Frederick Wm. Pearce Jago, Bodmin. Honorary Certificate: Charles Harper, Plymouth.

At the conclusion of the distribution, Mr. Hanbury, the treasurer of the hospital, in an excellent address, complimented the fortunate competitors upon their success, and, whilst holding them up as examples to the other pupils, encouraged them to increased exertion in their honourable professional career.

MIDDLESEX HOSPITAL SCHOOL OF MEDICINE.

DISTRIBUTION OF PRIZES, May 22, 1847.

Francis Hawkins, M.D., in the chair.

Medicine.—Prize, Mr. S. G. Bousfield.

Surgery.—Prize, Mr. W. B. Clapham.

Anatomy.—Prize, Mr. Charles Pates.—Certificate, Mr. Arthur Smith.

Pathology.—Prize, Mr. S. G. Bousfield.—Certificate, Mr. W. B. Clapham.

Practical Anatomy.—Prize, Mr. C. Pates.

Materia Medica.—Prize, Mr. Charles Hayman.—Certificate, Mr. Joseph Sims.

Midwifery.—Prize, Mr. S. G. Bousfield.—Certificate, Mr. E. B. Passmore.

Certificate for Practical Midwifery.—Mr. A. D. Home.

Forensic Medicine.—Prize, Mr. W. B. Clapham.

Botany.—Certificate, Mr. W. G. Haytor.

Theological Prize.—Mr. Augustus Grant.

Honorary Certificates for Regular Attendance and General Good Conduct.—Mr. Bousfield, Mr. Clapham, Mr. Davidson, Mr. John Day, Mr. Fearon, Mr. Hayman, Mr. Pates, Mr. Sims, and Mr. Woods.

Certificates have also been granted to the following Gentlemen, for Regular Attendance and General Good Conduct, during the Session 1845-46.—Mr. Bousfield, Mr. Boyers, Mr. Clapham, Mr. Day, Mr. Grant, Mr. Home, Mr. Smith, and Mr. Tomkins.

ROYAL COLLEGE OF SURGEONS.—The following gentlemen having undergone the necessary examinations, for the diploma of this college, were admitted by the Court of Examiners members of the institution, on Friday evening, the 21st inst., viz: Messrs. R. P. Bayley, Broadstairs, Kent; W. H. Brace, Bath; H. Tireman, York; R. Bentey, Hitchin, Herts; J. F. O'Leary, Cork; H. W. Slack, Liverpool; A. Somers, Dublin; G. A. Wilkinson, Bishopwearmouth, Durham; W. B. Deacon, Market Deeping, Lincolnshire; J. Ward, Sunderland, Durham; and R. N. Bower, Chelsea.

NAVAL APPOINTMENTS.—Assistant-Surgeons: Dr. Archibald Armstrong, Frederick Manger, and Henry Mathias, to the Caledonia; William Calbane and James Wood, to Plymouth Hospital.

MORTALITY TABLE.

For the Week ending Saturday, May 22, 1847.

Causes of Death.	Total.	Average of 5 Winters.
ALL CAUSES........	911	914
SPECIFIED CAUSES...	911	909
Zymotic (or Epidemic, Endemic, and Contagious) Diseases..............	199	166
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat..........	90	99
Diseases of the Brain, Spinal Marrow, Nerves, and Senses................	148	158
Diseases of the Lungs, and of the other Organs of Respiration	237	275
Diseases of the Heart and Blood-vessels..........	36	29
Diseases of the Stomach, Liver, and other organs of Digestion	87	70
Diseases of the Kidneys, &c.	12	8
Childbirth, Diseases of the Uterus, &c.	9	10
Rheumatism, Diseases of the Bones, Joints, &c. ...	9	8
Diseases of the Skin, Cellular Tissue, &c.	1	2
Old Age.................	51	57
Violence, Privation, Cold, and Intemperance........	32	28

A COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the THEATRE of QUEEN'S COLLEGE, Birmingham.

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly, Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Rheumatism; divisions of it into acute, subacute, and chronic; acute rheumatism; symptoms; characteristics peculiar to it; the parts upon which it seizes; its metastatic tendencies; products of its inflammatory action; exceptions to these: illustrations; acidity of the secretions; two pathological points to be regarded in the treatment of rheumatism—inflammation and acidification; neither to be pursued exclusively; comments; observations upon the alkaline treatment of rheumatism; not a specific form of treatment, but still valuable; illustrations; comments; why soda is generally preferred; when potash should be chosen; general observations.

GENTLEMEN,—During the past six months we have had some severe but very successful cases of rheumatism in the hospital. In this lecture, and the succeeding one, I shall discourse to you concerning this troublesome ailment and the treatment of it.

Rheumatism shows itself in a great variety of forms, and sometimes rather anomalously; this fact has suggested to those who are fond of minute distinctions, to classify the varieties I speak of, and make a somewhat formidable list of them. I have never been able to see the value of this, but I have often seen its disadvantages, in perplexing the mind both of the student and the practitioner.

The most convenient division of rheumatism, and that which seems to be most consistent with sound pathology, is into *acute, subacute,* and *chronic.* The first of these will constitute the substance of to-day's lecture; the others will furnish our topic when we next meet.

Acute rheumatism, known also by the name of inflammatory rheumatism, and by that of rheumatic fever, when general febrile symptoms coexist with local derangement, is a disease essentially inflammatory in its nature. This is the first light in which we have to view it. The parts which it attacks are, during its manifestation, marked by redness, increased heat, swelling, tension, tenderness, pain—especially on pressure or motion, a congested state of the bloodvessels, and accelerated circulation through them. These are the features which the inflammation of rheumatism possesses in common with inflammation in ordinary. It possesses, however, certain characteristics peculiar to itself and to its pathological ally, gout.

These are, 1. *The Structures upon which it seizes.*—Rheumatism generally visits the ligamentous tissues; the aponeurotic coverings of muscles (more rarely muscles themselves); tendinous sheaths; cellular investments of joints; and envelopes of nerves. It is inflammation of this structure surrounding the sciatic nerve which constitutes the painful ailment known by the name of *sciatica.*

2. *The Metastatic Tendency of the Inflammation.*—You sometimes see a joint, attacked with acute rheumatism of the most severe kind, completely relieved of it in twenty-four hours—the morbid action having been transferred to some distant part. From this it will pass, in like manner, to another, and another, until it shall have made a circuit of nearly all the large joints in the body. The lad Crutchley, who was in the top male ward a month ago, furnished a case in illustration: he additionally showed the tendency which rheumatic inflammation often has to attack symmetrical parts. He came in suffering from acute rheumatism, the affected joints being chiefly the shoulders and knees. After a time, the right shoulder was the solitary seat of pain, heat, and swelling: suddenly, this part became totally free from ailment, and was as well (the boy said) as it had ever been, but all its disorder was thrown into the corresponding shoulder; from this it disappeared most expeditiously, and then fastened upon the right knee; after having abided here for a time, it passed into the left knee; thence into the right wrist, and finally into the left one; its departure from this place was the last act of recovery.

This migratory disposition you never see in common inflammation: when this disappears, it is *in toto,* never repeating itself in remote spots, as a metastasis. Under this head may be mentioned the tendency of rheumatism to pass from superficial to deep structures. In this particular it is resembled by no other ailment except gout. The pericardium is chiefly liable to suffer from transferred rheumatic inflammation; an instance of it you saw in the case of Susannah Wilson, who occupied the top female ward about three months ago; more rarely the endocardium, and the muscular substance of the heart itself, are thus affected. The stomach and bowels are frequently seized in this wise, and the patient often experiences very severe pain. The boy Gill, in the middle male ward, you remember, suffered excruciatingly when the rheumatism lessened in his elbow and flew to his gastro-intestinal apparatus. Sometimes the brain suffers sympathetically, or metastatically, in acute rheumatism; and meningitis, or cerebritis, or coma from congestion, occurs; sometimes the lungs, and congestion, serous effusion, pneumonia, or bronchitis, is the result; sometimes the kidneys, and then the patient complains of sudden pain in the loins, shooting down the thighs, sickness, difficult micturition, and diminished secretion of urine; rheumatism of the uterus, also, is a very troublesome and intractable ailment—so is that of the bladder, which frequently gives rise to symptoms like those of calculus, or prostatic disease, with which, indeed, it has been confounded. I am not aware that rheumatism of any internal organ ever occurs as a primary affection; I never saw an example of it; my opinion is, that it is always secondary of a seizure upon the joints or the muscles of locomotion.

3. *The Products of the Inflammatory Action.*—It has been said that rheumatism, however active, affecting the joints or superficial parts, never terminates in the effusion of lymph, in adhesion, in gangrene, or in abscess; but that its products are confined to an increase of the natural secretion of the joint, to a thickening of the ligamentous or cartilaginous structures, or to the deposition of earthy or saline materials upon them. The preparation which I show you was formed upon the right parietal bone of a man who had for years suffered, almost periodically, from what seemed to be rheumatism of the integuments of the cranium. It is a hollow substance, as you see, about the size of a walnut, and consists merely of animal matter, carbonate and phosphate of lime, with a trace of lithate of soda.

In some raro cases, however, rheumatic inflammation resembles the phlegmonous in its products. You remember the boy Yardley, who died in the hospital about six months ago, of phthisis, and whose case I commented upon in my introductory lecture. When he came under my care, so latent was the disease that killed him, that he only complained of rheumatism of the right elbow-joint. He had often had it before, and on this occasion it was transferred to the elbow from the shoulder-joint. Several times the rheumatism flew to the stomach or bowels, leaving the elbow easy and capable of its accustomed motion. These, and other characteristics of the rheumatic action, left me in no doubt as to the nature of the local ailment in this boy's case; yet, as you know, pus formed in the neighbourhood of the joint, and was upon one occasion liberated by my able colleague, Professor Knowles. The patient was a very scrofu-

lous subject, and no doubt had for some time been labouring under tuberculous cachexia, which may in some measure account for the unusual products of the rheumatic inflammation; still, there are some people who would go so far as to say that, even in a case like this, rheumatism would not give rise to abscess. As you well know, *it did do so*, and I recal the case to your minds, to show you that the pathological law which I mentioned at the head of this paragraph is not *absolute*.

Rheumatic inflammation affecting the internal organs runs pretty much the same course, and furnishes the same morbid products as inflammation in general. Thus, rheumatic pericarditis is commonly attended by serous or lymphy effusion, and by adhesion; rheumatic carditis has had for its consequence an abscess in the substance of the heart; rheumatic pneumonia has been variously followed by red or grey hepatization, excessive sanguineo-serous engorgement, or purulent infiltration; and rheumatic enteritis has been known to terminate in gangrene.

4. *The Acid State of the Secretions.*—This striking and invariable peculiarity in acute rheumatism I have repeatedly shown you in the cases we have treated in the hospital. In every instance you have seen that the saliva has been acid, often proportionately to the severity of the attack: in its normal condition, you know, this secretion is alkaline, and you have seen it gradually return to a state of alkalinity as the patients have improved. The natural secretion of the skin is *acid*, but its intensity is greatly increased during acute rheumatism; in some cases, as I have more than once shown you, the acidity of the skin is strongest in those parts where the inflammation is highest. This localization of *acidity* is a singular circumstance: in rheumatism of one side of the face I have known the saliva secreted by the glands of that side to be acid, and that from the opposite side alkaline. The urine, again, has its acidity augmented in almost all cases of rheumatism. Even the blood, in whose serous portion free soda ought to exist, has been found strongly acid in severe cases of acute rheumatism. The lactic acid is that which is generally found under these circumstances; but the acetic is sometimes met with, and the uric and its salts, in most cases, abound in the renal secretion.

This acidification, so to speak, of the system in general, or of certain parts affected with rheumatism, is not only a leading pathological feature in this disease, but is, perhaps, the one which gives it its specific character, or constitutes what may be called the rheumatic diathesis. In particular, it resembles it to gout, and suggests the probability of the functions of digestion and assimilation being in some way concerned in producing or perpetuating the morbid phenomena: if this latter be true, again, it will tend towards the explanation of the hereditary character both of gout and rheumatism.

There are other pathological items in the ailment I am speaking of upon which I would fain dwell, but that the direct duties of this chair give no latitude to speculation. To regard acute rheumatism, then, in that practical light which relates directly to treatment, there are two leading points for consideration and guidance: these are, *inflammatory action* and *acidification*. These are the two morbid conditions which specially need correction. To say that either needs it more than the other would be to make an assumption beyond what our present knowledge would justify, and might open a precedent for exclusive and, consequently, for bad practice. For it sometimes happens that the inflammatory symptoms run excessively high, and demand immediate measures, not moderate in their energy, to save the patient from sacrifice. This is especially the case in metastasis to any vital organ. Under these circumstances, to be regarding the acid state of the system and its secretions to the exclusion of those more prominent peculiarities of excessive inflammatory action, would be the very height of bad judgment and generalship. I am of opinion, that if, early in the accession of the disease, the acid state and tendency were corrected, in a great majority of cases there would be little inflammation to call for active management. I do not mean to say that these two pathological conditions relate to each other as cause and effect; but this I do know, that the acidity is greatest where the inflammation is highest; that an increase of acidification is often a precursor of an increase of febrile and inflammatory action; and that the correction of the former is often followed by a complete cessation of the latter. I speak with confidence, gentlemen, upon this subject, because my opinion is the result of careful observation and not very limited experience. Twelve years ago, and for five years previously, I was in the habit of treating rheumatism, and seeing it treated, with a sole regard to one of its pathological features—*inflammation*. I have seen blood taken by ounces, and by pounds, and the patients left the weaker and the worse for the loss of it; I have seen them sink under depletive treatment, and yet their pains continue unabated, until approaching dissolution rendered them unconscious of agony; I have seen the most profuse purging from colchicum, and alarming depression from digitalis, yet the fever and local inflammation rise again, the more vigorous for the loss of power to resist them; I have seen mercury given in all doses, and to every extent short of actual sloughing of the mouth, and yet the rheumatism no better for the impregnation of the system; narcotics of all kinds I have seen tried, and, though often of service, they have sometimes rendered that service tardily, and again not at all. Mark, I am not wishing to underrate these remedies; they are excellent in their way, and when administered with judgment, in cases that absolutely require them, are often productive of much benefit. What I want to show you is, that, in the majority of cases of acute rheumatism, they can be dispensed with; and that, when actually called for, they need not be pushed to the extent that was the fashion some years ago. To take pounds of blood away from a man, to mercurialize him severely, or to produce excessive prostration by digitalis or colchicum, is to try a very serious experiment upon his future health and strength. Many a man has been invalided for life, been rendered anasarcous, irretrievably dyspeptic or palsied, by these fierce onslaughts upon his circulating and nervous systems. The maximum beauty of medical practice is simplicity; its success is greatest when, in doing the most good, it does the least harm in consequence.

In advocating the alkaline treatment of acute rheumatism, I am speaking of no novelty of practice. For years past it has been recommended, but by whom first I do not know. At the same time I think it right to state that I believe there are few, if any, practitioners who have given it a fairer trial, have trusted more exclusively to it, or have derived better results from it than myself. For six years past I have tried it in every case of rheumatism that has occurred in my dispensary and private practice, and seldom have I been obliged to have recourse to other remedies. I have never, in this space of time, had a case that has terminated fatally, and yet in not one instance have I ordered bleeding from the arm. Leeching and cupping, and these but rarely, have been the extent of my depletive measures. Yet I have had many cases which have equalled, if not exceeded, in severity those which I have seen progress indifferently, or not at all, under the opposite mode of treatment. Yet do not mistake me, and suppose that I am lauding alkalis as specifics in rheumatism. Nothing is further from my intention than to do so: my experience inclines me to the belief, as I have before said, that there is no such thing as specificism in medicine. An agent of this class, you know, should in all cases be infallible: I never met with such a curiosity. All I wish to say and to prove, from my own observation, is, that in the majority of rheumatic cases, alkalis will alone prove curative; and that, when they fail of doing thus much, they will at least supersede the necessity of large doses of more uncertain and more potent remedies.

I could give you many cases from my dispensary note-book, but I prefer confining myself to those which you have yourselves seen in the hospital.

The first case to which I will call your attention is that of Frances Child, a married woman, aged twenty-six, who was admitted under my care on the 17th of December last. She was the subject of acute rheumatism, in an exceedingly severe form, of about ten days' duration. Most of her joints, but especially her knees, elbows, ankles, and wrists, were largely swollen, very hot and red and painful. She could scarcely move hand or foot, and when we made only slight pressure over the affected parts, the poor sufferer screamed in agony. She was perspiring moderately, but her skin had so strong an acid odour that you remember we distinctly recognised it at above a couple of yards' distance. As I leaned over her to auscultate the heart, this acid stench was so intolerable that I could scarcely endure it long enough to enable me to effect my purpose. The reaction of the perspiration, as also that of the saliva, was instantaneous, and most energetic, upon the deepest coloured litmus-paper. The patient also complained of a distressingly sour taste in her mouth. There was some pain in both the sides, slightly increased on full inspiration, but especially aggravated by moderate pressure made over the intercostal spaces; the sounds of the heart were not unnatural, and I therefore concluded that this pain originated in rheumatism of the intercostal muscles. The face was flushed and hot; hands burning; respiration accelerated; pulse 146, firm and bounding; tongue coated with a thick pale fur in the centre, and red at the edges and tip; thirst urgent; no appetite; urine scanty and very high-coloured; bowels moderately open. She was ordered toast-water for drink; to have a hot bath containing two ounces of carbonate of soda, at bedtime; and to take the following:—

℞. Sodæ bicarb., ℥ij.; mist. camphoræ, ℥viij.; M. ft. mist. cujus cap. coch. larg. duo tertiis horis.

The next day she was slightly better. She fell asleep shortly after having been carried from her bath, and slept for about three hours, which she had not done for more than a week previously. Her perspiration and saliva were less sour, and there was less tension, heat, and tenderness of the joints. She was simply ordered to continue her mixture.

The day following she was improved in all respects, except that her bowels had not been moved for twenty-four hours. She had a little bilious tinge in her face: she was ordered a powder, consisting of three grains of calomel and four of scammony, to be taken directly: her mixture to be continued.

The next morning she was sitting up in bed; and you remember the smile of thankfulness which played over her face when she told us how much better she felt. Her powder had operated twice; she had slept through the greater part of the night, and was now the subject rather of weakness than pain. Still, there was a little tumefaction and tension of her joints, and her saliva was slightly acid; so she was ordered to continue her mixture three times a day.

On the 28th, eleven days after her admission, there was not a trace of rheumatism left, and she was requested to discontinue her medicine. From this date to the 20th of January she never took another dose of physic; but I thought it advisable to let her remain in the hospital thus long, both that she might recover strength, and that we might see if there were any relapse. There was nothing of the kind—she steadily improved to the end, and left the hospital quite well.

Now, considering the severity and duration of this case, a single aperient through the whole time of its treatment was little enough; yet that was all that was taken. The hot bath did considerable good, but that I attribute chiefly to the alkali in it, for the woman had tried simple hot baths before, but without any benefit; and I have

often made comparative trials of these, and those containing an alkali, and without exception immeasurably in favour of the latter. The camphor mixture I attach no importance to whatever, for I never find any difference between making this and plain water the vehicle of the soda: when I give the former, it is simply with a view to mask the taste of the soda, which to some people is very unpleasant. We have nothing left, then, but the alkali to which to impute the chief curative good in this case; and I think you will agree with me, that I am not in error in giving it the credit of the main service.

On the same day that this patient came in, another was admitted, labouring also under rheumatic fever. This was Susannah Wilson, who occupied the top female ward. Her symptoms were so precisely similar to those of the preceding case that it is not necessary for me to detail them in full: they had existed four days. Her rheumatic pains, which were very severe, occupied chiefly the shoulders, hips, elbows, and knees: the concomitant fever was also very strong. The point in which she differed from Child was in the state of her pulse: its beats were 130 per minute, but it was feeble; there was nothing unnatural, however, in the sounds of the heart. She was ordered a hot bath, containing an ounce of carbonate of soda, at bedtime, and the same soda mixture which was prescribed in the previous case.

On the following day we learned that she had passed a comfortable night, having felt much better for some time after leaving the bath. The saliva and perspiration were decidedly less acid, but the pains were still very severe. Her bowels not having acted since her admission, she was ordered five grains of compound colocynth pill directly, and to be repeated every three hours until full cathartic action should be produced. The mixture to be continued.

The first pill operated, and the patient was the better for it. On the next day, however, her pains were still very severe, and her pulse quicker; I had every confidence in the alkali, but fearing lest I might be reposing an unworthy reliance upon it, and be unduly biassed in its favour, I added to the mixture a drachm of tincture of colchicum. I had no experimental conceit to gratify, but rather to do the best I could for my patient. I ordered her, additionally, an opiate draught at bedtime. This caused her to sleep, and the next morning she was a shade better. The new mixture was continued through this day, but she was so purged and prostrated by the colchicum, and her pains at the same time were so violent, that I determined to fall back upon the original. Accordingly, she was ordered the soda mixture as at first, and a soda bath at bedtime.

The day following she was slightly better, and I resolved then to trust to the alkali singly. She did not bathe again, but took her mixture in double doses, and within a week was quite free from ache or pain. She then discontinued her medicine; but several days afterwards she was unfortunately caught in a heavy rain, took cold, and had severe rheumatism in both elbows. There was no concomitant fever in this instance, so I merely ordered her elbows to be thrice daily fomented with hot soda and water, and in a few days she was quite well again. She thus continued for near a month without any medicine, or any return of ailment, when she left the hospital well.

Shortly after the dismissal of this patient, we had another, Mary Hill, in the middle female ward. She had severe rheumatism, of recent occurrence, affecting both elbows and wrists. The constitutional symptoms were not urgent. An alkaline fomentation to the affected parts relieved them of their suffering within a week. She then went home to bury her father, caught cold, and came back again with acute rheumatism, confined to the knees, legs, and ankles. She could not even support her own weight. Local alkaline baths were again used, without any other remedial means, and in about ten days she was dismissed cured.

George Dawson, you remember, came into the top male ward on April 29. He had severe rheumatism, extending from the right shoulder to the tips of the fingers on the same side. His hand, as you saw, was enormously swollen. I learned from his surgeon, under whose care he had frequently been, that leeching, phlebotomy, colchicum, and mercury did him no good. All he had in the hospital was the soda mixture I have already prescribed; alkaline fomentations three or four times a day to his arm and shoulder; and a cathartic pill when necessary. By the 5th of May he had no further need of medicines, but I allowed him to remain in the hospital to recover his strength, and on the 12th he left from his own desire to go back to his employ.

Crutchley furnishes you with another case. His rheumatic seizure was very severe, but he took nothing but carbonate of soda, and had an occasional alkaline fomentation, and he got well. He had two relapses from exposure, and was again treated on the alkaline plan, and with the same results.

There are several more cases you have seen in the hospital, which I could recapitulate, did time permit: but you must all remember them, for I have made clinical observations upon them day by day, and it is not necessary for me here to dwell further.

I ought to add, however, that my reason for preferring soda in these cases is, because I regard it as the natural alkali of the animal system. It is the free alkali of the saliva, the blood, the bile, and the semen. I only use potash when there is abundant lithic deposit in the urine; and this, because the lithate of potash in less soluble than that of soda.

In conclusion, whilst I commend to your favourable notice this mode of treating acute rheumatism, do not receive it from me as an unexceptionable plan. If you will steadily pursue it, I am certain that the majority of cases will yield to it; but, should you meet with any that do not, attach no absolute faith to it, but use any other measures which immediate circumstances may call for. Look to the secretions, especially those of the skin, liver, and kidneys: if any general remedy or remedies will correct these, trust thereto; if not, try more direct ones, but avoid extremes!

A COURSE

OF

LECTURES ON SURGERY,

BY

SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London; Consulting Surgeon to London University Hospital, &c.

Lecture VIII.

Another powerful remedial agent in inflammatory diseases is tartar emetic, either in large or small doses. Its beneficial effects are produced, when employed in small doses, by increasing perspiration; when used in larger doses, by exciting nausea, and thereby promoting perspiration, and reducing the pulse at the same time. There can be no rational doubt that great benefit is derived from the use of tartar emetic for either of the purposes I have just noticed, as well as the slight purgative property it possesses; but we must not place entire dependence on this medicine to the exclusion of blood-letting; and, indeed, I am of opinion that the treatment of inflammation would not be less severe, and perhaps not so effectual, as if the lancet were employed. Rasori introduced the practice of administering large doses of tartar emetic in certain forms of inflammation into Italy many years since, carrying the dose to two grains, or even more; and this mode of treatment has been employed in England to a considerable extent in pneumonia, with a fair amount of success. Should you determine to employ this remedy after the manner of Rasori, you must begin with smaller doses—say a quarter of a grain, repeated at short intervals, and gradually increase the dose. You will find that the first few doses generally produce vomiting, but afterwards what is called tolerance is established, and the tartar emetic ceases to produce its ordinary emetic effect—even when the dose is doubled or trebled. When tartar emetic is administered purely for its diaphoretic effect, the dose may be about one sixth of a grain every four or six hours; when as a nauseant, a quarter of a grain may be given every two or three hours.

It is occasionally necessary, on account of the extreme pain which sometimes accompanies inflammation, to give opium, although this remedy is generally to be avoided if possible. We do not always succeed in alleviating pain, and frequently increase the fever, restlessness, and constipation, by its use. Opium is often given after severe operations, to alleviate pain and quiet the nervous system; and here it succeeds much better than when inflammation is already established. It is preferable to use certain preparations of opium, as acetate of morphia and liquor opii sedativus, to the drug itself, as these preparations are supposed to possess less of the stimulating and irritating principles of opium.

Low diet must be enjoined in all cases of inflammation, and the patient prohibited from taking animal food, wine, and other fermented liquors. The patient should be kept moderately cool, but not so cold as to produce chilliness and check the cutaneous transpiration. He should be placed in a large well-ventilated chamber, and no conversation or noise be permitted. You will find that ignorant nurses are very fond of keeping the patient warm, by heaping blankets and other coverings over him; but this you must not permit. Gentlemen, the means I have pointed out to you constitute the general treatment of inflammation, and form what is commonly called the antiphlogistic treatment; from which I must now turn to the local means employed for the purpose of removing inflammation.

One of the local effects of acute inflammation is an increased temperature of the part, which is distressing to the patient, and the surgeon would probably feel inclined to adopt means to diminish this painful sensation of heat, if only with the object of relieving the patient from the uncomfortable state in which he is placed by it; but he has other and more important reasons for so doing. It is well known that heat promotes all the processes going on in the system, and inflammation among the rest; and, therefore, by diminishing the temperature of the inflamed part, we are at the same time diminishing the inflammatory action. The most common means employed for this purpose is the application of linen dipped in cold water, or a cold evaporating lotion. A most useful lotion is made by adding a drachm of liquor plumbi diacetatis, and two ounces of camphorated spirit, to a pint of cold water; or equal parts of cold water and liquor ammoniæ acetatis, with some camphorated spirit, may be substituted. In all cases where the surface of the skin is broken or lacerated the simplest form of lotion is to be preferred. The most important thing is to keep up a continued evaporation, which you know produces cold. For this purpose we must order the linen to be kept constantly moist, and not allowed to dry, as it then becomes hard and stiff, and increases the pain and uneasiness by producing pressure and irritation.

It is a curious circumstance that in many cases the application of cold produces rather an injurious than a beneficial effect, and warm applications are indicated. We are unable to give a satisfactory explanation of this fact. Cold is useful in diminishing the heat of the part, as we have already seen; but, as regards warm applications, the explanation generally given is, that they soften the inflamed textures, and thereby relieve tension. Warmth combined with moisture is in some cases more efficacious than cold; a warm poultice being frequently more useful than a cold lotion. It is, however, chiefly in

those forms of inflammation which have a strong tendency to suppuration that warm and emollient applications are most beneficial. In the critical abscesses of fevers, boils, carbuncles, whitlows, and collections of matter at or about the anus, poultices and fomentations are most valuable. The common linseed-meal poultice is one of the best of these. To prepare it you pour some hot water into a basin, and gradually shake the linseed-meal into it, keeping the whole well stirred with a spoon until it becomes of a proper consistence. It may then be spread on linen or tow. Many persons spread a little oil on the surface of the poultice to prevent it from adhering to the part; but this is unnecessary, as linseed is of an oily nature. Other poultices are made with bread and water, bread and milk, or bread and Goulard lotion. These are in such constant use that it appears scarcely necessary to mention their preparation.

With regard to fomentations—you may make a very good one by boiling a quarter of a pound of chamomile flowers or poppyheads in a gallon of water. The liquid when strained is fit for use. It is unnecessary for me to examine the efficiency of these herbs, or to ascertain whether the good effects of the fomentations are to be attributed to them, or to the heat and moisture they impart; but I should recommend you to employ them because patients are apt to fancy that simple things are not efficacious. When the inflammation has declined under the use of the remedies I have described, the parts often remain weak and deficient in tone, especially when the inflammation has attacked the eyes or joints. In these cases it is proper to employ means for improving the tone and restoring the functions of the part. After inflammation of the joints, blisters are exceedingly efficacious in promoting the absorption of effused lymph, and diminishing the thickening of the textures. Blisters are not to be applied in the early stages of the inflammation before other depleting measures, but no applications are better for removing the stiffness and thickening which remain after acute inflammation.

In cases of inflammation some examples will be found in which it is doubtful whether it is better to use cold or warm applications; in such cases we must take the sensations of the patient as the indication, for it is certain that the kind of application which is most agreeable to the patient is that which will prove most beneficial.

Counter-irritation is a powerful means of lessening inflammation. It is useful in several ways, one of which is by producing inflammation of the skin, either near to, or more distant from the part affected, but in some situation which will sympathize with it. Here we excite inflammation in a less important part to remove inflammation of one of greater importance, so that, as the one increases, the other and more dangerous declines. The old terms, derivation and revulsion, apply to forms of counter-irritation whereby the blood or fluids are drawn from one part to another, either in the immediate vicinity or at a distance from the first; and the efficacy of counter-irritation, perhaps, chiefly depends on this kind of derivation. It is not always desirable to excite counter-irritation very near the part affected, especially in acute inflammation, because, if the inflammations are very near to each other, they may join and aggravate the original affection. In ophthalmia, for example, blisters are more frequently applied to the nape of the neck than the temples, because in the latter case the eyelids might become inflamed, and the inflammation of the eye itself increased, instead of being diminished. You must, therefore, follow the general rule of not applying blisters too near to inflamed parts, for the reasons I have mentioned. Blisters, however, act on another principle: they produce a copious discharge of serum from the skin, from which great good is derived; and, if the cuticle be afterwards removed, a purulent discharge is set up, which may be continued for a length of time by dressing the blistered surface with savine or other irritating ointment.

I must again warn you, gentlemen, against employing counter-irritation in acute inflammation before you have sufficiently depleted the patients by the general antiphlogistic measures I have advised, because it is often useless, or even injurious, under such circumstances, by increasing fever and restlessness, and thereby augmenting the inflammation. Counter-irritation, when not preceded by bleeding and purging, will not produce the beneficial effects anticipated from it.

There are several other forms of counter-irritation, such as setons, issues, and the tartar emetic ointment, which are all applicable in different cases. It is chiefly in chronic forms of inflammation, whether originally so or following acute inflammation, that these are employed. The tartar emetic ointment is made by carefully mixing a drachm of tartar emetic with an ounce of common lard or spermaceti ointment. This ointment, when rubbed on the skin, has the effect of producing pustules very much resembling those of smallpox, which may be kept up for any length of time by occasionally repeating the application of the ointment. In the chronic forms of inflammation, whether originally chronic or supervening on acute inflammation, these counter-irritants and derivatives, antimonial ointments, blisters, issues, and setons, are of the greatest importance as curative agents. The external application of nitrate of silver in some forms of inflammation is attended with far more beneficial effects than we might have anticipated from *à priori* reasoning, and for which we cannot assign any very satisfactory explanation. Mr Higginbottom has the great merit of introducing and maintaining this practice, which has undergone the test of experience in a most satisfactory and gratifying manner. In that form of phlegmonous inflammation which which occurs in the fingers, near the roots of the nails, and ends in the formation of an abscess, called in this situation paronychia or whitlow, the early application of nitrate of silver will frequently prevent the formation of pus, which could scarcely be effected by any other mode of treatment. When nitrate of silver is so applied as simply to blacken the epidermis, it is more often successful in dispersing inflammation than you would be led to expect. I have seen the application succeed in many instances, and, although I do not understand the principle on which it operates, I have no hesitation in bearing testimony to its efficacy. Under such circumstances the theory of the action of any remedy is of secondary importance. I may mention that I have seen the external application of nitrate of silver successful in dispersing scrofulous enlargements of the glands of the neck. It cannot be expected that any remedial agent should always be successful in preventing suppuration or other mischief, but this application has been successful in so large a number of instances as to justify a trial. In some instances it is only necessary to apply it in such a manner as to blacken the cuticle, but in others it is advantageous to produce vesication. Mr Higginbottom applies the nitrate of silver in the following manner. He first perfectly cleans the skin by washing with soap and water, and, after moistening it with cold water, passes a stick of nitrate of silver over it two or three times when the intention is simply to blacken the skin, but more frequently when vesication is to be produced. Like all other remedies, this may have been too much praised, but I have seen it so frequently attended with beneficial results that I should be wrong in not recommending it to you.

Counter-irritation is of great utility when chronic inflammation has attacked a mucous membrane. In many of these cases cold and astringent lotions may also be employed. In chronic inflammation of the conjunctiva, astringent lotions are among the most common modes of treatment. By the use of astringents the dilated vessels recover their natural tone and calibre, and a stop is put to the perverted action of these vessels which causes them to secrete pus instead of mucus.

A common consequence of acute and chronic inflammation is the effusion of lymph and other fluids, the absorption of which must be encouraged in order to restore the part to its natural state. Such effusions or deposits are sometimes so copious as to impede or even altogether obstruct the action of the organs, and to cause a sensation of weakness which is very troublesome to the patient. Blisters are perhaps the most powerful agents in exciting absorption of such matters; but we may often employ stimulating embrocations, mercurial or iodine ointment, for the same purpose with great advantage. When we require the long-continued action of a blister, we may do this either by a repetition of the blister after the first has healed, or keep it open by savine ointment. Brisk purgatives are also useful in exciting the action of the absorbents. The internal use of iodine or mercury is well adapted for the removal of particular kinds of inflammation. Lotions containing the muriate or acetate of ammonia, with vinegar or camphorated spirit, possess similar discutient properties.

Cold applications do not possess the same power of diminishing or removing chronic inflammation as we observe them to have in moderating the acute forms of this disease, although it is a general opinion that even chronic inflammation may be much retarded by these remedies. They are by no means so effective as the various forms of counter-irritation I have already discussed.

Hitherto, gentlemen, I have spoken of the treatment of ordinary inflammation, but you will soon discover that specific inflammation demands particular remedies in addition to those usually required for the removal of common inflammation. Thus specific inflammation of gout and rheumatism is most rapidly removed by colchicum; scrofulous inflammation, by the external application and internal administration of iodine, or other alteratives, which are capable of correcting the perverted action of the system; and in venereal inflammation it is usually right to employ mercury with greater freedom.

It only remains for me to notice the treatment of the fever which accompanies acute inflammation, although I have not much to say on it, because the treatment employed for the removal of the inflammation is equally efficacious in the removal of the fever. The inflammatory fever arises with the inflammation itself, increases with it, and declines as it declines, so that in each the one seems to move the other. John Hunter called this fever the universal sympathy of the system with the disturbed state of a part. The symptoms of inflammatory fever vary with the nature, extent, and violence of the inflammation, the constitution of the patient, and the functions of the part or organ. You have increased action of the heart and arteries; the pulse is full and strong when the inflammation is not seated in the vital organs; the secretions are more or less suppressed and disordered; the skin is dry and harsh, the mouth dry, with great thirst, and the tongue coated with a white fur. Inflammatory fever exercises a great influence on the secretion of ulcers and wounds; for we find that, while the fever is violent, the prevalent secretion is scanty and of an unhealthy character. The urine is much diminished in quantity, high-coloured, and clear, and does not deposit the lateritious sediment until the fever is on the decline. The heat of the surface is much increased, and the nervous system is disturbed; restlessness, headache, vigilance, and delirium being the indications of this disturbance. The bowels are constipated from suppression of the ordinary secretion of those organs. In very bad cases other nervous symptoms occur—twitches or convulsive movements of the tendons, called subsultus tendinum, which is a very bad symptom. The appetite is altogether lost, and the stomach often disturbed by nausea and vomiting. The ordinary treatment of inflammation will in general suffice for the subdual of the inflammatory fever, but, where severe headache or delirium exists, the application of leeches to the temples and cold lotions to the head will prove

mus. When the stomach is much distended, effervescing draughts, containing a few drops of laudanum or tincture of hyoscyamus, may be given, and fomentations applied to the epigastrium. Other occasional symptoms are to be combated by medicines calculated to relieve them. I need not add anything more to what I have already said when placing before you the treatment of inflammation.

DUMAS ON ORGANIC CHEMISTRY. No. XXII.

(Continued from page 271.)

CHYLE AND LYMPH.

We have seen that the venous absorption, which is so active on the surface of the stomach, carries directly into the blood the major part of the azotized aliments which are rendered soluble by the action of the gastric juice. The products of the intestinal digestion pass into the blood in a less direct manner: they traverse an especial apparatus, whence they are led into the general circulation. This apparatus consists of the chyliferous vessels which carry away the principles which the intestinal digestion has rendered fit to be absorbed. We can readily understand that it is impossible to collect, in a state of purity, the liquid which the radicles of the chyliferi suck up from the intestine, and which has been designated by the name of chyle; for the chylifer, properly so called, are vessels of extreme tenuity, and, moreover, they immediately inosculate with the lymphatic vessels, so that the chyle which we may obtain from the trunk of a chyliferous vessel or in the thoracic duct is already mixed with a quantity of lymph which it becomes almost impossible to appreciate. The properties which have been attributed to the liquid chyle belong, then, rather to a mixture of chyle and lymph, such as that which we meet with in the thoracic duct.

Generally speaking the chyle is a white milky liquid, sometimes of a rose colour, or even red. It contains fibrine and albumen; consequently it undergoes a spontaneous coagulation after the lapse of eight or ten minutes. The serum which surrounds the fibrinous clot may be coagulated by heat. It is probable that it is the lymph which conveys into the chyle the fibrine which is found there. I have, in fact, remarked that this liquid coagulates spontaneously only when collected below the lymphatic ganglions of the mesentery. The radicles of the chyliferi which absorb the fatty matters; the chyle is, then, found very rich in fatty globules with which we find mixed some colourless lymph globules. Sometimes the chyle is of a rose colour, or even assumes a clear red tint, yet it never holds blood globules, properly so called. It [illegible] also those salts which exist in the blood.

The following are some analyses of the chyle which are due to MM. Tiedemann, Gmelin, and F. Simon. The fluid examined was [illegible] from the thoracic duct of a horse.

Tiedemann and Gmelin.

	I	II	III	IV
Water	924 1	91 8	918 03	879
Coagulum	17 5	1 ?	7 08	1 9
Albumen	46 5	34 3	42 08	19 1
Fatty matters	a trace.	small quan.	16 1?	quan.
Watery extract	7 9	[illegible]	11 0?	[illegible]
Alcoholic extract and salts	6 6	2 3	2 00	0 9

Simon.

	I	II	III
Water	940 6	928 0	916
Fibrine	0 3	0 8	0
Fatty matte	1 2	10 0	[illegible]
Albumen	42 7	46 1	6(
Colouring of the blood	0 1	trace	5
Extractive matters and salts.	10 1	13 7	12

These analyses suffice to show the great variation which the composition of the chyle may present. We should especially remark the difference in the proportion of the fatty matter which it contains, but there is nothing surprising in these variations, for the composition of the chyle must necessarily change according to the nature of the ingested aliments. MM. Tiedemann, Gmelin, Bouchardat, and Sandras have performed some interesting experiments on this subject.

The chyle of animals, which have been fed on substances combined with a large proportion of oil of sweet almonds becomes opaque, and we may, by means of ether, extract from it as much as ten to fourteen per cent. of almond oil. We discover, in the same manner, suet which may have been mixed with the aliments. Should we tint these matters with alkanet or turmeric, we still find the chyle colourless, the chyliferous vessels refusing to absorb the colouring particles. Wax passes into the chyle in but small quantity; if, however, we dissolve it in olive oil, in the proportion of four parts of oil to one of wax, we shall meet with it in very considerable amount. As MM. Bouchardat and Sandras have remarked, these experiments plainly show that the chyliferi absorb from the intestine merely the fatty matters which are found in a state of minute division, but otherwise unaltered in the chyle.

Some experiments have been made on human lymph, and also on that of the horse. We may conceive that it is an easier matter to collect this liquid in a state of purity than to procure pure chyle. Its properties, however, appear to be identical with those of the latter liquid. According to MM. Tiedemann and Gmelin, it contains —

Water	96 0
Fibrine	0
Albumen	2
Chloride of sodium, carbonate and phosphate of soda, and animal matter	5
Extractive matter and lactate of soda	9

We should remark that fat has not been pointed out among the materials of the lymph.

MM. Marchand and Colberg analysed some lymph which exuded from a wound on the dorsum of the foot. It contained —

Water	969 20
Fibrine	5 2
Albumen	4 4
Extractive matter	3 2
Fatty matter	2 6
Chlorides, alkaline carbonates and lactates, sulphate and phosphate of lime, and traces of oxide of iron	1)

Excrementitial Matters. The excrements are composed of the residue of the aliments and all those products of the secretions which are unfit for undergoing any renewed absorption.

We designate by the name of meconium the matters which accumulate in the intestinal tube of the fœtus, and which consist merely of the refuse of the secretions. We have but one analysis of human meconium, and for this we are indebted to M. F. Simon. According to the description which he has given it is a soft mass of a blackish brown colour, having a sickly odour with a sweetish taste. When examined by the microscope, we discover in it, besides numerous particles of epithelium, a mass of small lamellæ resembling crystallized cholesterine, as well as flat globules which may be compared to decolorized blood globules. Ether removes from it the fatty matters and the cholesterine, whilst dilute alcohol extracts from it a matter possessing the properties of caseine. One hundred parts of dried meconium, according to M. Simon, contain —

Cholesterine	
Extractive matters mixed with bile	
Caseine	
Biliary matter	
Mucus, albumen, &c.	
	100 00

The ashes of meconium were analyzed by M. Payen, who found in them some alkaline carbonates and phosphate of lime.

Let us now place by the side of this first analysis one made upon the fæcal matters of an infant six days old, which had been suckled by its mother. This matter was of a pappy consistence, it was yellow, and possessed the odour and taste [illegible] ... It no longer contained any ... particles of epithelium, but a considerable quantity of globules of fatty matter devoid of cholesterine.

A hundred parts of the dried residue contained —

Fatty matters	52
Colouring matter of the bile and fat	16
Albumen or coagulated caseine	18
Loss and water	14
	100

M. Berzélius examined the excrements of a man who had been fed on brown bread and meat. They consisted of adherent masses which mixed but slowly with water, and which formed with it a thick pappy mass, difficult of filtration even through linen, a brownish, muddy liquid eventually passed through, which, after a few days, became sufficiently clear for it to filter through paper.

The clear liquid was rapidly coloured by contact with the air. Abandoned to spontaneous evaporation, it became gradually covered with crystals of the ammoniaco-magnesian phosphate, the formation of which was owing to the ammonia produced by the decomposition of the azotized matters, and to the phosphate of magnesia dissolved in the excrements.

The soluble portion of the excrements, when evaporated to a syrupy consistence, was diluted with alcohol, and the alcoholic solution mixed with a little distilled water. The residue was treated by sulphuric acid, which precipitated from it a brown, coherent matter, in chief part composed of the materials of the bile, and which resembled choloidic acid. The matter, insoluble in alcohol, was almost entirely composed of albumen.

Alcohol retains the brown extractive matters of an animal nature and some alkaline lactates.

The insoluble matter which is deposited from the thick liquid previously filtered through linen, and which so readily blocks up the pores of the paper, appears to be almost entirely composed of mucus. It is dissolved by potass, ether and alcohol remove from it some fatty matters and biliary resin (choloidic acid). The mass, after being acted on by boiling alcohol, yields to water a yellow matter which rapidly putrefies, at the same time that it assumes a very deep colour, and gives out an odour characteristic of putrefied urine. We may, in like manner, isolate this principle by treating the matter of which we have been speaking, by hydrate of lime, which forms an insoluble combination with the fat, and also with the biliary resin. The remaining substance is soluble in lime water, and may be isolated by precipitating the lime by a stream of carbonic acid or by the addition of oxalic acid.

The matters left on the cloth are principally composed of the intact debris of the aliments—such as the bran or skin of potatoes, and other vegetable matters. Their composition varies according to the nature of the ingested aliments.

M. Berzelius concludes, from his analyses, and from the reactions which he has observed, that the fecal matters contain an insoluble combination of biliary matter with the secretions of the intestinal tube, a combination which is destroyed by alcohol and by lime. Annexed are the result of his analysis —

Water			75·3
Matters soluble in water	Bile	0 9	5 7
	Albumen	0 9	
	Extractive matter	2 7	
	Salts	1 2	
Insoluble matter of the aliments			7·0
Insoluble matters of the intestinal canal—mucus, biliary resin, [illegible] mal matter, &c.			12 0
			100 0

To determine the nature of the salts contained in the fæcal matters, M. Berzelius acted on three ounces of fresh excrements by a large quantity of water. The aqueous solution, when evaporated to dryness, left a residue which gave, on

Carbonate of soda (arising from the lactate)	3·5
Chloride of sodium	4·0
Sulphate of soda	2·0
Phosphate of magnesia	2·0
Phosphate of lime	4·0
	15·5 grs.

The dry excrements leave, on incineration, 0·15 per cent. of nearly black ashes, which contain—

Phosphate of lime and magnesia, traces of sulphate of lime	0·100
Carbonate of soda	0·008
Sulphate of soda, with traces of sulphate of potass and phosphate of soda	0·008
Silica	0·016
Carbon	0·018
	0·150

The excrements, when distilled with a certain quantity of water, furnish a very fetid liquid containing sulphuretted hydrogen: a brownish grey precipitate is formed by the acetate of lead, at the same time that a repulsive odour is given out. Chlorine whitens the human excrements. When treated by sulphuric or hydrochloric acids, they disengage a very strong odour and acquire a violet or black colour.

MM. Einhof and Thaer made some experiments on the excrements of the cow. M. Morin also published a very complete analysis of this substance; the results are as follow—

Water	70·00
Vegetable debris	24·08
Green resin and fatty acids	1·52
Unaltered matters of the bile	0·60
Bubuline	1·60
Albumen	0·40
Resin of the bile	1·80
	100·00

The body, which M. Morin calls bubuline, resembles in all its properties the yellow extractive matter which Berzelius discovered in the human fæces, and which acquires a brown colour on contact with the air.

Intestinal Concretions.—Biliary concretions are somewhat rare in animals; the bovine race has however, presented some examples of them. Bezoars or stones are often found in the intestinal canal; these have sometimes nuclei formed by an agglomeration of hairs which the animals swallow in the act of licking themselves. They ordinarily possess a greenish brown colour; they are soluble in the alkalis; the acids precipitate the latter solutions; water dissolves them but very sparingly, at the same time assuming a yellow colour. Some of them are soluble in alcohol, whilst others are altogether insoluble in that menstruum.

The large calculi, known under the name of *oriental bezoars*, appear to be biliary concretions at least the substance which forms the greater part of these stones is also met with in those usually contained in the gall-bladder. It is an acid body, which was discovered by M. Goebel, and which has been more particularly studied by MM. Woehler, Ettling, Will, Malaguti, and Sarzeau. It has been designated by the name of *lithofellic* acid.

Lithofellic acid, which constitutes a great number of calculous salts, is crystallizable. To obtain it in a state of purity, we have merely to dissolve in alcohol the calculi which are formed of it, to decolorize the solution by animal charcoal, and then to evaporate it. It presents itself under the form of small brilliant hexagonal prisms, which are hard and readily pulverizable. These crystals are insoluble in water, and very slightly [illegible] in ether. They melt at 205° C., and [illegible] crystalline mass on cooling; if heated to a [illegible] more elevated temperature, they form [illegible] a vitreous mass, which melts at 105 [illegible], and which constitutes a true isomeric [illegible]ication. If redissolved in alcohol and allowed to cool, we obtain anew crystals of pur[e litho]fellic acid.

This acid is soluble in [illegible] and in acetic acids. It combines with [illegible] to form soluble salts; the ammoniacal [illegible] ation becomes destroyed by spontaneous [illegible]. With lime and baryta it forms salts which are insoluble in water. The salt of silver, in like manner, is but slightly soluble; it is obtained by precipitating a solution of lithofellate of ammonia dissolved in alcohol by nitrate of silver; the precipitate is to be redissolved by heat, and once more crystallized by cooling.

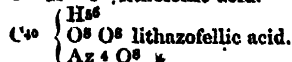
Lithofellic acid, according to MM. Ettling and Will, is represented by the formula: $C^{40} H^{76} O^8$.

According to Woehler, its constitution is C^{40}, H^{70}, O^7, H^2O.

Treated by nitric acid, it gives birth to a new body—*lithazofellic* acid—containing, according to MM. Malaguti and Sarzeau, two equivalents of nitrous vapour, $Az^4 O^8$, and six equivalents of oxygen, which together replace eight equivalents of hydrogen. It is consequently derived by substitution from lithofellic acid, as we see by the following formulæ:—



$C^{40} H^{76} O^8$ lithofellic acid.



$$C^{40}\left\{\begin{array}{l} H^{68} \\ O^8\ O^8 \\ Az^4\ O^8 \end{array}\right. \text{lithazofellic acid.}$$

By dry distillation, lithofellic acid is resolved into water and into *pyrolithofellic* acid, in accordance with the following equation:—$C^{40} H^{76} O^8 = 2H^2O + C^{40} H^{68} O^6$.

Very recently, M. Woehler extracted from a bezoar an acid different to lithofellic acid, and which he had at first viewed as a peculiar body. It has, however, been recently proved that this *bezoardic acid* is identical with the *ellagic acid* discovered long since by M. Braconnot. This observation would appear to prove that the matters of these intestinal concretions may, as one might have anticipated, be introduced directly by the aliments into the digestive canal.

ORIGINAL CONTRIBUTIONS.

CONTRIBUTIONS TO THE MEDICAL TOPOGRAPHY OF THE MEDITERRANEAN.

By WILLIAM THOMPSON KAY, Esq., Assistant-Surgeon of the Plymouth Division of Royal Marines.

"THE GRAND OBJECT OF ALL TRAVELLING IS TO SEE THE SHORES OF THE MEDITERRANEAN ON THESE SHORES WERE THE FOUR GREAT EMPIRES OF THE WORLD—THE ASSYRIAN, THE PERSIAN, THE GRECIAN, AND THE ROMAN. ALL OUR RELIGION, ALMOST ALL OUR LAWS, ALMOST ALL THAT SETS US ABOVE SAVAGES, HAS COME TO US FROM THE SHORES OF THE MEDITERRANEAN."—*Samuel Johnson.*

DIVISION I.—SYRIA GENERALLY, AND BEIROUT PARTICULARLY.

CHAPTER I.

SYRIA.—*Its Situation, Name, Extent; Divisions, Ancient and Modern; Physical Characters; Productive Industry; Manufactures; Civil and Social State; Climate; Diseases; State of Medicine and Surgery; Works on the Topography, Natural History, &c., of Syria.*

SYRIA is a province of Asiatic Turkey, called by the Arabians *Barr-el-Sham*, bounded on the north by Mount Taurus and its branches, which divide it from Asia Minor;(a) on the east by Diarbekir and the Euphrates; on the south by the Arabian Desert; on the west by the Mediterranean.

Name.—The original name of the country was *Aram*, from Aram, the youngest son of Shem; but the Ionians, who frequented these coasts after the Assyrians of Nineveh had reduced the country to be a province of their empire, about the year 750 B.C., corrupted the word Assyria into *Syria*. Some have said that it derives its name from *Syrus*; while Richardson ascribes it to *Suri*, a delicate and beautiful species of rose, for which the country has always been famous, hence Suristan, the land of roses;(a) and Lemprière, to Sora or Tyre.(b)

Extent.—Syria is estimated to contain about 50,000 square miles, and extends from 33°. 20′ to 34°. 50′ north latitude, and 35°. 20′ to 37°. 20′ east longitude from Greenwich.

Divisions, Ancient.—In the time of David it was divided into several petty kingdoms, the names of which occur in the sacred writings.(c) These seem afterwards to have been reduced under subjection to the four principal ones, Zobah, Damascus, Hamath, and Geshur. Afterwards the whole country was divided into two parts only, viz., Cœlo, Syria, and Phœnicia; though the Phœnicians, Idumeans, Jews, Gazites, and Azotites, or the whole country of the Philistines, were included. After the death of Alexander, Syria, in the great extent of the word, was divided into five large provinces, viz., Comagene, the Seleucide, Cœlo-Syria, Phœnicia, and Judea. Ptolemy, however, subdivided these, and in Syria Proper reckons only Comagene, Pieria, Cyrrhestica, the Seleucide, the Cassiotide, the Chalybonitic, the Chalcidic, the Assaméne, the Laodicene, the Mediterranean, Phœnicia, Cœlo-Syria, and the Palmyrene.(d) By a change which took place in these divisions, a large province, formed to the east by the Euphrates, was known under the name of Euphratensis.

Comagene was the most northern part of Syria, extending north-east between Mount Amanus, from the south-west to the north-east; Mount Taurus to the north; and the Euphrates to the east and south.

The *Euphratensis* extended along the Euphrates, the course of which was here from north-west to the south-east, having a chain of mountains to the west.

Pieria comprehended the town of Seleucia, named Pieria, from the adjoining mountain Pierius, which formed a small peninsula towards the north. At the extremity of this coast was the rock denominated Rossicus Scopulus; and upon the northern coast of the peninsula was the town of Rhosas or Rosos; west of Rhosas, and at the mouth of the Pyramus, was Ægæ; and between the mountains and the sea, the strait called Syriæ Pylæ. The gulf bore the name of Issicus Sinus, from the town of Issus, situated on the northern coast, and belonging to Cilicia. On the eastern coast were Myriandrus, or Alexandria, Alexandria-Cata-Isson, and Alexandria towards Issus, or Alexandressa. In the midst of a valley, near a lake north-east of Antioch, and on the course of a river, was a town called Hieracome, and more to the south, on a mountain, the fortress of Gindarus; to the west was Gephyra, on a small river, and south-west Pagre, or Bagras. At a small distance to the south was Antioch, on the Orontes; and further south was the place called Daphne, now Blit-el-ma. Towards the east was Imma, or Harem; and in ascending along the Orontes was a fine valley, having to the west Mount Cassius, upon which was a temple, in which were situated Platanus, or Blatanus; and a little further to the south, Baccalæ, or Bakas, since called Seleuco Belus (Shagr), which took its name from Mount Beluz, which almost shut up the valley on the south.

Cyrrhestica lay to the east of Antioch, and was watered by the Chalus, or Koeic; to the north were Deba or Ain-tab, and Ciliza or Kilis. Here were also Chaonia, Abarara, on the north-east; to the south-east, Regia or Sejour; and nearly south of Cyrrhus, the small town of Asa or Ezaz; and south-east, Thura, since Artas or Iterib.

The *Seleucide* comprehended the towns that lay on the seacoast: such were Marathus or Marakia,

(a) Syria, according to Ptolemy's arrangement, was bounded on the north by Cilicia and part of Cappadocia, and towards the west by the Syrian Sea.

(a) Notes to Moore's "Lalla Rookh."

(b) See "Classical Dictionary," article "Syria."

(c) 2 Samuel x. 8. Psalms lx.

(d) "Encyclopædia Britannica," "Syria."

Balanea or Balnias, Paltus, Gabala or Gebileh (Djebail), and to the north-west, on a small promontory, Laodicea-ad-Mare, or Ladittieh. The tongue of land which advanced to the north-west, was called Chersonesus, having at its extremity Cape Ziaret, and upon the northern coast a small fortress called Heraclea, or Meintaburg; and at a small distance towards the east, a small place called Cathala. At a small distance towards the north, on the seacoast, at the northern extremity of a small peninsula, was Posidium. On the south-east was the isle of Melibœa.

The *Cassiotide*, so called from Mount Cassius, was south of the mouth of the Orontes.

The *Chalybonitic* was south of Cyrrhestia, and north of Chalcidice, so called from Chalybon or Berœa, now Aleppo. North was Miasena, east Bannis, and Thiltauri in the mountains.

The *Chalcidice* lay to the south, and joined Assaméne. It took its name from Chalcis, situated at the place where the Chalus discharges itself into a small lake. To the east was another lake which, from the saltness of its waters, was called Lacus Salsus, and on the bank of which, to the north-east, was Gabala, or Gebul and south-west, Thelmenissus or Sernum.

The *Assaméne* lay to the north of Laodicene, and was traversed by the Orontes, from south-east to north-west. Here were situated Larissa or Shizar, on the Orontes; Assamea or Famieh, on the bank of a lake to the south, and surrounded by a lake; to the north-east of Assamea were Murra and Androna; to the east, Cassuræ and Theleda.

The *Laodicene*, or Losdicene, lay towards the north. Here were situated Laodicea-ad-Libanum; to the east, Emesa, where was a celebrated temple of the sun, to the north, Epiphania, called Kamah; to the west, Raphameæ or Rasineh; to the south, between the mountains, Lybum; north of Lybum, and north of Raphameæ, Demetrius or Akkar, north-east of this last place, Carion; and north-west, upon the Eleutherus or Nahr-el-Kibbir, Mariamme.

Phœnicia was bounded to east by Libanus, and lay to the north of Judea. Sidon was it metropolis, and several other towns of eminence were included in this division. viz., Tripolis, Byblus, Berytus, Tyrus, and Palætyrus.

Cœlo-Syria formed the southern part of Syria, between the Libanus and Anti-Libanus. Its principal towns were Damascus, Abyla Lysaniæ, Sonna, Paulas, Heliopolis (Baalbec), &c.

The *Palmyrene* was the eastern part of Syria, so called from the famous city of *Palmyra* (Tadmor)

Syria of Damas extended to the east, along the Libanus, and had Damas for its capital. *Syria of Emath* had Emath on the Orontes for its capital. *Syria of the Two Rivers*, or Mesopotamia of Syria, in Hebrew, Aram Nahazaim, was comprised between the Euphrates and the Tigris. *Syria of Maacha* extended on the side beyond Jordan, and was given to Manasseh.

Palestine was called Syria when it was subject to the Kings of Syria. *Syria of Rohole* was that part of Syria of which Rohole was the capital. *Syria of Soba*, called also Sobal, constituted a portion of Syria, the situation and extent of which are not now known. *Syria of Tob* lay in the vicinity of the Libanus: but its precise limits are not ascertained.

The Roman province of Syria included the whole of Judea *Modern*. It is now, including Palestine, divided into the pashalics of Aleppo, Tripoli, Sidon, Acre, and Damascus.

PHYSICAL CHARACTERS: GEOLOGY. — This country is, in some measure, only a chain of mountains, which distribute themselves in various directions from one leading branch, thus causing that variety of climate for which it is distinguished. The great mountain range, known by the general name of Lebanon, extends from the parallel nearly coinciding with the mouth of the Nahr-el-Berd, about ten miles north of Tripoli, to another corresponding with the mouth of the Kasmieh, between Sour and Seyde (Tyre and Sidon). These mountains are parted throughout their whole length into two branches by the fertile valley of the Bekaa, the ancient Cœlo-Syria; the western branch is the true Lebanon, in contradistinction to which the eastern branch is called by Europeans, Anti-Lebanon—a name unknown to the inhabitants. The length of this range is about ninety English miles, and its breadth from twenty-five to thirty. The space included within these limits is divided into ten districts, possessing several little towns, and between six or seven hundred villages. The rock that constitutes it is chiefly limestone, almost as hard as marble, which hardness increases as you advance northward, till, in the mountains near Antioch, it is almost a perfect marble.

Syria abounds in volcanic appearances—some important only in their geological relations; others also historically so; and the southern part, through which the Jordan flows, is a complete volcanic country. At different periods very extensive areas have been desolated by the convulsions of nature, attended with great loss of life and destruction of cities. History affords us direct evidence of the extensive ravages committed by earthquakes, in Aleppo, Tripoli, Sidon, Acre, Antioch, Baalbec, Laodicea, Berytus, &c.; and subjoined is a table of the most important that have happened.

A Table of Syrian Earthquakes.

Date.	Remarks	Number who perished
May 30, 526	Destroyed the greater part of Antioch	250,000
July 9, 551 (a)	Berytus destroyed.	
1169	Successive shocks for four months.	
1202	Destroyed Hauran and many cities, and filled up the valleys of Lebanon.	
October 30, 1759 (b)	Safed laid in ruins.	
1769	Antioch, Baalbec, Acre, Tripoli, &c., were laid in ruins.	30,000
August 13, 1822 (c)	Aleppo, Antioch, Biha, Gesser, and every village and cottage within the pashalic of Aleppo, wer destroyed.	20,000
January 1, 1837	Shook the whole of Syria.	6,000

In the earthquake of 1822 no less than twenty thousand persons lost their lives, and many more were maimed; and the violent shock which devastated Syria in 1837 was felt in a line of five hundred miles in length by ninety in breadth;(d) deep rents were caused in solid rocks, and more than six thousand people perished, and new hot springs burst out at Tabereah.

The chief part of the neighbourhood of Beirout and Lebanon is composed of granite, gneiss; mica slate and clay slate on the higher parts; while resting upon and forming the lower ranges are extensive deposits of secondary limestones and sandstones. The limestone abounds with organic remains, and in the neighbourhood of Djebail, fish of the genus *chætodon* are common, and *odontopetra*, *asteria*, *entrochitæ*, *strobili*, *echinides*, *madreporites*, &c. Resting on the limestone are deposits of tertiary rocks.

Lebanon is said to be rich in mineral productions, and iron is wrought in one or two places, as in the hills of Judea of old(e). Lead and pitch are also found in the neighbourhood Beirout.

The accretions of land on parts of the Syrian shores where rivers do not enter may be attributed to the current of the Mediterranean drifting the sediment of the Nile to the eastward(f).

(a) Rees' "Cyclop., 'Earthquake."

(b) Mariti "Voyages," ii., p. 164.

(c) "Journal of Science," vol. xiv., p. 450.

(d) Darwin's "Geol. Proceedings," vol ii., p. 658.

(e) "A land whose stones are iron, and out of whose hills thou mayst dig brass." Deuteron. viii. 9.

(f) Lyell's "Principles of Geology," 6th edition, vol. ii., p. 112.

The *soil* is very variable. In the plains, along the coast, it is sandy; in the mountains, very rich, abounding with oxide of iron, ironstone, limestone, and in many parts coal and volcanic substances.(a)

The analyses of several soils, from the most fertile parts of the country, obtained during my visits to the places, afford the following results:—

1.—Surface of the Plain of *Baalbec*.

Alumina	26·7
Lime, carbonate of	16·4
„ sulphate of	0·4
Magnesia, carbonate of	1·6
Organic matter	11·3
Silica	28·6
Iron peroxide	13·7
Hygrometric matter	1·3
	100·0

2.—Soil from the Banks of the *Nahr-el-Leban*

Alumina	12·0
Lime, carbonate	47·5
„ phosphate	0·3
Silica	34·2
Vegetable matter	4·1
Hygrometric matter	1·9
	100 0

3.—Soil from *Salayeh*, *Damascus*.

Lime, carbonate of	86·0
Alumina	7·0
Organic matter	5·3
Hygrometric matter	1·7
	100·0

4.—Rich Soil from the Lebanon (*Brumána*)

Alumina	23·9
Lime, carbonate of	4·2
„ sulphate of	1·1
Magnesia, carbonate of	a trace.
Salts of potash and soda	0·3
Organic matter	13·0
Silica	34·1
Iron protoxide	19·5
Hygrometric matter	3·9
	100

5.—Soil of the Gardens of *Beirout*.

Alumina	48·0
Lime, carbonate of	18·1
Magnesia, „ „	4·0
Soda, nitrate of	0·3
Iron protoxide	5·4
Organic matter	7·9
Silica	15·0
Hygrometric matter	1·3
	100·0

Like most countries composed of calcareous materials, and which have been visited by successive earthquakes, Syria abounds in caves, stalactitical formations, and deep recesses in the limestone. Near the source of the Nahr-el-Kelb is a natural bridge, considered, and deservedly so, the greatest curiosity in the neighbourhood, or even Syria. It is called by the natives Djesr-el-Khadjer, and is of the following dimensions.

The span	180 feet.
The spring	140 feet.
The breadth	140 feet.
Height from the water to the summit	160 feet.
Depth of the keystone	20 feet.

MOUNTAINS.—Syria is divided into two distinct portions by Mount Lebanon, whose highest peak is 11,050 feet above the level of the sea, and perpetually crowned with snow.

In the north the principal mountains are Djebel, (b) Khneb-Djebel Akkar, and Djebel Amanue.

In the south, Anti-Libanus and Mount Hermon.

In the east, there are the Sheball and Usneran hills.

(a) Captain Frankland's "Travels," vol. ii., p. 168.

(b) Djebel signifies a mountain; Nahr, a river; Bahr, the sea or lake; Râs, the head or cape.

R[illegible]s.—Some of the rivers of Syria have been famed, from time immemorial, so much so that frequent mention is made of them in the sacred writings, and Naaman, when desired by the prophet Elisha to "Go and wash in Jordan seven times," boasts of the rivers of his country (a) and refused.

Coasting southwards, we find the following rivers in succession:—The Nahr Arbasch, Nahr Keben (Eleutherus), Nahr Abrosh, Nahr el-Acchar, Nahr el Berid, Kadisha, Nahr Bes bhaza, Nahr-el-Kôbs, Nahr Ibrahim (Adonis), Nahr-el-Kelb (Lycus), Nahr el Leban or Beirût; Nahr-el-Kahdi (Tamyras), Nahr el-Aouly-Nualy el Djunda, Nahr el Derbel, Nahr el-Zahrany, Nahr Abu el Aswad, Nahr el-Thany or Leitany (Leontes).

In the north east is the Nahr Aazy (Orontes), called in its lower course the Nahr el Hamy, and the Nahr el Baruda (Pharpar) in the south-east, arising from Anti Libanus.

Besides these main streams from the mountains contribute towards irrigating the land and supplying it with necessary moisture.

Lakes. Fresh.—In the north is the Bahr-el-Kades, or Lake of Orontes. In the south east the Bahr-el Merdj, or Lake of the Meadows.

Salt—In the east the Mais Bahr, or Salt Lake.

Salt-pans. On the southward of the Ras Nahr el-Kelb is a square basin hewn in the solid rock, close to the sea, into which the salt water is admitted for the purpose of making salt by evaporation. The place is called El Mellahchk derived from the Arabic word melhchk, or salt, and is the only one of importance.

Bays.—The most remarkable are the Bay of Djounie, or Kesrouan (b) and St George's Bay, Beirout.

Capes.—Proceeding towards the south we notice the Ras el Kesn, Ras Enhasch, Ras el Schikaa, Ras el Dochebail, Râs Beirout, Ras el-Damur, Ras el Ebbi Junes, Ras el Djedia, Râs Mini Romain, Ras Sarphin, Ras el Albiad (Cape Blanco) and Ras Nakhora (Scala Tyriarum).

Plains. In the north is the Plain of Aleppo, the Plain of Keffien (southward of Aleppo), the Plain of El Djouni, Plain of Baalbec, the Plain of El Ghûtah, or the Plain of Damascus in the south (c), so celebrated for its beauty and great fertility.

Botany.—Syria unites different climates under the same sky, and collects within a narrow compass those productions which Nature has elsewhere so widely distributed. To this may be ascribed the charm which is thrown over the scenery, from the beautiful grouping of the trees, which are distinguished for their evergreen character and dark colouring.

The geognostic nature of the soil has a remarkable influence on the presence of certain plants, but, nevertheless, plants which peculiarly belong to a particular soil appear very frequently on other soils, and I can only know which would have been the more useful or interesting arrangement—according to the soil, as sand, chalk, rock, or bog plants, or their curves of temperature, certain it is that the climate would be exceedingly useful but occupy more space than could well be spared in this journal: therefore the most important and general productions have been arranged according to the natural system, without any regard to temperature or soil. Those marked with an asterisk are indigenous.

(a) "*Are* not Abana and Pharpar rivers of Damascus, better than all the waters of Israel?" &c, 2 Kings, v. 12

(b) The district of the Kesrouan contains 200 convents.

(c) "The Ghûtah of Damascus is one of the four paradises, which are the most excellent of the beautiful places of the earth. They are the Ghûtah of Damascus, the Sheib of Bauwan, the river of Ubelleh, and Soghd of Samarkand. The Ghûtah of Damascus excels the other three."—"Abulfeda," Tab. Syr., p. 100.

DIVISION I.—VASCULARES.

EXOGENÆ—I. ANGIOSPERMÆ.

Ranunculaceæ. Ranunculus acris, r pratensis acris, r bullatus, r flammula, r bulbosus, r flammeus major et minor, r. Asiaticus, aconitum napellus, caltha palustris.

Nymphæaceæ. Nymphæa alba, nelumbium speciosum, n lotus.

Papaveraceæ. Papaver somniferum, * p rhœas.

Cruciferæ. a Nasturtium officinale, cardamine pratensis, cochlearia armoracia, cochlearia officinalis, β sisymbrium officinale, lepidium sativum, γ brassica campestris, sinapis alba, s. oleracea, * senapis lævigata.

Malvaceæ. Malva sylvestris, m verticillata, althea officinalis, hibiscus esculentus, h syriacus *

Cacteæ. Cactus opuntia *

Salicariæ. Lawsonia alba, l inermis.

Myrtaceæ. Myrtus communis, punica granatum.

Aristolochiæ. Asarum Europeum.

Rosaceæ. Rosa centifolia, mespilus Germanica, m grandiflora, cerasus padus, azarollus tenacetifolia, cratægus trilobata.

Pomaceæ. Pyrus communis, p sorbus, p torminalis, p aucuparia, p salicifolia, p elæagnifolia, p aria, cydonia vulgaris.

Amygdaleæ. Prunus domestica *p Armeniaca, p cerasus, p avium, amygdalus communis,* a orientalis,* a nana.

Leguminosæ. a Glycyrrhiza glabra, * m digitata argentea, trifolium suffocatum, t subterraneum, pisum arvcum, p sativum, lupinus termes, β mimosa agrestis, m julibrissin, * m Stephaniana, acacia nilotica, a farnesiana, cassia acutifolia, tamarix Gallica, t orientalis, t Africana, t Germanica, t pycnocarpa, * ceratonia siliqua, cercis siliquastrum, spartium monospermum.

Urticeæ. Urtica dioica, cannabis sativa, humulus lupulus, celtis Australis, c occidentalis, c Tournefortii, * liquidambar imberbe *

Ulmaceæ. Ulmus campestris, u effusa.

Artocarpeæ. Ficus caricus, f sycamorus, morus nigra, m alba.

Cupuliferæ. Quercus infectoria, * q robur, q pedunculata, castanea vesca, fagus sylvatica.

Betulaceæ. Betula alba, b pontica, * alnus nigra, carpensis betulus, c orientalis, * ostrya vulgaris.

Salicineæ. Salix fragilis, s alba, s caprea, s monandria, s subserrata, s. Babylonica, populus tremula, p Euphratica, p nigra, p alba.

Platanea.[a] Platanus orientalis, p acerifolia, * p crinita.

Juglandeæ. Juglans regia. *

Euphorbiaceæ. Ricinus communis. *

Rhamneæ. Rhamnus catharticus, zizyphus spina christi, z vulgaris, palmirus Australis.

Hippocastaneæ. Æsculus hippocastanum.

Acerineæ. Acer plantanoides, a campestre, a negundo, a pseudoplatanus, a monspessulanum, a heterophyllum.

Vites. Vitis vinifera.

Meliaceæ. Melia azedarach. *

Aurantiaceæ. Citrus medica.

Violaceæ. Viola odorata.

Lineæ. Linum usitatissimum.

Chenopodeæ. Chenopodium album, c maritimum, c olidum, spinacea oleracea, salicarnia herbacea, atriplex halimus, beta maritima, b cicla, b. vulgaris, salsola fruticosa, s arbuscula, blitum capitatum. *

Polygoneæ. Rheum palmatum, rumex acetosa, r aquaticus, r roseus, r nemolapathum, r spinosus.

Umbelliferæ. Conium maculatum, apium graveolens, apium petro-celinum, pimpinella anisum, p. arvensis, crithmum maritimum, daucus carotta, cuminum cyminum; anethum graveolens, ferula galbanifera * inula viscosa, f fœtida, f crithmoides, f undolata, f [illegible].

Ilicineæ Ericeæ. Ilex agnifolium, i. [illegible] i pseudo coccifera, i infectoria,* i. phlœos,* i Libani,* i. Tournefortii;* i. lops, Æsculus.

Ericeæ. Arbutus unedo, a. andrachne.*

Pyrolaceæ. Chimaphila.

Cucurbitaceæ. Cucumis colocynthis, c. sativus, c melo-cucurbita citrullus.

Compositæ. a. Artemisia santonica, a. arborescens, a fragrans,* a Judaica; anthemis nobilis, a pyrethrum; a. grandiflora; a. indurata, γ cichoreum entibus; lactuca sativa; leontodon taraxacum, carthamus tinctorius; c. narcoticus, c cornelus.

Stellatæ. Rubia tinctoria.

Caprifoliaceæ. Sambucus nigra; cornus mascula, c suecica.

Asclepiadeæ. Asclepias Syriaca.*

Oleineæ. Olea Europea,* fraxinus excelsior; f ornus, f rotundifolia.

Scrophularineæ. Digitalis purpurea; veronica beccagunga.

Solaneæ. Solanum Sodomaeum, s. lycopersicum, atropa belladonna, nicotianum tabaccum, n rustica, capsicum annuum.

Labiatæ. Mentha piperita, m pulegium; m viridis, thymus communis, lavandula spica; origanum marjorana,* o vulgare, rosmarinus officinalis, salvia officinalis, verbascum undulatum, betonica purpurea.

Boragineæ. Borago Africana, cordia myxa.

Heliotropeæ. Heliotropium lineatum.

ENDOGENÆ—II. GYMNOSPERMÆ.

Coniferæ. Pinus sylvestris, p larix, p abies, p halepensis, abies orientalis, a. taxifolia, juniperus sabina, j drupaceæ, j. Phœnicea, j fœtidissima,* j communis, j excedens * j Tournefortii,* taxus baccata, larix cedrus, vel cedrus Libani,* cupressus sempervirens * pistachia vera (a) p lentiscus, p terebinthinus, thuja orientalis,* thuja articulata.

[illegible]

Iridaceæ. Iris [illegible], b Beiutn *

Amaryllideæ. Narcissus Tazetta, n jonquilla, [illegible] Tournefortii,* crinum [illegible].

Irideæ. Iris florentina, i Assyriacum, gladiolus communis, crocus sativus, c rubra, c purpurea, c lineatus.

Asphodeleæ. Scilla maritima,* asphodelus ramosus, hyacinthus comosus, allium sativum, a cepa, a porrum.

Liliaceæ. Lilium candidum.

Smilaceæ. Smilax aspera, s excelsa,* convallaria majalis.

Scitamineæ. Alpinia.

Colchicaceæ. Colchicum autumnale, c crucifolium.

Palmæ. Phœnix dactylifera *

Aroideæ. Acorus calamus.

ENDOGENÆ. II. GLUMACEÆ.

Gramineæ. Triticum sativum, t turgidum, t hybernum, avena sativa, a fatua, a arundinacea, a pumila, a Forskalii, hordeum distichon, lygeum spartum, stipa tortilis, zea mays. *

DIVISION II.—CELLULARES.

In this division there is little of interest, except a few algæ, the most important of which are the Fucus vesiculosus, Chrysimenia uvaria, Corallina officinalis, Dictyota dichotoma, Caulerpa prolifera, Sargassum salicifolium, Codium bursa and flabelliforme and the Odonthalia dentata.

MEASLES DURING THE LAST WEEK OF UTERO-GESTATION, WITH RESULTS TO MOTHER AND INFANT.

By ALEXANDER TYLER, M.D., Edinburgh, Licentiate of the King's and Queen's College of Physicians in Ireland, Lecturer on Midwifery, and the Diseases of Females and Children, &c. &c.

Mrs O., aged 25. First pregnancy, and now, according to her own reckoning, some weeks beyond her full time, after exposure to the contagion of measles, complained of the usual premonitory symptoms on Monday, the 10th of May, 1847.

(a) The pistachia belongs to the nat. *Terebinthaceæ*, but I have chosen, for reasons, to place it here.

She had been out on the previous evening, and then for the first time felt her face flushed and warm, next morning the eyes were inflamed and tender, and the usual catarrhal symptoms had set in. On Tuesday the eruption was distinct upon the face. As the cough was harassing, I ordered a mucilaginous mixture, with syrups of squill and saffron which effectually relieved it

On Wednesday, the 12th, the eruption was well out over the trunk and extremities, complains of nothing except of the excessive heat of the surface of her body

On the 13th the eruption had nearly faded away, and in every respect our patient was going on favourably. At eleven P.M. I was summoned to attend, labour pains having commenced since four o'clock, and continuing with regularity and increasing in intensity every ten or fifteen minutes

On a vaginal examination, the os uteri was found dilated to the size of half-a-crown, the head of the child presenting and low down, the bag of membranes entire

Labour progressed favourably until half past two A.M. of the 14th, when, the soft parts being fully dilated and the membranes protruding, distended largely with the liquor amnii, I allowed the waters to escape, which were in great abundance, and at an unusually high temperature Half an hour afterwards she was safely delivered of a fine healthy male child, full grown his skin was thickly covered with vernix caseosum, but when washed presented a natural and healthy appearance

15th Both mother and baby doing well, the latter is exceedingly quiet, and drinks well There is a wrinkled state of the skin extending from the root of the nose over the eyebrows was observed to sneeze, and has slight hiccough occasionally

16th Mrs C slept well last night until early this morning, when she was disturbed by the baby the latter is heavy and drowsy at present the colour of his face is rather a yellowish than red, but the attendant states that they observed distinct spots upon his face and neck an hour before my visit, continues to sneeze frequently breathes free, stools natural &c

17th To day, distinct blotches of measles are visible on the cheeks neck, and shoulders the catarrhal symptoms continue but not severe hiccough frequent, secretions natural

18th The eruption has almost disappeared off the baby, his mother has a long supply of milk, of which he partakes freely

19th Both mother and baby progressing most favourably, which they have continued to do up to this date, the 27th of May

The above case I think is interesting in a double point of view First, as proving the innocuousness of measles to a healthy female even at the close of utero-gestation And secondly, as establishing the fact that measles are not contracted by the infant *in utero* but may be communicated to it, at birth, by its own mother, and afterwards run their usual course

30, Harcourt-street, Dublin

OBSERVATIONS ON THE ACTION OF MERCURY IN INFLAMMATION, AND ITS EFFECTS ON THE SYSTEM

By HENRY SMITH M.R.C.S
Late House Surgeon to King's College Hospital

(Continued from page 273)

I have, in my former papers, endeavoured to lay down a theory of the action of mercury in inflammation, have reviewed those forms of inflammatory diseases in which it should be given, and those forms in which it should be withheld, and have made some remarks upon the mode of administering it, and upon those immediate ill effects which often arise during its exhibition I have shown that they are accidents of by no means an unfrequent nature, and that they prove prejudicial to the patient, and embarrassing to the practitioner. Before I take leave of this subject, then, I think it [illegible] some remarks on the best mode of preventing these accidents from taking place, and of counteracting them when they have taken place.

Excessive salivation and severe purging are the accidents I mentioned, and, to speak of the first It has been shown, from a few cases I mentioned, that this is attended sometimes with a fatal result, or, if not so, at least with dreadful suffering and, perhaps, lasting disfigurement and consequent misery Since that portion of these observations which contained the above cases was written, I have had an opportunity of seeing a shocking instance of deformity and suffering from the effects of violent salivation in a young man who was a patient in the King's College Hospital The jaws had become permanently closed, and the greater portion of the lower lip had been destroyed by sloughing, consequently the saliva could not be retained, and was running off from his mouth This had happened twelve years ago and he applied to the hospital to have the benefit of Mr Fergusson's ingenuity, who has performed the operation recommended by Mr Syme, for restoring the lip

Excessive salivation is doubtless apt sometimes to arise during the exhibition of mercury, where no want of caution has been shown, either from a peculiar susceptibility of the patient to its influence, or from a large dose having been taken at once, but many cases are owing to improper want of caution on the part of the practitioner, or from some rashness on the part of the patient And I think, therefore that many of those dreadful cases of violent salivation may be prevented by watching carefully the effect of the remedy The first symptom of salivation should be strictly noticed, and the remedy should then be managed according as the disease which we are treating is more or less slow As a general rule, when the system is affected the dose should be diminished as a small quantity would be sufficient to keep up a continued action and we can very easily strengthen or lessen its action, according as circumstances indicate its use, by altering the frequency and strength of the doses and it should be recollected that pushing on a furious salivation will do no good, if a fair but moderate action of the remedy has failed By attending to these points, we shall be spared the painful sight of patients convalescing from some diseases perhaps not very severe themselves with greatly swollen cheeks saliva running out of their mouths and hardly able to articulate plainly, or, if they can speak cursing the remedy worse than the disease and speaking in no measured terms of the doctor who has been giving it

If, however excessive salivation has set in with all its concomitant evils and annoyances we must use those remedial means which our art has afforded us with the view of neutralizing the poison both locally and generally and they must be employed with more or less vigour, according to the nature of the case

Generally speaking, in these severe cases, there is great inflammation of the cheeks and mouth, and, moreover from this cause there is inability to open the jaws If such should be the case it would be advisable to apply a few leeches on each side of the face, and afterwards to foment continually with cloths saturated with warm water or a decoction of poppies, this will abate the inflammation and relieve the patient of the excessive pain which these conditions produces At the same time some astringent and antiseptic lotion should be used with the double object of constringing the relaxed and swollen parts inside the mouth, and correcting the abominable fetor and the disposition to slough which is attendant upon such cases

Various remedies are used. Dr. Watson, in his lectures, speaks highly of brandy and water, and I have in more than one instance employed it with benefit, a good preparation is a mixture of alum and chlorinated soda ʒij. of the former with ℥j. of the solution of the latter to ℥viij. of water; but the strength must vary according to circumstances, if there is much ulceration, a strong solution will give unnecessary pain. Oak-bark, nutgalls, and tannin are also most valuable remedies, and particularly the latter, as it is a powerful astringent If there is inability to open the jaws, and the mouth is clogged with a viscid secretion, the lotion should be injected with a syringe, and warm water should be frequently thrown in in the same manner to clean this nasty stuff away. But local measures alone will not suffice the constitutional symptoms, which are severe and in some cases alarming, should be attended to, and we must endeavour to get the poison excreted from the system by the various depurative organs In general there is extreme depression, accompanied with quickness of pulse and nervous symptoms These, then, obviously indicate measures of support, and it will be requisite to give it liberally Any bland nourishing material mixed with wine may be given occasionally, and a decoction of bark, or quinine be prescribed, and these remedies may be increased or diminished according to circumstances

Sometimes, as I have before said, there will the greatest difficulty in getting food into the mouth, so much pain is experienced on attempting to move the jaws: if this be the case, the attendant must carefully separate the jaws and supply the nourishment and medicine by means of a feeder or spoon In more than one instance have I been obliged to do this myself, when it has been impossible for the patient to do it. For the purpose of getting the mercury more quickly out of the system, or neutralizing its effects, we must use certain medicines which act on the secreting organs, or which combine with the mineral The bowels should be well purged by some vegetable or saline medicine, and they should be kept open if the patient is not too debilitated Various remedies have been recommended, which are found to act as antidotes to mercury either by acting on the secretions in some manner or by combining with the mercury and neutralizing its power Tartar emetic, acetate of lead, opium, have been given and spoken well of by some The former acts beneficially, by exciting the skin, the latter, by checking the secretions of the mouth and constringing the parts There is one remedy, however, which appears to possess considerable influence in removing salivation, and one which I think is not universally known, I mean sulphur; by referring to Mr Colles's works I find that he recommended it several years ago In what manner it acts we are not able exactly to tell, but it is highly probable that it enters into combination with the mineral, and forms a sulphuret, which is an inert preparation, moreover, it acts as a purgative and also goes off by the other secretions, particularly the skin I have had opportunities of using sulphur for ptyalism, and I have seen it used by others, and certainly, in the majority of cases, decided benefit occurred. The only objection I have noticed, is the fact that it sometimes irritates the bowels very much. I used it in a case lately, when I was obliged to suspend it for this reason. I would strenuously recommend it to those who may meet with a troublesome case of salivation. Mr. Allison has found out that chlorate of potash has a most beneficial influence over mercurial salivation, and he has tried it in numerous cases.

These, then, are the means which it would be advisable to employ, should we meet with a severe case of this kind of disease, and they will in the majority of instances relieve the distresses of the patient and hasten his cure, nevertheless, in some cases, bad results will happen cicatrization of the parts will take place and contractions follow, and the motions of the jaws be much limited, or there will be a loss of a greater part of the lower lip, and consequently an uncomfortable flowing away of the saliva, these are accidents, however, which are now rare, and which happen for the most part, perhaps, when there has been some neglect.

Sometimes, after the acute state is over, and the patient has become convalescent, the gums continue very sore, and the affection still remains in a less degree. This will be found to happen

amongst the lower orders, who are dirty in their habits, and neglect their teeth; in such a case we shall find them incrusted with a quantity of filth, which keeps up the irritation: by removing this with a proper instrument, and using plenty of water and some astringent lotion, the cure will be effected.

The purging which sometimes takes place on the administration of mercury I will next consider, with respect to those measures which are liable to prevent and correct it; and these are important points to consider, as this occurrence is extremely troublesome, and likely to suspend our efforts in the cure of disease, for some time at least.

In the first place, whatever preparation of mercury is going to be used, if possible, the bowels should be well cleared out previously by some aperient which will effectually do this without irritating them much. The mercury should be carefully combined with opium, and the dose of the latter should be increased in quantity if necessary. If any griping ensues we may suspect that the mercury is about to act on the bowels; therefore, we should either suspend it, if we can, or, if not, we should diminish the dose, and our object may be gained without any inconvenient occurrence taking place. But nevertheless, notwithstanding great care on our part, the mercury will determine to the bowels, and produce the most severe and harassing diarrhœa, and even dysentery, and it now becomes our duty to correct and restrain it. The mercury must be left off; an opiate and starch enema be given, and a draught containing some aromatic confection, olive oil, and some laudanum; this will check it immediately. If the mercury is necessary, we had better use it in the form of ointment, as, in all probability, the use of it internally will be attended with irritation of the bowels again; and, should this be the case, it will be found extremely difficult to salivate the patient.

John Hunter, thinking that the purging was produced by the mercury uniting with the acids in the intestines, and thus forming an irritating compound, advised the employment of alkalis to correct this morbid state; and I have heard it remarked, that all purging may be effectually prevented by giving, after each dose of mercury, an ounce of chalk mixture.

I have now brought to a close the observations I had intended to make; but, since I had begun to put them together, my attention was attracted to a paper in the *Lancet* of April 24, by Mr. Holmes Coote, which had the object of inquiring into the efficacy of mercury as a remedy for syphilis, and of showing that it has not the power of eradicating this poison from the system. For this purpose he has related numerous cases of syphilis which, after it had been proved that the patients had taken more or less mercury, were followed sooner or later by secondary symptoms; and he ends his communication in these words:—"I confine myself to the conclusion which these cases seem to warrant—namely, that whatever power mercury may possess in arresting the progress of syphilitic ulceration, or in removing some secondary affections, it is wholly inefficacious in eradicating the venereal poison; and, moreover, that when carelessly administered it injures the general health, and is capable of exerting a most injurious influence, by which the subsequent symptoms resulting from the infection may assume an infinitely more formidable and intractable character."

Mr. Coote, with a view to obtain truth, has followed the proper mode of investigation, which will alone bring good results, by collecting a number of cases, observing them, and reasoning upon the facts observed; but, at the same time, I think he has failed in convincing his readers of the truth of the opinion he asserts—that mercury is wholly inefficacious in eradicating the venereal poison; and that he will not shake their faith in a remedy which has been handed down from generation to generation as a specific against one of the most dreadful scourges of mankind. We have few enough specifics as it is, therefore let us not hastily reject those which we now possess.

Mr. Coote collected his cases, as I suppose, from hospital patients—in and out—and appears to place perfect reliance on their statements; but every one who has seen much of hospital patients, and particularly those who labour under the venereal disease, must be aware of the great difficulty there is in obtaining correct information on a point which even their small sense of shame will forbid them to give.

Moreover, Mr. Coote, I suppose, had not many of the patients, when affected with primary symptoms, under his observation at the time, and, therefore, he is unable to tell the manner in which they were treated; he knows certainly that they did take mercury, but he does not know (or, at all events, he does not say he does) how the remedy was administered: whether those precautions which are necessary for the proper action of mercury were used, and to what amount, and in what time the system was affected, and whether or not that proper attention was paid in the administration of this remedy which must be observed in the treatment of syphilis. In some of the cases mentioned Mr. Coote gives the particulars: for instance, Case 13 —"A woman took mercurial pills at the request of her husband, and suffered a profuse salivation." Case 17.—"A sailor, of his own accord, took two or three hundred pills; his health suffered severely; but, abstaining from mercury, he got well; on landing he had rupial sores." In another case the mouth was but little affected: and in Case 20, a patient took mercury for phagedœnic sore, and, this not healing, he had secondary symptoms.

Now, I have no doubt every one will admit that, although a salivation may be excited by mercury, that is no reason why a sore should be healed and secondary symptoms be prevented, *particularly if this salivation has been induced rapidly and severely, and not according to the rules which ought to be followed in the administration of mercury.* Mr. Coote must be aware that symptoms similar to those produced by the poison of syphilis will be produced by an excess of mercury, or by this drug being given incautiously and at improper periods, and, moreover, that it is very difficult to distinguish the two diseases; it is probable, therefore, that the symptoms observed in those cases, when a profuse quantity of mercury had been taken, was as much owing to this cause as the venereal poison—in fact, to a combination of the two. I am persuaded that Mr. Coote, from having held the position of house-surgeon to Bartholomew's Hospital, must have had cases under his care where the symptoms, after a large quantity of mercury had been injudiciously given for syphilis, were so difficult to be rightly understood that he has hesitated what course he ought to pursue, whether to give mercury or to abstain from it altogether. I am sure I have seen cases in King's College Hospital (where I have had an opportunity of observing a great deal of syphilis) in which the symptoms were attributable not to the venereal poison alone, but to the influence of mercury taken to an unwarrantable extent. It is from my own observation of these cases, and from the experience of those who have written largely upon this subject, that I have come to the conclusion that symptoms similar to those produced by the poison of syphilis may occur from mercury, either taken to an immoderate extent, or not in sufficient quantity, or with proper attention to those rules which should be always followed when this powerful remedy is being taken.

If Mr. Coote could bring forward a number of cases where it could be seen that mercury was given cautiously, and according to the rules of art, and where every necessary concomitant assistance for the eradication of the poison was followed, and secondary symptoms subsequently showed themselves, then he would have sufficient reasons to form a strong opinion on the subject; but, until he does so, I think he will fail in establishing his opinion, "that mercury is wholly inefficacious in eradicating the venereal poison."

To show how necessary it is to observe careful rules in the use of mercury, and not be content with salivation alone, I will quote the words of a late celebrated surgeon who paid great attention to this point. Mr. Colles, after speaking of those precautions which are necessary in the administration of mercury in syphilis, says:—"I have been thus particular in stating at what period the surgeon should wish ptyalism to commence when using mercury for the cure of primary symptoms, because I am firmly convinced that he cannot count upon a cure if the salivation occur at a period much different from the above-mentioned period: for, should he be suddenly salivated, and even though not profusely, it will yet leave the disease uncured; *perhaps the primary disease may be cured; oftentimes it is not, but, at all events, the secondary symptoms will not fail to make their appearance, sometimes in full vigour, though often under a more subdued form.*"

Again, Dr. Graves, who has paid much attention to this subject, says (although a non-mercurialist)—"The venereal poison produces a peculiar train of primary and secondary symptoms; the mercurial another, and that not very dissimilar. Experience has proved that in general the venereal symptoms yield to the action of mercury; but occasionally this is not the case, in consequence either of some constitutional peculiarity, or an injudicious use of this mineral; and thus the constitution labours under a modified disease resulting from the combined effects of the two poisons."

109, Great Russell-street, Bloomsbury-square,
June, 1847.

ERGOT OF RYE IN HEMORRHAGE.

By W. W. DOHERTY, M.D.,
Ex-Member and President of the Royal Physical Society, Edinburgh University; Licentiate in Midwifery; Member of the Dublin Obstetric Society; Physician to the Dispensary; late of the Sisters of Charity, Edinburgh; and to the Guild of St. Joseph, Edinburgh.

How far, if at all, interesting to your readers the following case may be, I beg to submit it on account of its novelty. I am not presuming too much when I say it is the first case on record of the kind where the same treatment has been adopted. I would have refrained from the performance of this light task had I not observed allusions to M. Bonjean and Dr. Chevalle, of France, in the journals, in connection with the introduction of the use of seculi cornatum (ergot of rye) in external and internal hemorrhage—or, in other words, its use as a styptic externally, and its value in hæmoptysis and hœmatemesis. I am well aware it has been little, if at all, used in this country except in uterine hemorrhage. This much I know, after conversing with many—all, I may say, of the leading men in Edinburgh—that in only one or two cases have they ever heard of its employment. A medical gentleman in Fife, I heard from my friend Dr. Somerville, tried it in hæmaturia, but, I think, unsuccessfully, owing to complication of disease and advanced age. I have taken pains to make strict inquiry how far it may have been used, but have failed to find its having been resorted to except in uterine cases in this country; and in which I believe there is no person of the present day possessed of any information who will question its utility. On the 6th of June, 1842, I was requested to visit Mr. M'L., who had been seized with an attack of hœmatenon two or three days previously. On my visit I found Mr. M'L. in an exceedingly weak condition—the pulse almost imperceptible; countenance anxious, with, on pressing the abdomen, very considerable pain and tenderness. The first object I had in view was to remove this exhausting pain; and with difficulty I have prevailed on his friends to apply twenty-four leeches to the epigastrium, they fearing that his death, by their application, would be accelerated. The most powerful astringents immediately were had recourse to, including the mineral acids, sulphate of copper, gallic, Ruspini's styptic, alum, kino, and others

chu and opium, in combination with kino, &c., but without any apparent diminution in the discharge of blood, which still continued to flow in fearful rapidity and profusely. The leeches removed much of the pain, and he expressed himself satisfied with their application. The quantity of blood vomited I could not well ascertain; I had sufficient proofs of it being large from the appearance of the vessels in which it lay, the saturated condition of the bedclothes, and the reports made by those who witnessed it: in fact, to describe it as I saw, much less to speak of it as represented, would be looked on as exaggeration My endeavours to arrest the hemorrhage by the usual means seeming ineffectual, I thought it right to have the advice of some eminent men, and I suggested this to the family. Professors Lizars and Alison were sent for, but owing to engagement, the latter did not come. Professor Lizars and I continued our attendance until Friday morning, when, for the last time, we saw him together at eight o'clock A.M. From the commencement our hopes for his recovery were far from sanguine, in fact we despaired of him, considering the time which had elapsed before advice was had, and the alarming symptoms which accompanied the attack. I had once used ergot, but had not satisfied myself of its power in such a case, and was determined, should another again arise, to try it, and on frequent occasions spoke of it to many medical friends, who seemed to think the power of ergot in checking hemorrhage did not extend beyond the uterus, and consequently in this case would be useless. Is the power of ergot confined to muscular structure, as the uterus? I say no, but is extended to cellular structure, as to this case. Here there was no hope of recovery, and I suggested to Professor Lizars to make a trial of the ergot. He at once consented, and I prepared an infusion of three drachms to six ounces of boiling water, ordering two tablespoonfuls every half-hour to be given punctually. As I mentioned before, Professor Lizars did not again see him, nor did I on my leaving with him ever expect to see him alive. On leaving I promised to return in about three hours. He expressed a strong desire for me to remain, but other engagements prevented me, and I pleaded my excuse with great regret.

At the time appointed I returned, and, to my surprise and pleasure, found the hemorrhage had ceased. Strange as it may appear, the pulse became quite elevated without any stimulant. I forgot to mention in its proper place, that the extremities, as well as the entire body, were cold and clammy in the morning when I left, as throughout, notwithstanding heat to a high degree had been applied to the feet, air having been freely admitted into the room, where atmospheric pressure had been great previously, the whole surface of the body soon assumed as natural a heat as could have been desired. A second attack of pain (abdominal) returned next morning, but, although inclined to repeat the leeches, I applied an instant blister, as I feared more than enough blood had been already lost. I gave him five grains of Dover's powder, and ordered another dose in three or four hours, and to be repeated under certain circumstances. Same day there was a slight return of the discharge, which caused a good deal of alarm; I repeated the infusion, the hemorrhage was again stopped, and the abdominal pain yielded to the blister. Dr. Mist, of Lebanon, uses ergot, and has not found it lowering the pulse. He was called into a case of menorrhagia, Mrs. C., who was attended by another practitioner, who used the "tampon" ineffectually, he thought "the debility was considerable,"—these are his own words; it was a favourable case for the ergot; used it in five-grain doses; reaction was the fit, and the hemorrhage ceased. Miss L. was attacked similarly; respiration difficult, extremities cold, pulse small and weak; the same treatment was observed, the same result followed; "the hemorrhage was checked after the third powder."—*New York Medical and Physical Journal* (No. 26).

This medicine has been extolled by many; and condemned by many too, very unjustly. I have heard it condemned by men who acknowledged, nevertheless, its use. For my part it is not with me such a favourite remedy as to induce me to apply it on every occasion, but I would infinitely prefer it internally to creosote, as recommended by Sir P. Smith.—*Dublin Journal.*

Yet, on the other hand, having had an experience of some years of its powerful astringent qualities, I would not consider myself without blame were I to conceal the result of that experience from the profession, believing that by its agency the life of the patient to whom I now refer, and other lives, have been saved. Mr. M'L. never had a third attack; he is now well and in the enjoyment of most excellent health. The late Dr. Abercrombie witnessed its use in another patient of mine, Gilbertson, a man residing in the High-street. I trust that in giving this case it may be received as it is offered. It is done, first, to prove that this medicine may be employed with advantage, even when there is great prostration, in other than uterine hemorrhage. My object is not to extol it beyond its merits, but I think it only fair to give it a trial; and to those who place no confidence in its efficacy, I would respectfully say, what harm can it do when the usual remedies fail, and death stares you in the face? I have only to look back a few years, and find its use in obstetric cases abused or questioned. Further, I will find that such men as Paulet, Decandolle, and Wildenou have disagreed in regard to its qualities, its actions, and the cause of its production. That it has long been known in obstetric practice since 1600 is quite well ascertained, and yet is it not strange that prejudice has prevented its use in cases such as I refer to? Mitchell (England), who uses in menorrhagia, will not agree with Mist (Lebanon), the latter admitting it *per se*, the former denying its efficacy unless combined with acetate of lead.

As I mentioned one reason for intruding myself on the attention of the profession, I may state another—viz., as it relates to its entire efficacy without combination with any other astringent; that it is in itself a most powerful astringent, which can be exhibited in such cases without any bad consequence resulting; and thirdly, to show that I have used it with success in this country before it was tried, or at least recorded, in France as having been resorted to. The last may appear somewhat a selfish reason, but on that head I will not occupy a line in explanation. I am narrating facts; which, if useful, is enough for my purpose. But there is one thing certain, that to French pathology we owe much, and to local bleeding, in cases like Mr. M'L.'s, the French were the first to direct our attention to its efficacy, yet, in acknowledging this, it would not be fair to permit to pass by in silence, that in France ergot of rye was *first* used in hemorrhage—not uterine—when, in point of fact, it was used in Scotland long previously—and successfully. The doctrine of hemorrhage has occupied much attention at all times, and practical men of the greatest experience have indulged in views concerning it which have died with themselves, and never have been regarded as sound or scientific. Even the industry of Cullen was incomplete on the subject, many important points being unnoticed in his dissertation.

I will not refer further to the subject of which this communication treats, than by directing attention to the case which is particularly referred to, and to this important circumstance, that "nature seemed not exhausted," as the person who suffered loss of blood to an enormous extent was, in a few days after my visit of Sunday, seen driving his horse and gig through town in his (almost) usual good health, and is now in perfect health.

MAGNETIC DISCOVERY.—It is said that a physician in the south of England has discovered the principle of magnetic force which explains the deviation and dip of the needle.

FOREIGN PRACTICE.

Reported for the MEDICAL TIMES by ALFRED MARKWICK, Esq., Surgeon to the Western German Dispensary, and formerly Externe to the Venereal Hospital, Paris, &c.

CASE ILLUSTRATING PROFESSOR FLOURENS' THEORY OF THE FORMATION OF BONE.

A young man, from twenty-five to thirty years of age, entered the Hôtel Dieu about twelve months since, under the care of M. Blandin, for a fistulous wound on the anterior superior region of the chest, along the course of the left clavicle. M. Blandin probed the wound and discovered that it proceeded from caries of nearly the entire internal half of the bone. Before determining on an operation, he was desirous of trying the effect of emollients and resolutive unguents; the disease, however, continued to make progress, and the patient, who lost flesh daily, was anxious for relief. M. Blandin, therefore, no doubt reflecting on the beautiful results that had been obtained by Professor Flourens, who succeeded in effecting the reproduction of the entire radius in dogs and goats, decided on extirpating the diseased portion of the bone, hoping that by adopting this plan it would be reproduced.

He made an incision along the upper surface of the clavicle, from its centre as far as its internal or sternal extremity, including in this incision the periosteum upon which the reproduction of the bone mainly depends. At either end of this incision he made another at right angles, so as to represent two T's, thus [——], then denuded the clavicle all round, and passed beneath it and the periosteum an instrument made expressly for this description of operation, in order to protect the latter and the surrounding soft parts. He was thus enabled to saw through the bone at its centre without danger, disarticulate it at its sternal extremity, and remove it.

After M. Blandin had terminated the operation with his usual dexterity, the patient, a man of great courage and *sang froid*, requested him to examine carefully the remaining half of the bone, preferring to have it at once extracted if it was at all carious, than to have to undergo eventually a second operation. On complying with this request, M. Blandin found that it was necessary to remove the other portion of the clavicle, which he did with the same care and success. The patient recovered in a short time and left the hospital.

In this case we have a confirmation of the beautiful theory of M. Flourens, of the formation of bone; and the result obtained in this instance will be always met with, provided a favourable course be adopted; the best, and undoubtedly the most indispensable, is the preservation of the periosteum. Wherever the periosteum, the envelope, the mould, if I may so express myself, of the bone is preserved, the bone becomes reproduced—a result obtained by M. Flourens in operating on young animals: the bone in these cases being formed in a very short time.

The following, however, are the observations made by Professor Flourens himself:—"We may take away a portion of bone from the periosteum, and it will restore that portion; we may remove from it the head of a bone, and it will restore that head; we may take from it an entire bone, and it will reproduce the bone entire. Consequently, the periosteum reproduces and restores every portion of bone that it is deprived of." * * * "And now, having explained, having proved by so many different experiments, the extraordinary faculty, previously so little known, of bone in reproducing itself, may I not hope that this astonishing power will soon prove of great value in the hands of surgeons?

"Doubtless, no. I appeal to reflecting surgeons—to surgeons who look upon surgery not as a mere routine business, but as a science, a noble science, and who see humanity beyond it."

A conviction, therefore, of the truth of these assertions, which are perfectly original, I believe induced Professor Blandin to remove the whole of the clavicle by preserving uninjured the pe-

riosteum, which is, as I have stated, the wonderful agent in the reproduction of bone. I do not think I shall be asserting too much when I say that, had not the periosteum been preserved, the bone would never have been reproduced, and the patient would have been a cripple the whole of his life.

The patient returned to the hospital eight months afterwards for another affection, when it was ascertained that the clavicle had been restored, and was almost perfect, and that the arm could be moved nearly as well as before.

This case does credit to modern surgery, and to the distinguished surgeon who performed the operation; but it does much more credit to [illegible], who first stated that bone was [illegible]ed entirely in the periosteum, and to M. Flourens, who, by his new and ingenious experiments, has proved this beautiful theory with mathematical accuracy.—*Gazette Medicale.*

19, Langham-place.

AIR IN THE UTERINE CAVITY.

[From a Correspondent.]

A lady, of florid complexion and sanguine temperament, concluded herself pregnant with child, and made every necessary preparation for the termination of utero-gestation, when suddenly (on the arrival of that period), without any preliminary symptoms, a violent and distressing eruption of flatus from the uterus took place, accompanied by a loud report, which was followed speedily by a complete subsidence of the tumefaction of the abdomen. The discharge of flatus has been continued daily since the occurrence took place, the symptoms being always aggravated on the near approach of menstruation. There is no communication (directly) between the rectum and vagina, though an eminent writer on the subject, with whom I have corresponded on this case, suggests that there may be a communication indirectly through the medium of the Fallopian tube. The same gentleman remarks—"Accumulations of air within the uterus, under circumstances like those connected with the first part of your case, are of rare occurrence; the flatus in this case, I suppose, is the product of partial decomposition of the menstrual fluid, which in process of separation in the circulation [illegible] or very soon after it has been deposited in the uterine cavity. Air may undoubtedly be [illegible] [illegible] act on the uterus [illegible] considerable extent during [illegible] immediately after parturition [illegible] accumulation, in the [illegible] stage of [illegible] [illegible] of the [illegible] [illegible] [illegible] above [illegible] prevent [illegible] by dep[illegible] species of [illegible] the dysmenorrh[illegible]

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of May 24. M. Becquerel in the Chair.

HEMOSTATIC PROPERTIES OF COTTON.—A paper was received from Dr. Baudin, in which the author states that cotton wadding constitutes an excellent hemostatic in cases of capillary hemorrhage, particularly in those losses of blood which follow too frequently the application of alkaline escharotics.

ELECTION OF A MEMBER.—M. Duvernoy was elected in lieu of the late M. Delessert.

ACADEMY OF MEDICINE.

Meeting of May 25, M. Bouillaud, V.P., in the Chair.

TAPEWORM.

[illegible] was read by M. Mérat on the properties of a plant, named cousson, gathered in [illegible] by M. Rochet D'Héricourt. This wood, which seems endowed with powerful vermifuge virtues, is employed in Africa with much success against the tapeworm. The reporter moved that the thanks of the academy be offered to M. Rochet for his interesting communication.

A short debate ensued on the nature of the hygienic causes which facilitate the development of the tænia. M. Moreau remarked that the tapeworm endemic in Abyssinia was extremely rare in France, and, on the contrary, very common on the shores of the Lake of Geneva.

INFLUENCE OF THE LAWS OF GRAVITY ON CIRCULATION AND LOCAL INFLAMMATION.

A most interesting paper of a practical nature was read on this subject by Professor Gerdy. The author remarked that the influence of the laws of gravity on the circulation was often evident in the production or increase of cephalalgia, of œdema of the extremities, that it was sometimes an obstacle to the cure of hydrocele after operation, as also to absorption of hydarthrosis of the knee or ankle, that it occasioned the displacement and extension of ecchymosis, and favoured the development of uterine hemorrhage, the morrhoids, and of varicose veins, that diffused or circumscribed phlegmonous inflammation could frequently be ascribed to no other cause, and consequently that those parts of the body which their dependent situation most exposes to these various affections should, on the imminence of any one of them, be placed in an elevated or at the least, in a horizontal attitude. This was a precept of general practice applicable to a vast number of different disorders, and which should, therefore, never be lost sight of.

M. Nacquart expressed a regret that Professor Gerdy had not established a comparison between the influence of position and that of compression on inflamed parts. The method of compression with strips of adhesive plaster had been by error attributed to the British surgical school, but had in reality been introduced into practice by French surgeons more than thirty years ago. M. Nacquart had seen it applied in Paris, and he thought it might with advantage be substituted to elevation of the limbs, to which M. Gerdy had granted so much influence in the treatment of phlegmonous affections.

M. [illegible] agreed with M. Gerdy [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] of [illegible] for instance, epistaxis was [illegible] stopped by raising the arms. Hence, it [illegible] probable the influence of the laws of gravity on the circulation of blood was the cause of the beneficial effect of this practice, and so convinced was M. Malgaigne of their efficacy, that when, after the operation for hydrocele, the inflammation of the tunica vaginalis did not occur within the usual time, he prescribed that the scrotum be abandoned for a few hours to its weight, a plan which was invariably followed by the desired congestion of the parts.

M. Gerdy could not think that compression with strips of adhesive plaster might be substituted to position. In fact, this compression often did more harm than good, whereas elevation of the limb constituted an incessant withdrawal of blood from the part, without loss of the circulating fluid. M. Gerdy concluded his remarks by stating that the advantages of his method were particularly distinct in cases of atonic ulcer of the leg.

SOCIETY OF SURGERY.

Meeting of May 19; M. Lenoir in the Chair.

DISLOCATION OF THE FOREARM.

M. Robert laid before the meeting a dislocation of the cubitus backwards, attended with laceration of the branchial artery and brachialis anticus, in consequence of a fall on the palm of the hand. The forearm remained fixed, in an intermediate position between flexion and extension, the olecranon protruded backwards, and slight mobility of the head of the radius was detected, although the swelling of the parts interfered with an accurate diagnosis of its position. On dissection, the coronoid process of the ulna was found lodged in the sigmoid fossa of the os humeri, the capula of the radius still corresponding to the external condyle. The annular ligament and the external part of the capsular were lacerated—a circumstance which accounted for a very slight displacement of the radius backwards.

M. Malgaigne could not admit the simultaneous existence of semi-flexion of the forearm, presence of the coronoid process of the ulna in the sigmoid cavity of the os humeri, and maintenance of the radius in its proper position. The present case was one of complete dislocation of the ulna, and incomplete displacement of the radius—a variety more common than the complete luxation of both bones of the forearm.

After some further discussion, the meeting adjourned at an early hour.

HOTEL DIEU.

PARACENTESIS THORACIS.—BY DR. HUSSON.

A man, aged forty three, was admitted into hospital labouring under acute pleurisy. Venesection and two blisters had brought on very great improvement, and a considerable diminution in the thoracic effusion. Suddenly, after an imprudent exposure, the acute symptoms returned, pain in the side reappeared, and the right thoracic cavity again became filled with fluid. Local bleeding was resorted to without success, four successive blisters were applied on the chest, and the effusion continued to increase. [illegible], the right side was enormously distended, and œdema was present in the lower part of the thoracic walls, the [illegible] forced downwards by the accumulation of [illegible] and so great was the distension [illegible] that it could be felt in [illegible] [illegible] right thigh was slightly [illegible] much accelerated, and [illegible] the chest dull on percussion. [illegible] these circumstances, thoracentesis was [illegible] M. [illegible] called on to [illegible] [illegible] incision was made [illegible] eighth and ninth ribs, and four [illegible] and a half of a fluid formed for the most part of pus were removed, immediately afterwards the liver resumed its proper place. The following day [illegible] of pus was again withdrawn from the wound, and a blister was placed on the side. Several days have now passed since the operation, and the patient is doing well.

Paracentesis thoracis, in cases of pleurisy, was for many years considered one of the most formidable operations in surgery, or, rather, trifling as an operation, its results were almost invariably fatal. It was performed only in chronic cases, and was considered as a last and desperate resource of art. Within a few years, Professor Trousseau has introduced the practice, in acute diseases, or, to speak more accurately, in the second period of the acute stage, when the most violent symptoms of febrile excitement have in some measure passed away, and when the life of the patient is in peril more from the enormous amount of the accumulation of fluid, than from the intensity of inflammatory action. In this stage of the disease, M. Trousseau asserts that the lung not being, as in chronic pleurisy, bound in solid fibrous attachments and deposits, can expand fully after the removal of the effusion, and the professor thence draws an argument for the early performance of thoracentesis. One of the great objections to this operation was the fear of the penetration of air

into the chest, and of the mischief which might result from its presence in the pleura. Experience has shown that the apprehensions on this score were unfounded, or at least much exaggerated, and that the penetration of air into serous cavities is far less formidable than it had been imagined. For the operation of thoracentesis, however, all fear of this accident may be at once set aside by the use of Rébard's instrument, which precludes the introduction of the smallest particle of air into the pleura. This instrument has been adopted by Professor Trousseau, whose operative process we will explain after giving a short description of Rébard's invention. The instrument consists of a common hydrocele trocar, to the canula of which is attached a membraneous tube, on the withdrawal of the blade from the canula, the tube closes the orifice of the canula, effectually preventing the entrance of air, without in the least interfering with the escape of the fluid. M. Trousseau begins the operation of thoracentesis by puncturing the skin with a lancet on the level of one of the ribs, immediately below the intercostal space to be punctured. The object of the incision being made thus low is obviously to prevent the parallelism of the wound of the pleura and that of the skin after the removal of the canula; the skin is then pressed upwards, so as to bring the incision already performed opposite the central part of the intercostal space, where the trocar is gently passed into the chest, the fluid escapes, and no air can penetrate, owing to the simple and ingenious mechanism above alluded to, and instantaneous relief of course follows the liberation of the chest. Several cases have now been operated in this manner by M. Trousseau and others, with the greatest success. It may not, perhaps, be in all cases advisable to withdraw at once all the fluid contained in the chest. A few weeks since the operation was performed by M. Robert, on a patient at the Hôpital Beaujon, the totality of the effusion was removed, and almost immediately afterwards the patient expired. The only alteration found after death to account for its suddenness was an immense quantity of frothy mucus in the air-passages. Perhaps here, as in the case of death immediately after catheterism, which we recorded in vol. xv., p. 265, the fatal termination may be attributed to the sudden removal of considerable pressure from the large vessels, by which an unusual rush of blood and distention took place in the central organs of circulation.

FRACTURE OF THE TEMPORAL BONE. — In fractures of the petrous process of the temporal bone, the issue of a serous fluid through the meatus auditorius externus is justly considered a characteristic sign of the fracture, and its gravity is universally acknowledged. But, on the one hand, the opinions of surgeons on the origin of this serous fluid are extremely various, and on the other, the fluid is not always of the same nature. M. Langier considers this liquid as the serum of the blood, indicative of lesion of a vein within the cranium, and filtering through the division of the bone. M. Robert gives to this fluid another source. It is in his opinion the cephalo-rachidian liquid, but the anatomical proofs of this assertion have not been given, on account of the thinness of the arachnoidean membrane, the laceration of which is absolutely necessary to the escape of the cephalo-rachidian liquid. Chemical analysis has on two occasions shown it to contain a large proportion of chloride of sodium, and very little albumen. Mr. Guthrie was of opinion that this fluid, escaping through the ear, had its source in the cavity of the arachnoid. In another set of cases, immediately after a fracture, a discharge of blood takes place from the ear, becomes soon sero-purulent, and finally acquires the colour and consistency of real pus. It would be important to ascertain if the difference of nature of these aural discharges correspond to a difference in the diagnosis, and especially in the prognosis, of the injury.

After a brilliant *concours*, Messrs. Vigla, Beccquerel, Goéneau, Mussy (N.), Roger, and Hardy, were named Professors Agrégés at the Faculty of Medicine.

D. M'CARTHY, D.M.P.

The Use of the Hair in Animal Economy.—The hair, says Mr. Paget, in its constant growth, serves, over and above its local purposes, for the advantage of the whole body, in that, as it grows, it removes from the blood the bisulphide of protein, and other constituents of its substance, which are thus excreted from the body. Now, this excretion office appears, in some instances, to be the only one by which the hair serves the purpose of the individual; as, for example, in the fœtus. Thus, in the fœtus of the seal and, I believe, of most other animals, removed as they are from all those conditions against which hair protects, a perfect coat of hair is formed within the uterus, and very shortly after birth is shed, and replaced by another coat of wholly different colour, the growth of which had begun within the uterus. In these cases it is chiefly as a secretion that this growth of hair serves to the advantage of the individual. The *lanugo* of the human fœtus is an homologous production, and must similarly serve in its economy by removing from the blood, as so much excreted matter, the materials of which it is composed.

Constipation.—The causes of this disease, Mr. Edward Crisp remarks, may be either nervous or mechanical. Amongst the former may be enumerated apoplexy, and other conditions of the brain and nervous system, which appear to paralyze the muscular fibres of the intestines. These may be overcome by appropriate treatment. The mechanical are more likely to occasion permanent obstruction and death. These obstructions may be either within the tube, or produced by pressure from without. Amongst the former may be enumerated impacted scybalæ, extraneous bodies introduced by the mouth or anus, biliary or intestinal calculi, ulceration producing thickening or contraction of the tube, intussusception, scirrhous thickening and malignant growth of the mucous and submucous tissues, congenital contraction and occlusion occurring in all parts of the canal, fibrous tumours of the muscular or submucous tissue. The external causes are tumours pressing on the bowel, the escape of intestine or omentum from its proper cavity, constituting hernia, dventitious bands producing strangulation, the gluing together of the intestine, so as to interfere with their peristaltic motion, twisting of the intestine, abscess occurring on the walls or in the adjoining parts.

Soft Cancer including the Cardiac Orifice of the Stomach.—Mr. Norman related to the Bath Pathological Society the case of an individual who, when first brought under his care, suffered from constant vomiting after taking food attended with gradual emaciation. No tumour could be felt over the region of the stomach, and he suffered no pain. A small-sized œsophagus bougie was passed, which met with some obstruction at the junction of the pharynx with the œsophagus. Mr. [illegible] thus until within a month of the patient's death, when it was found that the bougie would no longer pass into the stomach, in consequence of obstruction at the cardiac orifice. On dissection it was found the lower end of the œsophagus and the cardiac end of the stomach were found involved in an extensive cancerous deposit of the soft or encephaloid kind. The disease had not attacked any other organ of the body. The cause of the obstruction to the passage of the bougie was found to be an ossified condition of the thyroid cartilage, by which the œsophagus was pressed backwards and on one side.

Chronic Inflammation of the Cæcum and Colon.—The predisposing cause Mr. Storrs considers to be a relaxed and atonic state of the vascular system, and a highly irritable state of the nervous; the exciting causes—torpor of the bowels, scybalæ, drastic purgatives, and repeated errors of diet. It may not unfrequently be connected with suppressed hemorrhoidal discharges, and tight lacing. The stools afford a good criterion of the nature of the disease—often they are perfect in form and consistence, but [illegible] coated with mucus, [illegible] mucus, which or tenesmus; occasionally the mucus will appear in small lumps, not unlike lumps of fat; at other times it assumes the form of the finger of a glove. This mucus is uncoloured; sometimes there are scybalæ discharged with it. In this disease all drastic purgatives are to be avoided. A few leeches, followed by blisters, are advisable when there is abdominal tenderness. When inflammation has subsided, the tone of the system is most rapidly restored by a continued exhibition of the citrate of iron. Smart doses of calomel and scammony, followed by castor oil, are useful when scybalæ are suspected; in other cases drastic purgatives should be avoided, and mild injections substituted for them. When the inflammatory symptoms do not yield to leeches and blisters, the linimentum hydrargyri is useful.

Abnormal Conditions of the Blood.—These are arranged by Simon under four divisions:—1. *Hyperinosis*, in which fibrine exits in excess—a characteristic of the true inflammatory type of disease. 2. *Hypinosis*, consisting in a deficiency of fibrine, seen chiefly in fevers of an ataxic type, in passive hemorrhages, and in certain cachectic states of the system. 3. *Spanæmia*, in which the blood is poor in solid constituents, but especially in fibrine and corpuscles. 4. *Heterochymeusis*, embracing all those states of the blood in which some substance is present which does not exist in the normal fluid, as in diabetes, morbus Brightii, &c.

Cancer.—Dr. Walshe has found conium and other narcotics, in the treatment of this disease, do little more than alleviate pain. The only medicine which he has found of real benefit the *iodide of arsenic*: this, in conjunction with compression, he affirms to have afforded the greatest chance of success. It may be given with safety in doses of one twelfth of a grain, and continued for several months, if the precaution be taken to exhibit it about two hours after eating.

Effects of Disease upon Animal Temperature.—The most complete example of this kind of investigation (says Dr. Rankin in his retrospective address) is that of M. Roger, consisting of a careful study of the effects of disease upon the temperature of children, the results of which may be thus briefly recapitulated. In *typhus fever* the elevation of temperature is most considerable and most continuous. A remarkable fact ascertained was, that there was no proportion between the elevation of the temperature and the excitement of the pulse. In *eruptive fevers* the rise of temperature was most marked in scarlatina, then in smallpox, and next in measles. In smallpox the temperature reached its maximum at the commencement of the eruption, then diminishes, but again rises at the period of the suppurative fever. The *temperature* in *scarlatina* is higher than in any known disease. In measles the heat is greatest at the outset of the eruption, after which it gradually subsides. In diseases of the *respiratory organs* the temperature rose in proportion as the parenchyma of the lungs became involved. In this disease there is always a correspondence between the temperature, pulse, and respiration. In acute phthisis the temperature was augmented, but in chronic it remained natural. In *anæmia* and *rachitis* the temperature is normal. In *œdema neonatorum* it is below the natural standard. These observations are of value in the diagnosis of infantile disease. Thus, typhus fever is the only infantile disease in which a greatly elevated temperature is associated with a moderate range of pulse, and it may be diagnosticated to a certainty in a child when the temperature is 40° Cent. or upwards, and the pulse at the same time under 100.

Scarlatina.—Mr. Isaac Brown has recently recommended the use of distilled vinegar in drachm doses in the treatment of this disease. Independently of the beneficial effects attributed to it during the progress of the disease, this medicine is supposed to prevent the subsequent anasarca, as he states that since he has adopted the specified plan he never met with an instance of this *sequela*. Similar testimony is also afforded by Mr. Hunter, of Margate.

Impacted Fractures of the Neck of the Humerus.—Dr. Robt. Smith, in his work "On Fractures in the Vicinity of Joints," says, in reference to the diagnostic signs of this accident, they are remarkably obscure, and the true nature of the injury is exceedingly liable to escape detection: there is but little deviation from the natural form of the shoulder, nor is there any *appreciable* alteration in the length of the limb. When the surgeon places one hand upon the shoulder, and with the other rotates the elbow, the head of the bone will be felt moving with the shaft; no satisfactory information is obtained by examining ...h the axilla, for, although perhaps a slight ...larity may be felt near the junction of the ... with the head of the bone, it is usually so inconsiderable that it cannot be looked upon as affording positive evidence of the existence of a fracture in this situation. In order, however, to form a more decided opinion as to the nature of the lesion which the bone has suffered, let the surgeon, with both hands, grasp the head of the bone with firmness sufficient to maintain it as nearly as possible in a fixed position, while an assistant rotates the elbow; by this method crepitus can be produced in the great majority of cases. The diagnosis of the *intra-capsular* impacted fracture is simple compared with that of the *extra-capsular* variety. the arm is slightly shortened, the acromion process projects more than natural, and the shoulder has lost to a certain extent its rounded form; the upper extremity of the shaft of the humerus is approximated to the acromion, and the entire of the globular head cannot be felt. In consequence of the fracture of the tuberosity, crepitus can be readily detected when the shoulder is grasped with moderate firmness and the arm rotated. Both forms of impacted fracture unite by bone. It is sufficient in the treatment of such cases to bandage the arm to the side, and to support the forearm in a sling. There will always be a certain degree of impairment of the motions of the joint.

Tubercles in the Lungs.—Dr William Addison states, in their early condition, they escape notice, unless searched for with a lens in very thin sections, gently extended upon a dark background. To make out correctly the primary situation of a tubercle, the examination should be made in the lungs of young persons who have died of other diseases. The material deposited in the air-cells in *pneumonia*, and that forming a tubercle, has only the difference that exists between recently excreted and old pus. The same class of objects—incoherent colourless cells, molecules, and granular matter—appears to constitute the material in both cases; and in both cases, also, the material takes primarily the shape of the air-cells in which it is seated. In the material forming the consolidation resulting from inflammation, incoherent cellular forms predominate, as they do in recent pus; whereas, in tuberculous matter, granular masses and molecules greatly predominate, as is also the case in old pus. And, were we to imagine the fluid element of old pus removed or absorbed, the remaining solid matter would be tuberculous matter; the colourless elements of blood, pus, and tubercle, passing into each other.

Prognosis of Scurvy.—Professor Andral says that nothing is more difficult than the definite cure of those diseases in which the blood is robbed in a slow and spontaneous manner, either of its globules or its fibrine. If scurvy arises from evident external causes, it generally ... readily when those influences no longer exist; but if it comes on spontaneously, it will generally resist every possible means we may employ. In ... of cases, although the symptoms ... improve very greatly at intervals, they ... entirely disappear, and, after gradually in...sing, finally terminate fatally.

Accidental Ossification.—The abnormal growth and development of bone, Mr. Hassall, in his "Microscopic Anatomy," states, is a very common pathological occurrence. It is not, however, every ossific deposit which presents all the characters of bone: thus, those contained in the ovaries, in the mesenteric gland, and in the coats of arteries, usually want the more conspicuous elements of bone—the bone-cells and lamellæ—although these have been met with in ossific depositions remote from all connection with bone. In the reparation of fractures we have a development of true bone preceded by the formation of cartilage.

... *on the teeth* consists of phosphate of lime mixed up with the mucus of the mouth and epithelial scales: it contains also occasionally animalcules and vegetable growths, which find in the animal matter of the tartar a convenient nidus for their development. The accumulation of tartar around the necks of the teeth results from an opposite condition of the saliva to that to which chemists ascribe dental caries, viz., an alkaline state of it.

Fungi in the Mouth and Intestinal Canal.—In his observations on the microscopic characters of the aphthæ of children, and of adults during typhus, Remak found that a single aphtha often contained several species of fungi, and that the species of fungi, occurring in different aphthæ on the same individual, exhibited no constant relationship; also, that while one aphtha contained numerous fungi, others on the same individual contained none at all. Hence it appears that the loosening and ulceration of the mucous membrane is the primary phenomenon, and that the fungi are only produced under favourable chemical conditions. It has been long known that the presence of aphthæ is usually associated with an excess of acidity in the primæ viæ; and it is very probable that a putrid condition of the surface of the mucous membrane would accelerate the conversion of sugar and starch into lactic acid, and thus afford a favourable soil for the growth of these fungi.

Spermatorrhœa.—Gonorrhœa undoubtedly disposes to this disease, as was shown by Lallemand. But whether it be the gonorrhœa itself or the balsam of copaiba taken to cure it that causes this predisposition, it is difficult to say. The latter is probable, since it has been noticed by Schonbein to induce baneful effects on many persons who have taken it for gonorrhœa in full doses, and for a long time, giving rise to Bright's disease.

REVIEWS.

The Preservation of Infants in Delivery, being an Exposition of the Chief Cause of Mortality in Stillborn Children. By RICHARD KING, M.D., &c. London: John Churchill, 1847. Pp. 61.

It requires no small share of physical courage, as well as mental endowments, to explore successfully one of the regions of science where philosophers who have gone before have been bewildered, and where there are but few waymarks to direct the traveller in his course. In his progress he must expect to meet with difficulties, and to surmount these he must use discreetly that knowledge which has been gained by experience. If under those circumstances all is not attained which was contemplated in the beginning, it may prepare the way for others who may be ultimately successful.

The author of the present essay has taken up a subject which possesses much interest in a physiological point of view, and one which in its consideration he can derive but little assistance from the labours of others. It is evident that he has had opportunities of making himself acquainted with the subject on which he writes, and that he has carefully observed those phenomena which he attempts to elucidate. His monograph is, therefore, entitled to the respectful consideration of his professional brethren, and, though they may have different views to those which he entertains, they must give him credit for a very plausible theory.

The question which he proposes to solve is, what is the chief cause of mortality in stillborn children? He had noticed that the number was considerable, and that many of them were amongst the strongest and finest with regard to development; and, the question being answered, he proposes for adoption a practice which he thinks will save a large amount of infant life.

Dr. K. entertains the opinion, that the legitimate position of the afterbirth is against the walls of the uterus, and as far as his own researches extend they are in favour of the anterior wall. Moreover, he considers that there is uniformity in detachment of the afterbirth in natural and preternatural deliveries, which will help to explain why footlings should more frequently be stillborn than children of breech presentation, and the latter than those of natural birth; and he says that the duration of life in these several presentations is in exact proportion to the amount of loss the uterus has sustained compared with the time which elapses from the supposed period of the detachment of the afterbirth to the birth of the infant. While, therefore, distinguished accoucheurs have troubled themselves greatly about pressure on the umbilical cord, which they think nearly always produces fatal results to the infant, our author holds that this is of rare occurrence, and that the theory of suffocation from pressure is altogether unfounded and unphilosophical, death more frequently arising from syncope from want of compression—the *placenta* "acting as a moist sponge released from the hand becoming gorged with blood at the expense of the infant." In presentations of the afterbirth he recommends its removal before the extraction of the infant, and that the placenta should be squeezed firmly in the palm of the hand, and not released until the umbilical cord is thoroughly compressed, lest it should produce a fatal syncope by absorbing the blood of the child. "The delivery of the afterbirth also," he observes, "before the infant must facilitate delivery, for to the loss of the placenta there would be a proportionate amount of contraction of the uterus, consequently a considerable gain of expulsive power; and, if my views are sound, by compressing the umbilical cord there would be a gain in time, and the probability of saving boys as well as girls." In the Cæsarean operation he thinks that the great object should be to secure the funis as speedily as possible.

For our own part we believe there is a great deal of truth in the author's statements, and they are worthy of the consideration of the practitioners in midwifery.

Thoughts on the Nature and Treatment of several Severe Diseases of the Human Body. By EDWARD J. SEYMOUR, M.D. Vol. 1, pp. 260. 8vo. London, 1847.

A physician of Dr. Seymour's experience, and habits of close observation, would naturally be expected to write something worth reading upon any practical subject which had commanded a good share of his attention. This is an *à priori* proposition which we should feel almost warranted to make before proceeding *de facto* to analyze his book. Indeed we did make it in our own mind, and, after having put the proposition to proof, have found that it was not idly made. The volume before us abounds in those useful hints and reflections which are alone the suggestions of vast clinical opportunities. Dr. Seymour has long enjoyed ample scope for the exercise of his skill and judgment as a physician, and we are happy to see that he has devoted himself to the task of giving, with no sparing hand, his copious gleanings to those of his professional brethren who have been less favoured in their calling.

The present volume consists of cursory observations, illustrated with cases, on diseases of the stomach, gout, mental derangement, and sciatica.

These several subjects are not treated of in any specific or set manner, but what is said of each consists merely of a current of experimental observation, just such as a curious and cumulative mind would put forth. This makes the tone of communication easy, and the temper of it natural, practical, and truthful. What we say is well illustrated in the following passage concerning perforation of the stomach:—

"I was called, two years ago, to see a servant-of-all-work, about twenty years of age, who was dying with the symptoms of perforation. She had long complained of pain in the stomach; but went about her usual laborious occupations. Suddenly, after eating *a very large meal* of salted beef, she exclaimed, placing her hand on the region of the stomach, that she was shot! Violent vomiting ensued without much of the contents of the stomach being brought up. She became insensible, though still giving signs of pain when pressed with the hand upon the epigastrium. She died in about five hours after the attack. In the morning of that day she had appeared to be perfectly well.

"But it has been said that, even after perforation of the stomach, it by no means necessarily happens that the patient immediately dies. In two cases which occurred to me in St. George's Hospital, one survived the perforation five months, and another twelve days, after the most violent symptoms of peritoneal inflammation. As such cases are undoubtedly rare, *i. e.*, cases in which persons have lived after perforation of the stomach, the secondary process which prevented immediate death has never been described."

The two cases are then subjoined, and excellently illustrate what adhesive inflammation is capable of doing to repair solution of continuity. In one case, "the left lobe of the liver, being enlarged, covered the greater part of the anterior surface of the stomach. On lifting up this portion of the liver, the contents of the stomach oozed out of a small aperture, which was partly blocked up by adhesions between the two organs. Another small ulcer was found at the lower part of the posterior wall (of the stomach). This ulcer had merely destroyed the mucous membrane, the margins of which were firmly united to the subjacent parts."

In the second case, "on the posterior surface of the stomach, towards the great curvature, was a large ulcer, which had completely destroyed the different coats, the deficiency of which was made up by the pancreas adhering to the circumference of the ulcer: the edges of the ulcer were levelled off, and perfectly smooth. The surface of the pancreas, which thus formed a part of the stomach, still retained its granular appearance; but it was covered over by a thin smooth membrane."—(Pp. 18—25.)

The chapters on the other subjects, especially that on gout, which is the longest, and not the least important, of the whole, are made up of the substantial practical material which has pervaded the quotation we have just given. Occasionally, Mr. Seymour throws in a reference, an illustration from a fresh source, or an anecdote, which serves to enliven and enlighten the otherwise somewhat dull continuity of invariable detail and practical reflection.

The style of our author is for the most part clear and simple, and not seldom eloquent; occasionally, however, the phraseology is loose, and in places inaccurate. This is plainly the result of inattention—but it would be better corrected—such a fault is a growing one.

Altogether, we like the book excellently well, and we gladly commend it to the notice of the medical practitioner.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.*

Discipulus *has been misled by his advisers. He has only to use discretion, and retrace his footsteps.*

Agonistes *must permit us to publish his name, or to have it in confidence, or otherwise we coulp not allow the long statement which he makes to appear.*

Mr. Roache's *letter can only be admitted as an advertisement. Our correspondent asks a considerable favour.*

Truth-seeker *informs us that he was once inclined to believe in the homœopathic theories, but he has found that it is strict attention to a patient's diet that accomplishes all the good which is erroneously attributed to infinitesimal doses of medicine.*

Mr. Blachley *may consult with advantage John Hunter's celebrated works. Bad surgeons, he says, are like bad carpenters: they make work for each other.*

A Member of the College *may easily ascertain the names of those examiners who signed Mr. Mr. Blake's diploma. We have heard nothing of the brazen statue which it is proposed to erect to his honour.*

Mr. T. Neal *shall hear from us privately.*

A Liverpool Reformer *is thanked for his information.*

Scotus.—*The faculty of Physicians and Surgeons of Glasgow had a narrow escape of strangulation during Sir James Graham's Secretaryship. They still dread a speedy dissolution whence they hail with satisfaction the Wakley Registration Bill, as it will avert from them impending danger.*

Magister.—*The apprentice must serve his time, or the indentures may be retained; without these he has no chance of getting the license to practise.*

Mr. Beazant.—*The Polytechnic Institution.*

Chirurgus.—*The treatment of aneurism by compression is not new; the pressure was sometimes applied to the sac, or to that and the artery leading to it. It is said that an Italian surgeon was the first who thought this disease might be cured by pressure.*

Amicus, Bristol.—*Hippocrates had some knowledge of placental presentations, and he thought that if the afterbirth came first the child could not live.*

Mr. William Smith, Belper.—*The communication has been received, and will be inserted in an early number.*

A Subscriber, Boston.—"*Guy's Medical Jurisprudence.*"

Dr. Tyler, Harcourt-street, Dublin, *is thanked for his interesting paper.*

W. G.—*The suggestion will be attended to.*

Mr J. Thomas, Carlisle.—*There is some doubt about the matter.*

M. S. Bristol.—*We cannot assign a cause; it would be best to consult some medical gentleman in the neighbourhood.*

Mr. Geo. Turner, M.R.C.S.—*Quest.* 1. *Consult the University Lists.* 2. *No.* 3. *Doctor by courtesy, not by right.* 4. *No. If in the country, there will be some difficulty in getting access to the authors mentioned, unless their works are purchased.*

Chirurgus.—*We are sorry that there has been so much disappointment in reference to "Dr. Quain's Anatomy;" and we hope, as our correspondent says, "that literary gestation will soon be complete, and the author safely delivered."*

Medicus, Dublin.—*We think not.*

A. W. C. *writes to us as follows:—"Can you tell me how to separate the lime of bone from the gelatine, &c.? This question might be satisfactorily answered, but with the following stipulation I cannot reply to it:—I want the earthy matter, as well as the other, separate and distinct, yet unaffected by the process. Perhaps some of your correspondents will favour the inquirer with some information which may tend to elucidate the matter."*

A Constant Reader, Elgin, N. B.—*The fault is not with us that the* Medical Times *is not received as soon as it ought. It is always published early on Friday, and might, of course, be posted on the same day.*

J. B., Hackney.—*There are many who were at first misled, but have since thought proper to change their opinion as to the advantages which the Registration Bill will confer on the profession. Of course their defection will be passed over "in solemn silence" by the Finsbury member.*

A Pupil's *objection to the Registration Bill—"that, if passed, it would depress the social status of medical men fifty per cent."—is well founded. It would be idle, in any such deplorable event, to talk of the word "gentleman."*

M. B. H. *would oblige us by forwarding to us the response of his representation on the propriety of moving for the committee he suggests.*

Novus Homo *is inadmissible. He should convey his opinions to Mr. Bannerman, or to the surgeon whose supposed "intrigues" he condemns.*

Marcus *is thanked.*

Mr. J. H. *will find the article he inquires for in the last volume of the* Medical Times.

Amicus *thus addresses us:—"Your exertions in the Hounslow case having won for the profession so splendid a vindication of their rights—and especially of the right not to be postponed as a witness to any parasite or friend—you would add to the gratitude of the profession if you would form a society for the purpose of resisting any encroachment by coroners on the just privileges of medical witnesses."* * * * *The suggestion is not unworthy of consideration.*

M.R.C.S.I., *Liverpool.—Not in England.*

Mr. Burton, Ulverstone.—*Received.*

Incognitus *had better use a little self-government. We know not to what communication he refers; if sent, it was either not received, or has been mislaid.*

Inquirer "*wishes to ask of Dr. Copland, the author, and Messrs. Longman and Co., the publishers, of it, when 'The Dictionary of Practical Medicine' will be completed.*" Inquirer *complains of broken engagements, and the increased price of the work. He had better wait than seek assistance from the law.*

Juvenis.—*King's College Hospital. Mr. Dermott is an efficient teacher.*

Qualification.—*There is no remedy. The present medical gentleman being in office, the guardians can continue him as long as they please.*

R. G. C., Kilrush.—*A Scotch physician cannot practise in London legally without a license from the College of Physicians.*

X. Y. Z.—*The case had better be laid before the Apothecaries' Society, who will take up the case if there are good grounds.*

Mr. Howard, Heaton.—"*Brand's Chemistry.*"

Letters and communications have also been received from Mr. Beazant; Mr. Thomas Neal; Truth-seeker; Mr. Blachley; Discipulus; Agonistes; A Liverpool Reformer; Mr. Leonard, Strand; A Member of the College; Scotus; Mr. Wm. Smith, Belper; Amicus, Bristol; A Subscriber, Boston; Mr. A. Tyler, Harcourt-street, Dublin; W. G.; M. S., Bristol; Mr. G. Turner, M.R.C.S.; J. B., Hackney; A Constant Reader, Elgin, N.B.; Chirurgicus; Medicus, Dublin; A. W. C.; Mr. Barton, Ulverstone; Mr. Howard, Heaton; X. Y. Z.; R. G. C., Kilrush; Qualification; Juvenis; Inquirer; Incognitus; M.R.C.S.I., Liverpool.

Several lectures and communications which have been promised an early appearance must stand over to our next.

THE MEDICAL TIMES.

SATURDAY, JUNE 5, 1847.

PROFESSIONAL JEREMY DIDDLERS AND THEIR DESERTS.

In discussing the affairs of the medical profession we have been compelled on many occasions to severely censure the conduct of those corporate institutions which have the power of legislating for its members, and of admitting whom they please within the pale of their several establishments. Placed as they are at the head of the profession in this country, they cannot fail to exercise a powerful influence for good or evil; and it seems, from the present aspect of medical affairs—from the restlessness and dissatisfaction which are universally manifested, that the ruling powers have not been faithful to the trust committed to their charge.

In the foremost rank of [illegible] institutions we are compelled to place the College of Surgeons of England, not only [illegible] treated with the utmost contempt the [illegible] of its members, but also has used its [illegible] to lower their professional status. Called into existence by the Imperial Government for the express purpose of becoming a nursing mother of science, she has violated every paternal feeling, and [illegible] sacrificed her children upon the altar of Mammon. In the selection of her officials she has in some instances manifested the most contemptible nepotism, and too frequently in the bestowment of her diploma has she regarded the capabilities of the breeches-pocket of the candidate to pay the accustomed fee, more than the capabilities of his intellect to meet the demands of an efficient examination. If ever there was a corporation inherently selfish, this is the one, and the exercise of this baleful principle has plunged it so far into the depths of degradation as to induce it to patronize a bribe as a passport to office, and to bestow upon a pastrycook homœopathist the diploma without a due regard to college regulations. We noticed last week this disgraceful affair, and we feel that it calls for further remarks, inasmuch as there has been an attempt to shield the corporation from the castigation which is certainly its due.

The public has been taught to believe that the barriers which fence off the profession from the community at large have been erected for the express purpose of keeping out everything that may hinder the progress of science, or militate against the public health, and the examinations at authorized institutions have been established ostensibly for no other purpose than that of preventing improper persons from tampering with the limbs and lives of our fellow creatures. We conceive that it is the bounden duty of the medical corporate institutions of this kingdom to mind that this principle is carried out by requiring an efficient medical education and instituting a searching examination. With the price at which education may be purchased they have nothing to do, their duty being only to see that those who undertake the office of medical and surgical teachers should have the aptness and the means which are indispensably necessary for communicating knowledge. We would warn the members of our profession from propagating the notion, that intellect must be able to pay a certain toll before the favoured possessor shall be admitted to the legitimate exercise of the healing art. If there is anything more calculated than another to [illegible] the profession, it is this fixing a high price for medical education in the schools, and requiring but a small amount of knowledge to pass an examination at the colleges, and it will do more than anything else to accomplish the purposes of those who advocate the doctrine of free trade in physic. If the surgical nymph of Lincoln's inn fields is, like the ancient Danaë, to yield her favours unto a shower of gold, there will be multitudes of professional Jupiters who will adopt the stratagem and receive the reward.

It seems, from the history of the Taunton pastrycook, that he was metamorphosed into a surgeon, to use a significant Americanism, with the velocity of "greased lightning," and, if it had cost him treble what it did to [illegible] the lightning as well as "grease" it, he [illegible] successfully dubbed in homœopathy and pastry for [illegible] thirteen years as to be able to meet the demand. As Mr. Blore can now attach to his name the important letters M.R.C.S., we are led to conclude, from his previous history, either that the College examination is not worth [illegible] a test of surgical proficiency, or that he, being a very clever fellow, received instruction in a [illegible] school. If the former be the [illegible], it is incumbent on every surgeon of [illegible] at once to take such measures as [illegible] prevent this guilty institution from pursuing that course which must eventually bring disgrace and ruin upon the whole profession. To an individual, after one year's study, have they given a paper, signed with great names, and sealed with a large seal, which declares to all men that they have *deliberately examined* him, and found him *fit and capable to exercise the art and science of surgery.* Of course he has taken care that the good people at Taunton, who patronize his homœopathic establishment shall be intimately acquainted with the surgical "BULL" which irrevocably constitutes him a man of science, and there is no other alternative for the professional gentlemen of the same town but at once to destroy their twenty pounds worth of college paper, if they wish to retain the honourable position which they have hitherto occupied. It is preposterous to suppose that two [illegible] study, even with the most diligent [illegible] could have [illegible] and therefore, the [illegible] be designated by no other name than a deliberate insult to the members [illegible].

[illegible]

We ask in conclusion, what has the College of Surgeons of England ever done for the profession? Who among its members have ever been assisted by its generous and well timed aid? Its history proves that it has signally failed in accomplishing that good which was proposed when it received a charter of incorporation. If this College has never blighted rising talent, neither has it ever been fostered there. By the irresponsible powers which this corporation possesses, it has made laws for the advantage of a few and to the injury of the many. It has virtually excommunicated its members, and has supercilliously added insult to injury, by recent acts in reference to the fellowship, and by bestowing its diploma upon some who have violated the laws of the College. To perpetuate the abuses of such an institution is to perpetuate the degradation of a liberal profession. This the Medical Registration Bill, now before the House of Commons, must do, if it should pass into a law. It behoves the general practitioner, therefore, to lose no time in opposing this measure, and to seek such a reform as shall bestow upon him corporate privileges, and secure his professional respectability.

THE PRESENT POSITION OF MEDICAL PRACTITIONERS.

ON Thursday the second reading of the Registration Bill was postponed some weeks, to await the results of the parliamentary committee on Medical Reform.

Of all the circumstances that have occurred within our remembrance, we know of none more humiliating to medical reformers than the present parliamentary position of the question which has so long excited their hopes and monopolized their attention. After a quarter of a century's excessive exertions—after the expenditure of a sum of money, large in any profession, but enormously so to one so impoverished as ours—we are agitated to our centre, and a large committee of Parliament set in motion for the trumpery purpose of getting the profession pilloried before the public in the three grades of Apothecaries, Surgeons, and Doctors! In other words, Medical Reform [illegible] made to mean the [illegible] of the great body [illegible] of a public [illegible] them to their patients [illegible] subordinate [illegible] of the [illegible] minded, [illegible] and the [illegible] time and [illegible] some half [illegible] Parliament [illegible] there have been [illegible] of other bills, [illegible] to the public judgment. [illegible] injustice, [illegible] written [illegible] remembered, we [illegible] scheme now before [illegible] the House of Commons. It is [illegible] everything Medical Reform, [illegible] conveyed to rational and [illegible] minds. Beyond branding the mass of general practitioners as an inferior and subordinate class, it is a thorough nullity, save as it opens [illegible] registrarship [illegible] asylum for that [illegible] which circumstances have recently made so uncomfortable. We tell the Fellows of the College of Surgeons, who are aiming at the injury in public estimation of a body of men, their equals in every respect, and their superiors in many, that their machinations to get this bill passed will be defeated. We tell them that the general practitioners of England, Scotland, and Ireland will unite to a man in resisting the legislative recognition of their spurious and illegitimate pre-eminence. The bill is only to be understood to be opposed as energetically as if it were, in a statutory form, the renewal of the recent collegiate charter.

If there be some with an interest in the debasement of the majority of their brother practitioners, that majority are too sagacious to lend their aid to the nefarious project. The greatest of all evils to the profession would be its inundation by the thousands of low means and education to whom this bill would open the [illegible] portal they would require. At present we do

make, as a body, claim to social acceptance as gentlemen and scholars. The general practitioners will never consent to be so submerged by artful legislation that while the few shall ascend in the social scale, they—the majority—shall fall into the position of needy shopkeepers and contemned tradesmen.

MEDICAL CAMPAIGNING.

We have published in another column a document that has been presented to the Council of of the National Institute by certain members of that body. A more extraordinary specimen of English composition has seldom come under our observation. Grammar is evidently at a discount in the appreciation of the persons who have signalized their talents by drawing up so remarkable a production. First and third persons are joined together in holy matrimony when the parties are not agreed. This violates all law, although, unfortunately, there have been numerous precedents for the practice in other documents emanating, we presume, from the same source.

We confess that we can scarcely comprehend the meaning of the particular sentences, the style is so profoundly obscure. When, however, the writer approaches the surface of intelligibleness, we detect folly or falsehood [illegible] matter of course. He, or they—one or many—states that "the *members* [illegible] the Institute *at large are most favourable to* Wakley's Medical Registration Bill, and [illegible] a project [illegible] after canvassing that body [illegible] some *sort* [illegible] who object to the policy of the Council!"

This is [illegible] example of [illegible], and will, no doubt, [illegible] faction to the author of the bill. [illegible] of the assertion is justified by the [illegible] of the evidence. Well may Mr. Wakley [illegible] gratulate himself upon [illegible] what it lacks in assurance [illegible]. Such persons cannot, certainly, have [illegible] lively sympathies with the [illegible] and noble objects which the Council advocate.

THE CONSTITUTION v. THE BILL.

TO THE GENERAL PRACTITIONERS OF MEDICINE, &c.

GENTLEMEN,—A cursory examination of the nature of the support which the Medical Registration Bill has received will give us a tolerably faithful idea of the nature of the bill itself. Mr. Wakley, whose indiscretion is daily assuming the more decided characteristics of lunacy, has glorified himself on the patronage which his bill has obtained from the College of Surgeons of Edinburgh, and that distinguished scientific community, the Faculty of Physicians and Surgeons of Glasgow! Where is the drowning man that would not cry out for help? Where is the unhappy malefactor who would not be glad to receive a respite even from the hands of the hangman?

Sir James Graham proposed to destroy this exemplary body, and, with the sword hanging over their heads, they are ready to prostrate themselves before any individual whose hand promises to intercept the blow. It is instinct, and no more worthy of blame than the bread-lifting of a famishing man. I do not censure, neither can I praise; least of all can Mr. Wakley find, here, subject for congratulation.

Again, gentlemen, what voluntary body has sounded the tocsin of [illegible] brigandage of the honourable [illegible] friends of the *Provincial Association* [illegible] are true to their instincts, [illegible] with the most ecstatic sympathy [illegible] favour of their ally.

This Association is an elaborate [illegible] foul imposition on the faith [illegible]. According to the principles [illegible] Association is based, medical politics [illegible] bidden topic, and forms no part of [illegible] the governing council. After a few years [illegible] its formation, and as soon as the self-elected council were firmly established in power, they commenced dabbling in these matters, and since, have continued to interfere just to the extent that shall enable the council to advocate the interests of the *dubs* and *pures* who form that body, and not give open offence to the large mass of their members.

Hence their journal is closed against the discussion of political questions, because, forsooth! it would be *inconvenient*. Very inconvenient, no doubt, to be driven to an honest advocacy of the rights of the members. The whole power of the Association resides in the *Central Council*, who are irresponsible, do what they please, and laugh at the members. Two or three individuals are, practically, the Provincial Association [illegible], and, as these individuals have interests [illegible] to those of the members, they [illegible] ingenious in [illegible]. The politics [illegible] [illegible].

In [illegible] the Provincial Association I condemn [illegible] Association. [illegible] up [illegible] College of Surgeons [illegible] of London [illegible] Physicians [illegible] College of Surgeons [illegible] Parliament. [illegible] have in this bill [illegible] tlemen that they [illegible]. We might have expected otherwise [illegible] we may have believed that among a body of educated gentlemen there would be [illegible] of the profession, and that respect for its honour [illegible] no individuals could be so unblushingly selfish as to seek their own ends by the injury of the general body. Though disappointed we are not surprised, and the Liverpool doctors are at liberty to enjoy their unenviable distinction.

Of the hundred or more single petitioners I have nothing to say, because I do not know their characters, their position, their qualification, their aims. I desire to prejudice no man; but it cannot be forgotten that the importance of an opinion depends upon the capability of the individual to form one, and its truthfulness upon the emancipation of his mind from all bias of interest, prejudice, or feeling. Mr. Wakley has published the names of those who unwarily petitioned for his bill, *will he also publish their recantation?* Men of sense may be entrapped into a blunder, but they cannot be chained down to it. Next to the merit of discovering truth is the generosity that will acknowledge an error.

If, gentlemen, we take into our consideration what are regarded as the *minor clauses* of this bill, we shall find them equally fraught with mischief to the interests of the masses of the profession. There is a thread of evil running through the whole web of plausibility that characterises the measure. Its principle is unsound; the [illegible] is in the [illegible] bill, and it infects every ramification with its malignant influence. [illegible] never more effectually demon[illegible] principle.

[illegible] the Secretary of State is in[illegible] arbitrary power over the course [illegible] examination of all classes of the [illegible] isolated intention, nothing [illegible] preposterous, and, in association [illegible] provisions, nothing could possibly [illegible] perilous, and destructive to the interests of the general practitioners. The [illegible] evil of this clause I have already exhibited to you.

Again, the councils of the various colleges are empowered to erase the name of any member from their lists who has acted in a manner "*calculated* to bring scandal and odium on the profession." No particular offence is cited, but the obnoxious conduct is indicated by the phrases—"indecent advertisements," "obscene prints," and "unprofessional behaviour." The council are required to judge what amount of nudity in examples of spinal deformity, &c., shall be considered "indecent," and at what precise point the faithful delineation of the generative organs shall be considered "obscene." Anatomists and obstetricians, beware! The censorship of public morals would be a suitable office for the amiable M.P. I earnestly recommend him to the notice of the Government. His chaste sensibilities have, doubtless, been shocked by the prurient [illegible] of certain anatomical volumes recently published. Shade of William Hunter! —vindicate [illegible] of obstetricians! I have no doubt, [illegible] the fate of the Registration Bill [illegible], the prudish fastidiousness of the worthy M.P. will prompt him to back Mr. [illegible] for the suppression of illicit [illegible] not succeed in this [illegible] more fitly employed than [illegible].

[illegible] appropriate to the clause [illegible] more twaddling [illegible] the purity of the profession [illegible] by the language of the bill. If it be desirable that a power of punishing disgraceful conduct shall reside somewhere, let the body before whom the case is brought decide whether such case, upon its own merits, be discreditable or not. The judicial body will be competent to decide in all cases upon the immorality or indecency of an action without [illegible] prompting as appears in the proposed bill. The vague enumeration of offences is simply undignified and meddlesome verbiage.

For my own part, gentlemen, I believe that the moral tone of the profession can be elevated only by a high and strict educational discipline, and by the cultivation of friendly intercourse among the the constituent members—an end that the establishment of a new college will tend most directly to achieve. Flagrant offences require, however, positive punishments; it is therefore expedient that there should be suitable statutory enactments to meet such cases as violate the decencies which professional honour enjoins.

Let us take care, however, how we confide such a jurisdiction to the hands of the governing councils of the present colleges. They ought not to be endowed with powers more arbitrary than any they now possess. We have been contending for many years against the irresponsibility of these councils, and the author of this bill virtually ridicules our struggles by proposing to confer upon them more extravagant

authority than they themselves would dare to demand.

No council, gentlemen, should have the power to deprive, in a summary manner, any member of their college of his character and his bread. There should be an appeal from such decision. The attempt to ingraft this irresponsible power on the present intolerable jurisdiction of these councils is monstrous. Their sentence will be irrevocable, and the ruin of an individual will be complete. No attorney can be struck off the rolls unless he has been tried before the Court of Queen's Bench and the highest courts in the realm; and are we to have no appeal to a superior court?

Further, gentlemen, the powers proposed to be conferred on the Registrar are equally unconstitutional. He also can strike any name off the register, and his *fiat is final*. Mr. Wakley seems resolved that an unfortunate member shall not escape; he seems to delight in persecuting a misdemeanant; he is either pertinaciously just, or atrociously unjust, as the case may be. Resolved that an offender shall not evade judgment, he is also resolved that he shall have no appeal. The exculpation of an innocent man is a matter of high disdain to him; although, probably, if this law had been in operation thirty years' since, Mr. Wakley might have spent the latter years of his life in unavailing repentance, and dishonoured destitution. I am not sure, if this bill should become law, that his own name would not be the first erased from the register. There are not wanting those who would say it was righteously done.

Such are the *unconstitutional* powers sought to be conferred by this bill. A professing Liberal is the ally of your oppressors. Scandalizing honesty of principle, and putting consistency to the blush, he is busy forging shackles for the men who have committed their liberties to his charge. His sympathies are with the despotic councils. He has himself declared that the powers I have denounced are unfair, and might be *iniquitously* employed! I hesitate, however to quote him as an authority. I know not but that, next week, he may *call* me liar, and *prove* himself one.

Gentlemen, it is your bounden duty to PETITION against the bill. Your sluggishness will be your ruin. Have I argued truly,—placed the clauses of the bill in a just light before you, and drawn honest conclusions? If you think so you *ought* and *must* petition the House against the measure. *Do it at once*, it is of the utmost importance that you should act while the special committee are conducting their inquiry.

I do not expect to please all dispositions and remove all prejudices, there may be some who are still hard to convince; let such men read the bill again for themselves; and, unbiassed by my comments, which are addressed to a variety of interests, and which reflect, perhaps strongly, the impression of my own mind, dispassionately consider the more important clauses, and establish their judgment.

You may rely upon it, gentlemen, that the general practitioners can never be in a safe or honourable position until they are incorporated in one body; and the moment that they abandon this enterprise they lose all chance of acquiring their just rights. It is much easier of attainment than some of you imagine, and it requires only a persevering and united effort to accomplish its fulfilment.

I have learned that there are certain sneaking and underhand attempts now in progress to divide the members of the Institute. Let such unmanly stratagems be treated with scorn.

I have the honour to be, Gentlemen,
Yours, very faithfully,
VOX VERITATIS.

THE SELECT MEDICAL COMMITTEE.

This committee consists of the following members:—

Mr. Macaulay (chairman), Sir James Graham, Mr. G. Hamilton, Mr. Bannerman, Mr. Acland, Mr. Wakley, Mr. Hawes, Mr. Fitz-stephen French, Sir Robert Harry Inglis, Mr. Dennistoun, Viscount Sandon, Mr. Boyd, Mr. Aldam and Mr. Lascelles,

Power to send for persons, papers, and records. Five to be the quorum.

The examinations will commence this day (Friday). The office-bearers of the College of Physicians will take precedence in the examinations. Monday will be given, it is expected, to the College of Surgeons, and successive days to the other institutions.

MISCELLANEOUS CORRESPONDENCE.

THE NATIONAL INSTITUTE OF MEDICINE, SURGERY, AND MIDWIFERY.

[To the Editor of the Medical Times.]

"4, Hanover square, June 2, 1847

"SIR,—I am requested by the committee of the National Institute to forward to you the enclosed, which you will oblige them by publishing.

"I am, Sir, your most obedient servant,
"GEORGE ROSS, Secretary."

A document, of which the following is a copy was this day left at the offices of the National Institute, by three gentlemen with whom the clerk was unacquainted, and who did not give their names. Two notes were left at the same time, copies of which are also annexed. As neither the document nor the letters of withdrawal enable the committee of the National Institute to determine under what circumstances the signatures have been obtained, or whether the document emanates or not from a public meeting the committee are desirous that it should be published without loss of time, in the exact state in which it was received.

The committee forbear to offer any observations upon the document in question, although it has been evidently prepared in ignorance of the principles which have influenced the National Association as well as the National Institute throughout the whole of their proceedings.

[COPY, NO. 1.]
"Middleton-road, Dalston
"June 2, 1847.

"SIR,—The opposition of the Council of the National Institute to the Medical Registration Bill, now before Parliament, not being in accordance with my views upon the subject, I beg that my name be at once erased from the list of members.

"Your obedient servant,
"E. B. BOWMAN."

[COPY, NO. 2.]
"1, Queen's-road, Dalston
"June 2, 1847.

"SIR,—The opposition of the Council of the National Institute to the Medical Registration Bill, now before Parliament, not being in accordance with my views upon the subject, I beg that my name be at once erased from the list of members.

"Your obedient servant,
"J. DALSTON JONES."

[COPY, NO. 3.]

"TO THE COUNCIL OF THE NATIONAL INSTITUTE OF MEDICINE, SURGERY, AND MIDWIFERY.

"We, the undersigned members of the National Institute of Medicine, Surgery, and Midwifery, take upon us thus publicly to repudiate the address published by the Council of that body against the Medical Registration Bill, now before Parliament, having neither been asked nor consulted upon the merits or demerits of the measure; also to deny the right of the Council to issue an address of such paramount importance to all its members, without endeavouring to elicit their views upon the subject. If they possessed the means of knowing the individual opinion of the body for the election of the council, they surely possessed the same means for ascertaining their views upon a measure where they one and all were so deeply interested.

"Feeling that the Council had by its precipitancy pledged itself to oppose a measure, the success of which the members at large were most favourable to, we are anxious that the members of the Legislature, and more particularly the committee now sitting in the House of Commons, should know that the opposition of the Council of the National Institute is not that of its members.

E. B. Bowman, Middleton-road, Dalston.
*J. Dalston Jones, 1, Queen's-road, Dalston.
Wm. Thos. Shaw, 17, Mount-street, Bridge-road, Lambeth.
Edgar Cockell, jun., Queen's-road, Dalston.
James Edward Mathew, Church-cottage, De Beauvoir-square.
*Esquire Dukes, Acton-place, Kingsland-road.
George Gould, 19, Kingsland-crescent.
Geo. West, 2, Hackney-road-crescent.
W. G. King, 7, Thurlow-place, Hackney-road.
*James Smart, Cambridge-heath, Hackney-road.
*Geo. Ned Giles, 4, Clifton-place, Hackney.
William Callender Tidy, Cambridge-heath, Hackney.
Henry Gervis, Triangle, Hackney.
*Wm. Huxtable, Wells street, Hackney.
*Edwd. L. Humphries, Kingsland.
*Frederick Caust, Dalston.
John Chambers, 3, Trafalgar-place, Hackney-road.
J. B. Pattison, 2, Brunswick place, Islington.
*H. C. Robinson, 2, Caledonia-place, Pentonville.
*P. Hagenies, 18, Hamilton-place, New-road.
W. Bayes (not a member), 1, Angel-terrace, Pentonville.
*Charles Parker, 12, Pitfield-street, London.
*W. Baker, Bow, Middlesex.
*James Self, Mile End-road.
William Garbutt Taylor, Enfield; authorized by letter, J. D. J.
*William Kelso Wright, North Brixton.
James Townley, Harleyford-place, Kennington; by authority, through W. M. Powell, of Clayland's-place, Clapham-road.
*David Taylor, Harleyford-place, Kennington; by authority, through W. M. Powell, of Clayland's-place, Clapham-road.
H. M. Townsend, 75, Newington-causeway; by authority, through W. M. Powell, of Clayland's-place, Clapham-road.
*William Hay, 23, Park-square, Leeds; authorized by letter, J. D. J.
Richard S. Penkivil, Sampford Peverill, Tiverton; authorized by letter, E. B. B.
John Augustus Lloyd, Bath; authorised by letter, J. D. J.
*Edward Parker, Rickdale, Liverpool; authorized by letter, J. D. J.
Thomas Inman, M.D., Liverpool; authorised by letter, J. D. J.
*William Hitchman, Cirencester; authorised by letter, J. D. J.
*James Holmes, Cirencester; authorized by letter, J. D. J.
*Edward James Shearman, Rotherham; authorized by letter, J. D. J.
*Fredk. George Wm. Muller, Haswell, Durham; authorized by letter, M. R. A. S.
*John Christie Seaham, Durham; authorized by letter, M. R. A. S.
*Wm. E. Coyte, Bishop Easington, Castle Eden, Durham; authorized by letter, M. R. A. S.
*Robert Fidler, 71, Northumberland-street Liverpool; authorized by letter, M. R. A. S.

Henry W. J.
by letter, M. R. A. S.
P. S. Ellis, Yorkshire; authorized
*Joshua Barlow, reet, Manchester; authorized by letter, M. R. A. S.
W. Briggs (not a member), Manchester; authorized by letter, M. R. A. S.
*Samuel Beecroft, Hyde, near Manchester; authorized by letter, M. R. A. S.
Jonathan Shaw Hyde, Manchester, Cheshire; authorized by letter, M. R. A. S.
*W. E. Grindley Pearse, Marsham-street, Westminster.
*W. H. Cooke, 88, York road, Lambeth.
*R. L. Hooper, London-road, Southwark.
Wm. Eales, 23, Parliament-street.
Fredk. Tucker Ryde (not a member), Cheshire; authorized by letter, M. R. A. S.
William Tucker (not a member), Cheshire; authorized by letter, M. R. A. S.
Robert R. Clay, Wandsworth-road; authorized by letter, W. M. Powell.
*Alexander M'Gregor, South Hetton, Durham; authorised by letter, J. D. J.
William Philson, Hitching, Herts; authorized by letter, J. D. J.
George Learey, Maidstone, Kent; authorized by letter, J. D. J.
Wm. Bird, Herapath, Bristol; authorized by letter, E. B. B.
*Geo. John Parker, Bristol; authorized by letter, E. B. B.
J. P. M'Donald, Bristol; authorized by letter, E. B. B.
Robert M'Pherson, Bristol; authorized by letter, E. B. B.
James St. J. G. Parsons, Bristol; authorized by letter, E. B. B.
Edward Evans, Stone's-end, Borough; authorized by letter, W. M. Powell.
Dated June 2, 1847.

ON THE USE OF OXIDE OF SILVER AS A REMEDIAL AGENT.

The use of oxide of silver as a remedial agent is daily increasing. I believe any facts in relation to the compounding of it that may come under the notice of the dispenser to be his duty to lay before the profession, for, like all other novelties in medicinal science, experience only can lead to beneficial results, and the want of experience is likely in all cases to lead, and with this substance must lead, to very pernicious results.

The usual form of administering it I believe to be in pills, containing about half a grain each; but if, in the preparation of these, the confectio rosæ gallicæ be used as a vehicle, it forms an explosive substance; and with this, like other similar substances, you cannot fix with any certainty the period of its explosion, so that, should it not explode before taken, the party taking it will be swallowing a substance almost certain to explode with the heat of the stomach.

It also forms an explosive substance when combined with an essential oil—a combination many physicians are very fond of, but a most dangerous one.

It, therefore, now becomes a subject worthy of the attention of the chemist, pharmaceutist, and physician, what substance it can be combined with in safety. The examination of all these cts requires an immense deal of labour, and but repeated experiments can lead to al results; but a subject of such importance surely must not be passed over on account of the labour attending its investigation.

I must beg pardon when for a moment I would depart from the rules of philosophic research, and throw out one or two theories upon this substance, which I employ to put the physician or practitioner upon his guard.

I believe the explosion to result from the slight affinity which holds the carbon and hydrogen together in both sugar and essential oils, in of which substances it it in large quantities.

I consequently believe the same results would follow its combination with starch, all saccharine matters, and all bodies where carbon and hydrogen are present in large quantities, and where their component parts are held together by a very slight affinity for each other.

Seeing the majority of extracts contain a large quantity of either starch or saccharine matters, care should be taken how we combine it with them.

With these remarks I would conclude, leaving the subject open to the investigation of all, though I trust soon to be able to offer you a few more remarks upon its action.

J. UNDERWOOD.

4, Grafton-place, Kentish-town.

P.S.—I noticed the effect of the conserve while preparing some pills with it at 199, Fleet-street; and the effect of the oil was noticed at Messrs. Allen's, Plough-street.

A WHOLE FAMILY POISONED.

On the evening of Sunday last there occurred, at Kensal-green, a more painful accident by poisoning than we ever remember to have heard of on any preceding occasion, the result of which is that six persons have been killed, and three others are in imminent danger. A man named Thomas Hickman, aged thirty-four, occupied, with his wife and six children, a small cottage in Penton-villas, Middle-row, adjacent to the cemetery at Kensal-green. On Sunday morning last Caroline Boncroy, a sister of Mrs. Hickman, called to spend the day with her relatives, and during the morning she was asked by her sister, who was otherwise engaged, to prepare a rhubarb-pudding for dinner. It appeared that after the batter was mixed, and all the flour exhausted, the substance was too thin, and on going to an adjoining cupboard she found in a paper bag what she imagined to be another package of flour. This she added to the former mixture, and the whole was sent to the bake-house. At dinner the family, including the sister of Mrs. Hickman, partook heartily of the pudding, little suspecting that it contained a deadly poison. Shortly after they had partaken of the pudding, very alarming symptoms were perceptible in the whole of the children. They were first seized with violent sickness, accompanied by a burning sensation in the throat and stomach. Whilst Mr. and Mrs. Hickman were attending upon their offspring, they were, together with Caroline Boncroy, attacked in a similar manner, and they then for the first time imagined that the fruit in the pudding had caused the symptoms, and assistance was called in.

Mr. Abercrombie, a surgeon, of the Kensal-road, was promptly in attendance, and, seeing the state the parties were in, he inquired what they had eaten? He was told a quantity of rhubarb-pudding, and was shown the remainder of it, which was lying on the table. From the symptoms which showed themselves, he was positive that it was not the fruit in the pudding, but some violent poison that was acting on their constitution; and, from the metallic taste they described as having in their throats, he felt convinced that they had partaken of arsenic. He made known his suspicions to the sufferers, when Mrs. Hickman's sister exclaimed, "It must be that white composition which I found in a bag in the cupboard, and which I mixed with the pudding. Hickman, on hearing that, exclaimed, "My good God! why, that is the white arsenic I have had in the house so many years!" Mr. Abercrombie immediately on hearing this administered the usual antidotes, and did all that the nature of the case would admit of, but without any beneficial result; and at six o'clock James Hickman, a fine youth only nine years of age, died from the effects of the poison. In the course of an hour and a half afterwards another of the children, named John, three years of age, also expired. A third child, aged eighteen months, named Henry, next died. Mary Ann, aged four years and a half, also died at half-past ten. At eleven o'clock on Sunday night the fifth child, named Harriett Elizabeth, aged six years, expired. Mr. Abercrombie continued in attendance throughout the whole of Sunday night and Monday morning; but, in spite of all his efforts, the father of the above unfortunate children died at half-past twelve on Mon He was only thirty-four years of age; and the time of his death he exhibited the gre anxiety for the fate of his wife and offspring.

Mrs. Hickman, her sister, and her son Thomas, aged twelve years, are now (Wednesday) still alive, but their ultimate recovery is doubtful. Mr. Abercrombie has taken possession of the remainder of the pudding, and what they had thrown off their stomachs. The latter he has analyzed, and found that it contained a considerable quantity of arsenic, and, on questioning Caroline Boncroy, he learned from her that the bag contained at least half a pound of that poison.

The statement made by the husband prior to death, and which was confirmed by his wife, was, that a quantity of arsenic had been kept in a bottle, but some time since, by mishap, the bottle was knocked down and broken, and the contents were afterwards placed in an old flour-bag, and deposited in one corner of the cupboard, where it remained until removed by his sister-in-law.

In explanation of the large quantity of arsenic so carelessly placed in a cupboard, it may be mentioned that the deceased Hickman had formerly been a glassblower, in which capacity he had frequent occasion for the use of the poisonous substance. Nothing, however, can be offered as a sufficient excuse for the carelessness of leaving so large a quantity of so deadly a poison in a cupboard amongst articles of food, and, above all things, *in a flour-bag*. Rumours have been afloat to the effect that Hickman intentionally poisoned himself and family. There can be no doubt, however, that this statement is incorrect. A coroner's jury was convened for eleven o'clock on Tuesday, but the inquest was adjourned.

CHARGE OF POISONING AGAINST A CHILD.

At Southwark Police Court, on Monday, Henry Asher Fitzjames, a boy between eleven and twelve years of age, was charged before Mr. Cottingham with attempting to poison his mother and her infant, the latter three months old.

Mr. Cottingham, on being informed that there was no person in attendance to press the charge, remarked that the accusation was one of such an extraordinary and serious character that he felt bound to investigate the affair. He then called upon the policeman to state the circumstances under which the boy was given into custody; and his account was, that the mother brought her son to the station-house the preceding day, and said that he had mixed poison with the water she had used that morning for her breakfast, and from the effects of which she was then suffering. She also said that he had attempted on former occasions to poison her, and that her infant, three months old, was then lying in a hopeless condition, owing to the boy having mixed up small pieces of broken glass and precipitate powder in its food; that upon hearing the nature of the charge it was immediately reduced to writing on the police sheet, and the accused, who did not deny it, but continually beseeched forgiveness, was then locked up. The mother was directed to be in attendance to proceed with the complaint that morning, but instead of doing so she absented herself, and he (the policeman) believed that it was not her intention to come forward.

Mr. Cottingham then sent a policeman for the prisoner's mother, and after some delay she attended, but evinced a strong repugnance to proceed with the charge against her child, until the magistrate impressed upon her the necessity

of it, as well for her own sake as for that of the rest of her children, and also on the part of the public, for there was no knowing what mischief a lad of such an atrocious spirit might do if suffered to go unchecked in his career.

The mother, who gave her name Anne Fitzjames, said that she was the wife of a traveller now abroad, and that she lived in Hanover-place, Millpond-bridge, Rotherhithe, that on Sunday morning she had coffee for breakfast, and about half an hour after partaking of it she was attacked with violent pains in the stomach and a disposition to vomit which she encouraged by taking copious draughts of hot water and brought away the contents of her stomach, when she became better. She afterwards made some inquiries about the coffee of her daughter, a little girl, and from her she heard that her son the boy at the bar, had thrown a quantity of precipitate powder into the jug which contained the water with which she had made the coffee for breakfast. She added that the girl might have told falsehoods and that she had contradicted herself there in making out the subject.

Inspector Hornsby here informed the magistrate that Mrs Fitzjames, when at the station-house the preceding day, informed him that it was not the first attempt the boy had made to poison her, that he also attempted to poison the person to whom he was apprenticed, and, in fact, she said many more things to him to criminate the boy which she now seemed unwilling to disclose.

Mr Cottingham (to the mother) Is it true your son attempted to poison you on a previous occasion? I have already cautioned you as to the importance of investigating this dreadful charge to the utmost, and you are, therefore, bound to tell me all and everything that has reference to it, in order that the truth may be elicited. Has the boy made a similar attempt before?

Mrs Fitzjames replied that about ten months ago she was taken suddenly ill, and that her daughter then told her that her brother had mixed arsenic in some tea which she drank.

Mr. Cottingham Can you tell the reason he attempted such a wicked act? Had you chastised him or given him any cause to be provoked with you?—Mrs. Fitzjames. None that I am aware of, he has certainly been a bad boy, and had on different occasions taken money and other property from me.

Inspector Hornsby said that on the preceding day Mrs Fitzjames told him that the boy administered the poison to her in order to get possession of her goods and other property.

Mr. Cottingham here remarked that he was sorry to perceive that Mrs. Fitzjames still manifested a disinclination to repeat the whole of the circumstances, he would make allowance for a mother's feelings, but still he must be put in possession of all the facts bearing upon the case. The magistrate then directed that Inspector Hornsby should repeat all that Mrs Fitzjames said to him on the subject of this charge at the station house in the presence of her son.

The inspector was then sworn, and he said that Mrs. Fitzjames, when giving the boy into custody, described the circumstances attending his mixing precipitate powder in the water with which she had made the coffee, and also of his having upon a former occasion put arsenic into her food, and that when the boy was questioned by her as to his motive for doing it his reply was that a man named Jones, a card printer, advised him to do it, in order to get possession of her property, telling him that if he killed his mother they would divide all belonging to her between them. The inspector added, that the mother also mentioned to him that the boy had attempted to poison his master, and also that her infant, three months old, was then in a dying state from precipitate powder which had been given, or glass which the boy had mixed in its food.

Mr Cottingham inquired whether the prisoner denied his mother's statement at the station house? The reply was in the negative, that the only words the boy uttered were, "Mother, do pray forgive me."

The mother was here interrogated by the magistrate and in reply to his questions she said, that the inspector's statement of what took place at the station-house was perfectly correct. She added, that about two years ago she detected a powder resembling arsenic in the water she was about to use; that she did not take the water to a chemist to have it analyzed, under the apprehension that it would get the boy in trouble and it being such a dreadful thing for a mother to accuse her son of an attempt to poison her. On that occasion, when she questioned the boy, he admitted that he had mixed arsenic in the water, adding that Jones gave it to him, telling him that if his mother swallowed it it would kill her and that then he would have all her money. She added, that on that occasion she was exceedingly ill, having drunk a small portion of the water that she went to a medical man, but did not disclose to him her apprehension of her being poisoned. She never saw the man Jones.

Mr Cottingham Had you or the boy's father ever told him that he was likely to have property at either of your deaths? Mrs Fitzjames replied that nothing of the kind was ever mentioned by either of them.

Mr Cottingham then, addressing the prisoner, who cried during the greater portion of the examination, asked him what he had to say in answer to the charge?—Prisoner I said a great deal that was untrue to get myself off when my mother took me to the station. I thought that if I said that I gave her poison I should be let out. I never put arsenic or precipitate powder in the coffee or the water.

Mr Cottingham Then why did you beseech your mother's forgiveness when she was repeating what you had previously told her at the station house?—Prisoner Because she threatened me with the police. I knew Jones. He wanted me to give my mother poison to kill her to get her property, but I told him I would not.

Mr Cottingham How long have you known Jones?—Prisoner Since Christmas. I met him in the Borough market after I ran away from my master, and he wanted to take my boots and my cap. I told him where my mother lived, and all about my running away, and by his advice I went to sleep at a workhouse, and told the porter that I belonged to Liverpool. The next time I saw Jones he proposed that I should kill my mother, and said that he had poison to give me to do it. He showed me a powder, saying it was arsenic, but I refused to accept of it.

Mr Cottingham. Have you seen Jones lately?—Prisoner No, I have not.

Mr. Cottingham: You told your mother about putting broken glass and precipitate powder in the child's food, is that true?—Prisoner. I did tell my mother so, but it is not true, I never did anything of the kind.

In reply to Mr Cottingham, Mrs Fitzjames said that she threw away the coffee grounds, that she kept no precipitate powder, arsenic, or anything else of a poisonous nature in her house, that she remembered several months ago sending out the prisoner for a pennyworth of precipitate powder, the greater part of which was used for her children's hands, but she did not know where he purchased it. Her infant was very bad that morning and not expected to live. She had not mentioned to the doctor who attended the child about the precipitate powder or glass suspected to have caused its illness, under the fear of the consequences to her other child (the prisoner).

Mr Cottingham said that it was really dreadful to contemplate a lad of the prisoner's tender years attempting not only to destroy his own mother, but also her infant, by means of poison. The case at present was involved in mystery, but he must say that he did not believe one word of the boy's assertion with regard to his having been advised by a man named Jones to poison his own mother in order to obtain possession of her property. This he (the magistrate) [illegible] to relieve himself from so serious a charge. He, however, would investigate the case thoroughly, and should give directions that the prisoner be placed in a part of the county gaol or removed where he would have no opportunity of having intercourse with any of the other prisoners; and that he should also request the chaplain's particular attention to be directed to the prisoner, with the view of impressing upon his mind the situation in which he was placed, and obtaining from him such information on the subject as would lead to a full disclosure of the whole of the circumstances, and also of ascertaining whether the boy was the originator of the atrocious attempt upon his mother's life, or whether he had been goaded on by some villain whom he met with at the time he absconded from his master. At all events, the most rigorous inquiry should take place into so serious a matter. The magistrate then remanded the prisoner for a week, desiring that the police should use the most active exertions to discover whether he had purchased any arsenic or precipitate powder in the neighbourhood, and he also requested Mrs Fitzjames to call in the aid of a medical man to her infant, and in the event of its death to have a *post mortem* examination, with a view to discover whether ground glass and precipitate powder had been administered in its food.

The prisoner sobbed aloud on hearing that he was going to be sent to prison, and was then removed from the bar.

Melancholy Suicide.—On Saturday week Dr Meshum, one of the physicians to the Bedford General Infirmary, committed suicide by taking prussic acid in the committee-room of the institution. The deceased had been at the infirmary all the morning, and had been seen by a number of persons throughout the day, but he appeared in his usual health and spirits, and had not betrayed anything in his manner likely to attract particular attention or suspicion. He has left a wife and six children to bewail his untimely loss.

On Wednesday, the 2nd inst, the St Pancras Board of Directors concluded an inquiry, which had been pending for three weeks previously, respecting the conduct of Mr Thomas Henry Cooper, surgeon to the workhouse of this parish, in reference to the case of Sarah Needen, a young girl sixteen years of age, who, on the morning of April 20, gave birth to a stillborn child in the infirmary of the workhouse. The labour was stated to have been natural, but the removal of the placenta did not follow for several hours. Mr Cooper, who was present, was requested to administer ergot of rye, but he declined, and finally removed the placenta twelve hours after delivery. A few days after, the patient died of puerperal fever. Several members of the board having become acquainted with the history of the case, Mr. Cooper was called upon for explanation, which not being satisfactory, the case was referred to Dr. John Hull Davis, physician to the Royal Maternity Charity, whose report was on Wednesday read, in which he gave his opinion that the surgeon, knowing, as he must have done, that the practice and opinions of the present day were against him, had done wrong in allowing the placenta to remain. After a very full investigation, and some resistance from Mr. Cooper, the following motion was carried without a dissentient voice —"This board, having been repeatedly called on to express its censure at the general conduct of Mr Cooper as its medical officer, feels itself under the painful necessity of recommending to the vestry the removal of Mr. Cooper from his present office."—*** Our readers will recollect that Cooper is the person who, with (one, or it may be two) other agitators, formed Wakley's successive mock-associations, the other moiety figured the other day in the newspaper reports of the Bankruptcy Court.

Dr. Wagner, the celebrated professor of Berlin University, has just died in the fifty-fifth year of his age.

SUGGESTIONS

FOR A MORE SIMPLE ARRANGEMENT OF THE

MATERIA MEDICA,

BASED ON ITS PHARMACEUTICAL AND THERAPEUTICAL RELATIONS.

By GEORGE LEITH ROUPELL, M.D.

Cantab., F.R.S., Fellow of the Royal College of Physicians, Physician to St. Bartholomew's Hospital, Lecturer on Materia Medica at the College of St. Bartholomew's Hospital.

LECTURE I.

The numerous classifications of the materia medica which have been suggested at different times, and the objections which may be urged against all, will justify a further attempt at arranging this extensive and complicated subject. It is well known that this is the most distasteful of the various pursuits to which the mind of the medical student is directed. That such should be the case appears strange, when we reflect that its object is the history of certain agents possessing the singular power of influencing the system, so as to control morbid actions, and thus to cure disease. How, it may be asked, can topics such as these be viewed with indifference or apathy, or what reason can be assigned for the repugnance often exhibited towards them? Phenomena more interesting cannot be pointed out in the physical world, nor can incidents more gratifying be disclosed by physiology. No one will deny, moreover, that an accurate knowledge of materia medica is necessary in practice. Many have deeply regretted their neglect of this department of their studies when their acquirements have been tested by examination, and when afterwards they have been called upon extemporaneously to prescribe.

The claims, then, of this subject to attention are sufficiently obvious. Equally clear also is the fact, that it often fails to command the thoughts of the pupil. It becomes, therefore, of moment to inquire into the reason for the slight so often exhibited towards it, and the slender amount of knowledge respecting it with which the young practitioner commences too frequently his career. The reasons for this I believe to be the great extent of the subjects included under the term "materia medica," and the general want of connection in the arrangements of them usually adopted. These appear to me the chief drawbacks to the willing pursuit of the study. It is to be apprehended that pupils when commencing it have felt as if entering into an interminable labyrinth, and been, as it were, lost in the confusion which the numerous collateral sciences may readily be supposed to create in minds previously untutored, yet at once directed to them all. Should this be so, or, further, should the feeling of inability to master the task set before the student impress itself upon him,—should the idea enter his imagination that the endeavour to tax his memory with what is laid down as essential to be known were hopeless, then would materia medica, or any other pursuit, be turned from with aversion, and naturally abandoned in despair. It may be that doubts have arisen with some, and that early in their pupilage, of the real necessity for the whole phalanx of remedial agents which is to be seen upon our shelves. Quaint sayings are current of men eminent in our profession who have contrasted with marked antithesis the number of diseases which at the close of life they found to be irremediable, with the host of certain cures for every disorder with which they believed themselves furnished at its commencement. The declarations, too, of certain successful practitioners, that they did not use a dozen of the many simples and compounds with which our "Pharmacopœias" are enriched, may have had the influence with many. One distinguished for the clearness of his views and his just appreciation of symptoms has declared that he wants no other tools to work with than calomel, jalap, bark, and opium. Doubtless, the thorough knowledge of a few active remedies is all that can be required for the energetic treatment of acute, simple, uncomplicated disease. This, however, is by no means what we meet with in ordinary every-day practice; and were the attempt made to enforce such simplicity, let our agents be as powerful as they might, it would utterly and entirely fail. As easy would it be to restore to society the primitive manners of the desert, or to make all mankind think and act alike, as it would be to restrict the practitioners of medicine to the exclusive use of a few chosen drugs. Granting, then, the necessity for retaining, if only for the sake of variety, a long catalogue of medicinal agents, under the head of the materia medica, the question naturally arises of how these are to arranged? Can any classification be suggested freer from objection than those now chiefly employed? Before entering, however, into this inquiry, it is not irrelevant that we should be reminded of the broad steps by which the present knowledge of the materia medica has been attained, and of the position which it may be said to occupy at this time. The first step of all would, of course, have been the discovery of the simple fact that certain substances possessed active medicinal properties. The next would be the employment of them in the cure of disease. The third step would be the acquirement of skill in the use of remedies, so as to adopt the appropriate ones to particular disorders. A fourth step has been made, and that is, the inquiry into the composition of the organic substances which constitute the materia medica. They have, in almost all instances, been investigated analytically, and their components separated in a purer form. It cannot be necessary to dwell upon the importance of ascertaining the active principle of drugs. Upon this knowledge depends our estimate of the absolute or relative value of different samples; by it we direct the preparation or regulate the admixture of our compounds. This knowledge, too, enables us to exhibit our remedies when desirable in a small compass and in a concentrated state. Great strides have thus been made in the progress of the materia medica. Much has been accomplished pharmaceutically, but it yet remains for physiology and chemistry united to unfold to us the secret workings of a large portion of our medicinal agents. We are yet much in the dark as to the processes by which restoration from sickness to health takes place. We may, however, consider certain data as established:—

1. That the cure of disease is effected as the nutrition of the body is performed, through the instrumentality, namely, of various organic and other principles.

2. That these agents operate by the manner in which they modify, directly or indirectly, the morbid actions of the system.

We have, then, in looking at our list of remedies, to think of the chief principles which they contain—to find out that in our medicaments which has the power of acting, to ascertain its nature, and then to measure its power. In very many instances these principles are now prepared to our hand in the laboratory, and are supplied in a state sufficiently pure for administration. The properties of our large number are so well known that their genuineness may, with little difficulty, be tested, and fraudulent adulteration detected. These principles we may consider to stand at the present day in the same relative position as regards the practice of medicine as the crude drug occupied in former times—the greater certainty in operation, and potency in effect corresponding with the advance of science in other departments. We have to deal with principles, in fine, instead of the crude material, we reject the inert portion of organic masses; and, casting off superfluities, we advance to the treatment of disease armed with weapons of great power and formidable activity. Another advantage is gained by organic analysis, the detection, namely, of analogous principles in very

many plants, thus showing that numerous individuals of this kingdom are indebted for their place in the materia medica to principles identical in composition and similar in effect. Hence we see that, should organic substances be grouped together according to the prevailing or active principle, our memories might be relieved of much unnecessary detail. It will be of comparatively little importance to pay attention to the sources whence they may be derived, such reference alone being requisite as will serve to awake attention, rather than confuse the mind. Impressed with these ideas, it appears to me that the materia medica may be comprised in a much smaller space than it has hitherto been, and that it might also be arranged in a much more simple and intelligible form. The works upon this subject, which are deservedly in the highest repute, are arranged in one of two forms, either alphabetically or according to the natural-history system.

In either case the natural history of the substance in question forms a large portion of the amount. Such details are essential where the whole subject is to be treated of. The lecturer on materia medica, however, at any of our schools, finds himself relieved of the chemical and botanical portion of his labour, and has only to look to that which concerns his special province, the pharmaceutical and medical relations of our drugs. In doing this he has to think always of the active portion or principle, to view it naturally combined with others; to study its character, so as to separate it on the one hand, and recombine it, if desirable, on the other; he has, besides, to trace it in its progress through the system. Now, all these processes and effects are more or less chemical; our pharmaceutical manipulations are purely so; the changes which take place within the body are chemical too, modified undoubtedly by the vital influence. Is the proposed arrangement, then, to be chemical? The materia medica ought, I think, to be so arranged, in order to be studied pharmaceutically. It is proposed, then, to place in groups those substances which are distinguished by a certain similarity of composition. But it may justly be asked, is organic chemistry sufficiently advanced to permit us to assume this as the basis of classification? Far, very far, from complete, let it at once be admitted, must be this attempt at arrangement; but, while we allow that we have much to learn before it can be so, no one will deny that much sound and valuable knowledge has been accumulated respecting the composition and properties of the materia medica. Should it be granted that such a classification, if practicable, would be the best, we need not, in that case, await the perfection of analysis. When, besides, a chemical arrangement is spoken of, I mean a chemical one so far only as chemistry may give us the broad indications of the properties of the classes which it is proposed to form—properties which it is absolutely essential that the practitioner should be acquainted with, as they regulate all our formulæ. In studying the properties and action of drugs it is not necessary that we should involve ourselves with minute atomic calculations, nor that we should dwell upon the refined distinctions between the different orders of plants and animals. The great and immediate object of this particular department, the materia medica, is the investigation of our curative agents, to view them in the simplest manner, and to discard all unimportant considerations. If the fact be admitted that in the cure of disease the result is produced by means of certain organic principles, and we can separate these, then may we discard inert matters, and chiefly direct our attention to the active portion of our medicinal roots, barks, leaves, flowers, fruits, or seeds.

It is proposed subsequently to divide the whole of the materia medica into two classes—the organic and the inorganic class. The incontestable proofs which we have of the identity of composition of many animal and vegetable substances render the separation of these two kingdoms unnecessary when treating of organic principles. This will be one step towards the simplification of the subject; and, proceeding from the point to which botany and chemistry conduct us, we may dispense with minute botanical distinctions, however interesting, or classifications of animals, however ingenious. The mind will thus be better disposed to regard the properties of the substance before it, to consider its mode of operating, and the laws which should regulate its administration and use. Let me not be supposed to underrate or decry the utility of studying the laws of vegetable life as illustrated in the formation of those principles upon which eventually animal life depends. In regarding the more simple processes of the germination of plants we discover the reasons of the changes in our own frames, and ascend analogically from the mere combination of elements to the complex metamorphoses of organized principles. Having made these general preliminary remarks, I shall proceed in my next paper to the more practical consideration of my subject.

A COURSE OF LECTURES ON SURGERY, BY SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London; Consulting Surgeon to London University Hospital, &c.

Lecture IX.

The subject of inflammation may be appropriately succeeded by the consideration of abscesses, involving the process of suppuration, often the result of inflammation, though some eminent physiologists, including Andral, are of opinion that it occurs where the latter has not taken place. As it may take place in any of the parts of the body provided with bloodvessels, it occurs in the same localities that are liable to inflammation. It may be connected either with specific injuries or a more generally morbid condition of the system, and leads to the formation of pus. When this purulent matter accumulates in any locality, that accumulation is called an *abscess*. As suppuration may be a consequence of acute or chronic, common or specific, inflammations, its character is modified accordingly: that suppuration which is brought on by acute inflammation is exemplified in every common abscess following healthy inflammation—in whitlows, milk-abscesses, those following gunshot wounds, and such violent mechanical injuries. Some specific inflammations produce acute suppuration, as seen in the venereal bubo. Others induce chronic suppuration: the lumbar abscess, and most scrofulous abscesses, are chronic, although some may commence with acute inflammation.

Although all parts susceptible of inflammation are liable to suppuration, some are more so than others: the mucous membrane, according to the observation of Professor Thomson, being the texture in which it is most readily produced, as in the lining membrane of excretory ducts, the respiratory or urinary organs. The same causes also which excite cutaneous inflammation and separation of the cuticle may produce suppuration of this texture. It may be induced by various circumstances, some of which are—1. the intensity of inflammation; 2, the nature of inflammation, always leading to the formation of a puriform fluid; 3, by continued exposure of certain internal tissues, as in the case of wounds, the sides of which have not united; 4, as a concomitant or, at all events, a result of ulceration; 5, following slight inflammation in mucous tissues without ulceration or breach of surface; 6, it is possible in parts having a serous membrane, as the disease called empyema, or a collection of purulent matter within the cavity of the pleura, proves: this disease first conducted science to the fact, that suppuration may take place without the destruction of the solids; 7, injury of the textures by violence, attended with contusion, and laceration, as well as the presence of foreign bodies in the cellular tissue, is a frequent cause of suppuration.

An abscess may be defined to be a tumour containing pus—a collection of purulent matter in the tissue of an organ. Where there is no accumulation, but matter pours out from the surface, there is not an abscess, though suppuration takes place: it is called a discharge. The matter of an abscess is generally deposited in the centre of the inflamed part, and the texture seems to be previously loosened and deprived of its firmness. Its formation is often preceded by a violence and rapidity of inflammation which may often serve to indicate the next stage. The pain and throbbing, the swelling and tightness of the parts, seem to attain their highest state of excitement just at the period preceding suppuration; and, if the inflammation be sufficiently strong to excite fever, it is then that febrile disturbance is greatest. When, however, matter is well formed in the tumour, all these symptoms are reunited, and, instead of an acute throbbing, a dull heavy pain remains. One portion is distinguishable from the rest rising to an eminence, generally in the middle of the tumour, of a whitish or yellowish appearance, permitting by its transparency the subjacent fluid to be discerned. At this part the skin is very thin, and when the pus arrives at the cuticle that texture gives way, and the pus is discharged.

It is a point of the highest importance to a practitioner to have the means of forming a correct judgment on the cases which present themselves under the appearance of abscesses. Nothing certainly marks more distinctively the experienced and observant surgeon than the ability to detect collections of deep-seated matter; and, as ultimately the true character of disorders of this kind is made obvious to all, nothing is more injurious to the reputation of a surgeon than an erroneous estimate of one of these cases. Generally, in an abscess, fluctuation may be discerned before pointing, and where this can be distinctly made out, it is one of the surest signs of the presence of pus, since only under that condition can fluctuation really exist; and it may be sometimes detected, although the matter of the abscess is thickly covered by textures, and lies at a great depth. At other times the thickness of the muscles covering it prevents the practitioner from deriving aid from this symptom. Where an œdematous swelling is observed, which is often the case, it may assist the surgeon in his diagnosis. Sometimes the perception of fluctuation is impeded by the character of the pus itself where it is thick. Many fail in their diagnosis for want of a correct method of conducting the manual examination of suspected abscesses: the fingers are not to be applied successively to the two sides of the tumour; but, while two or three fingers are placed on one side, the opposite side is to be tapped with those of the other hand: in this way, where fluctuation exists, it will be rendered more or less susceptible, according to the circumstances which have been enumerated.

But the mere manual examination of a tumour, however useful and, indeed, indispensable, should not be altogether relied on; the history of the case may be always made to contribute to the formation of a correct opinion upon the case; every symptom must also be compared with similar appearances, and their differences discriminated; and these, joined to the information derived from the manual examination, will generally conduct a man of observation and reflection to a correct result.

Besides these local symptoms, there will be, in many cases, frequent shiverings or rigors, following symptomatic fever. These rigors, however, seldom occur, unless the collection of matter is considerable or in some of the internal organs. The constitutional disturbance is afterwards lessened, and, instead of acute pain, numbness is felt. If, in addition to this, the patient have nocturnal exacerbation, sweatings, and a small quick pulse and hectic symptoms, for which no other cause can be assigned, they are

additional grounds for suspecting the existence of an abscess. The rigors, it has been observed, seldom occur very distinctly, except where the collection of matter is considerable, or where some of the viscera are the seat of suppuration. Hunter remarked that they are more common at the commencement of spontaneous inflammation than in that which arises from outward injuries.

When the patient is of scrofulous constitution, a very slight increase in the action of the vessels will will be followed by the formation of matter; indeed the first intimation of such increased action may be given by the appearance of such an abscess, as it may take place without much disturbance in the part; and in this respect they differ very much from those formations which follow acute inflammation, in which all the symptoms are aggravated just before matter is deposited, but which subside on the establishment of suppuration. Up to that time the arteries become dilated, causing the sensation called throbbing, and marking the transition from adhesive to suppurative inflammation: the colour of the part also becomes heightened, and is of pale scarlet hue; the swelling and tension increase through the dilatation of the vessels and the effusion of coagulating lymph.

The pointing of an abscess, which arises from the approach of matter to the surface, occurs earlier or later, according as the inflammation is more or less acute, and must be preceded by a gradual absorption of the parts lying between the collection of matter and the skin. After having made its way through the cutis, its passage may be delayed for a time by the thickness of the cuticle, which by the intervention of the pus is divided from the cutis; but it ultimately bursts, and the matter escapes; the tightness is thus relieved, and the feeling of weight is gone. The discharge may continue for some time, and the size of the opening increase, but under favourable circumstances the cavity diminishes, the acchemmo inflammation and granulating process ensue, and the opening heals up.

There may, however, be causes in operation to prevent the healing of the opening: thus, the presence of a foreign body, diseased or dead bone, retained pus, or the nature of the disease, may take away the disposition of the opening to close. The passage by which the abscess communicates with the surface is called a *fistula*.

It is desirable that you should be put in possession of the opinions on the theory of suppuration of those who have devoted and applied considerable time and talent to the subject, and more so, as the most discordant opinions have been held by pathologists respecting it. It was for a long time thought that pus could dissolve and hold in solution the living solids of an animal body; but, were that true, no sore discharging matter would be exempted from continual dissolution, and an abscess must continue to increase either opening as fast as before. It was upon this principle of the dissolution of solids into fluids that the practice of bringing indurated parts to suppuration, rather than making an early opening was founded. The experiments which men of more recent times have made for the purpose of building up a gratuitous theory, instead of proceeding boldly in investigating Nature, have made their conduct still more ridiculous: those who put dead animal matter into abscesses, and, finding it in part dissolved, imagined they had arrived at a confirmation of their theory, because they had proved the power of living matter over dead, must also have known that even extraneous animal matter will lie in an abscess for a long time without dissolution taking place, and that in some kinds of abscesses sloughs of the cellular membrane come away like wet tow, and, therefore, did not form pus. So the formation of pus has been ascribed to a fermentation of both solids and fluids. If so, how can what happens in internal canals be accounted for, where pus is formed without loss of substance or previous fermentation? Whence, also, could the solids come which enter into the composition of urethral discharges in gonorrhœa, since the whole substance of the veins could not afford matter enough for the pus of one gonorrhœal discharge? How could such a process ever stop? And, yet more, how was the first particle formed?

Nor is that theory which accounts for the formation of purulent matter by the conversion of extravasated blood more tenable, since blood has never been known, when extravasated by violence or rupture of a vessel, of itself to become pus; nor is it known that pus, in these cases, was ever found without previous inflammation.

That particular doctrine of the process of suppuration which has found most favour in the present day ascribes it to an action of the vessels analogous to secretion, and the arguments by which it is supported, I think, are well worthy your attention. It is known that suppuration is influenced by many circumstances affecting secretions in general. For instance, an ulcer, while pouring out a white, thick, healthy matter, becomes suddenly inflamed, the discharge diminishes, and becomes thin and reddish—a fact which agrees with the effect of inflammation in modifying the natural secretions in the organs which are the seat of it. So, also, the quantity and quality of the discharge from an abscess are often changed by violent emotions—sudden fever, the state of the digestive functions, and the diminution and decrease of the secretions by the influence of the nervous action in the system; and by functional or organic disorder in a part of the system unconnected with the seat of suppuration; and when it is considered that the kind of pus secreted varies with the peculiarities of the organization of individuals, the analogy is still more obvious. Those who hastily reject these views because no pus is found mixed with the blood in the system, following the same argument, might deny that the bile is a secretion, since it can, under no circumstances, be found in the blood. Neither pus nor bile is in the circulation, but the matters which, by the action of the secreting vessels, are converted into one or the other of those fluids.

From the fact that pus forms from the surface of the cutis, or a mucous membrane, without ulceration, it might be inferred that a dissolution of solids is not essential; but, although not necessary, it may accompany suppuration. Perhaps a portion of that substance which we find loosened in abscesses may occasionally be blended with the matter. There was several years ago a girl in Bartholomew's Hospital who had an abscess in her hip. When this was opened, with the pus a considerable lump of adipose matter came away. No doubt it was merely an accidental addition, and not an essential part of the purulent matter. When we examine the interior of an abscess, the cavity is found to be lined with a smooth membraneous substance, of whitish ash colour: it is called the cyst or sac of the abscess. The cellular membrane surrounding it is denser and more vascular than in its natural state; its cells are closed by coagulating lymph. By these two conditions, one of the sac and the other of the surrounding cellular substance, the matter of the tumour is bounded and prevented from becoming diffused. Abscesses have a tendency to make their way to the surface, and discharge there, by which tendency they will frequently make their way through a considerable thickness of parts lying between them and the skin, although merely a delicate serous membrane divides them from the cavity of the belly; they will, however, sometimes burst into a neighbouring duct, lined by a mucous membrane; and in this way those which form near the urethra or rectum take one of those outlets, as being the most direct course to obtain an outlet from the system. Where dense fascia exist between the abscess and the surface, great mischief will often ensue: unless precaution be taken, the purulent matter spreads between the muscles and under the fascia, forming formidable sinuses, greatly impeding a speedy cure.

Dr. Raymond, medical professor to the medical faculty of Madrid, died recently very suddenly.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), M.R.S.,
Physician to the Royal Infirmary for Children, &c. &c.

(Continued from p. 270.)

GENTLEMEN,—In my lecture to-day I shall continue the consideration of the *general* internal or constitutional treatment of scrofula, afterwards alluding to that especially adapted to the more important groups of its external manifestations. When I last addressed you I referred to the general characters of those remedial agents which were found to be the most serviceable, and I remarked that they were such as are indicated by the terms of *tonics*, *alteratives*, *liquefacients*, and *deobstruents*. Passing over *iodine* and a few other agents, supposed by some to exert almost a specific power over scrofula, I may say that the tone-giving agents you will find most serviceable in treating the malady are *iron* and *quinine*, and these may be given in various forms and modifications. You might expect, perhaps, that, from the known action of *iron* upon the blood, this metal would be of great service in correcting the thin serous fluid wanting in proper plastic material met with in this disorder: and it is the case that under its use the circulating fluid becomes redder, thicker, and richer in colour and fibrinous material. This improved state of the blood naturally reacts upon all the organs and textures of the body through which it circulates: it affords them new and better material to repair their wear and tear, and to increase their size, at the same time that it is wanting in that from which morbid deposit would certainly take place, did it exist. You will find, I am sure, from experience, that the preparations of *iron* are amongst the best agents you can have recourse to in this disease. The results of clinical experience also receive great support from physiological experiments. You will remember, perhaps, that I told you M. Coster placed a number of dogs, rabbits, &c., under the circumstances most favourable for the development of scrofula. Many of these unfortunate animals were shut up in dungeons without light, or space, or motion, and exposed to a cold, moist atmosphere, by means of wet sponges hung up in the cages. Some of the animals were fed on their ordinary diet, others were fed with food containing iron in the proportion of half an ounce of the sesquioxide to the pound. All the former became ill—the greater part were tuberculous; but not one of the latter afforded a trace of tubercle. I am the more particular in impressing upon you my belief of the value of iron, because it has lately been promulgated by a very great authority on the diseases of children, in France—M. Trousseau—that this agent is one of the worst you can administer to a chlorotic girl, in whom their exists disposition to tuberculous deposit; and in fact, from what I can glean from his paper, he regards it as to be entirely set aside in the treatment of incipient tuberculosis. M. Trousseau also affirms that there is a species of antagonism between chlorosis and tuberculosis—a repugnance between these two affections to exist together. If you give iron, he says, in such a case, it restores to the blood its exciting qualities, provokes febrile action, and hastens the end of those destined to die of phthisis. Now, I can neither believe in such antagonism, nor in the view here held of the effects of iron. Every one will admit that the indiscriminate employment of iron in certain cases, although it may give support for a time to the general vital energies of the body, may yet tend to increase the local derangement; but that in a pale chlorotic girl, of flabby muscle, with a loud *bruit de soufflet*, iron is at once to be abrogated—is the very opposite of a doctrine I should wish to inculcate.

Iron may be given at all ages, but certain forms are more fit for one age than are others. When the child is old enough there is no form better than the sesquioxide; I prefer this form to all others; you can give it in treacle, in doses varying from a teaspoonful to three teaspoonfuls

in the day For very young children I prefer the *vinum ferri*, and this you may give to children at the breast I am aware that this preparation is ridiculed by some, who regard it as of little use, and think it properly discarded from the Pharmacopœia They say, that if it has any good it must be from the *wine*, since it contains only a very little tartrate of the sesquioxide Be this as it may, whatever it contains I know that it contains enough iron to change the colour of the dejections, and also sufficient to do a great deal of good in a child of scrofulous constitution

Some practitioners are fond of the *tartrate*, and others give the *tincture of the sesquichloride* The *citrate* is a good form The *tartrate* and the *citrate* may be given to very young children, and are useful too on account of their better flavour. I shall speak of some other forms presently

Quinine, I remarked, was a very able weapon in strengthening the scrofulous patient I prefer it generally to the *bark* In some cases it seems to do more good than anything else, especially in those where there is great loss of appetite, but not evident fever Care must be taken that too much acid is not used in dissolving it when the intestinal lining membrane is irritable You will find the addition of the tincture of hyoscyamus or of hemlock very often advisable I think that this agent in combination with the *iodide of potash*, is the grand remedy for scrofula. I shall allude to it more fully presently, but I may tell you I have more faith in this combination than in anything else Maunsell and Evanson state that a combination of cinchona and iron is often more serviceable than where either is given singly It was first proposed, I think, by Dr Cheyne I have given quinine with the sulphate of iron, adding a little sulphuric acid to the mixture, with great benefit in some cases For children of the better classes of society you will find the *syrup citrate of quinine and iron*, manufactured by Mr Bullock, an admirable preparation You must not think, however, that it is so *very nice*, as its name of syrup citrate seems to indicate, for, when mixed with water, the more powerful flavours predominate Still, for those who can afford to pay a little more, I strongly recommend it As a general rule, you know, for young children, medicine should be made as nice as possible, but the metals and quinine are no very easy to deal with in this respect

Although you will find *iron* and *quinine*, with their combinations, so useful in scrofula, you would be wanting in a still more efficient weapon if you had not *iodine* This, gentlemen, is the grand remedy for struma I need not detain you with any descriptions of its chemical or pharmaceutical you will find such subjects amply spoken of in the various modern works on *materia medica*

We have now had a little more than a quarter of a century's experience with this agent, and I think that such experience warrants us in believing that the scrofulous disposition at once meets with an antagonist in iodine By the latter, not only are present maladies cured, but future ones are avoided In using iodine, you of course are not to expect to always overcome everything before you, but you will overcome much that you could not without its most important aid My experience in its use is great my belief in its virtues is so also I have had plenty of children brought to me with bad scrofulous ulceration, which was increasing under the various modes of treatment they had been subjected to, when I gave iodine the sores healed I have had enlarged cervical glands to treat over and over again, ... which cases no iodine had been used and they remained, in spite of every other thing, as hard and as large as ever When I gave iodine they got well I have seen chronic skin disease in scrofulous children resist treatment, I have administered iodine, and the skin became clear I have had children with strumous peritonitis, with disease of the mesenteric glands, successfully treated by it, and chronic hydrocephalus has yielded to its power Nay, I will go further than this, and say that however few and far between they have been, I have had recoveries for a time from infantile phthisis, and have warded off the more severe symptoms of that lethal disorder, tuberculous meningitis by the use of this most valuable drug I have painted the surface of sores with its alcoholic solution, have rubbed it over joints, brushed it over tonsils, have had many young heads shaved, and then rubbed with its ointment at night and morning for months together, in fine, from what I have seen of its power, I regard it as one of the grandest agents of the Pharmacopœia In this opinion I do not stand alone, many others are as deeply impressed with its power as I am, and no one more so than M Lugol, who asserts iodine to be possessed of powers as strongly opposed to scrofula as mercury to syphilis But there are others who regard it with a far more doubtful eye they see nothing very peculiar in it, believe in no antagonistic or specific virtue of it and hold other remedies to be quite as effectual It may be all very true that Magendie took a quantity of the tincture, containing nearly a scruple of iodine, without its producing any effect that Dr Kennedy administered it in a case in hand to eighteen grain doses daily, giving in the whole 993 grains, without any benefit, or that, on the other hand, a patient has been a miserable monument of the effect of iodine, that in others they have got worse under its use that it is uncertain both from its own peculiar variability of power and its commercial adulterations, and that, more than all, its virtues can not be depended upon, since by its meeting with bread, potatoes, sago, arrowroot, tapioca or other like matters in the stomach, those virtues will be modified and diminished by the formation of an iodide of starch I say admitting all these and other theoretical and practical objections which exist, yet in spite of them there is nothing equal to iodine in the mere therapeutic treatment of scrofula According to Condet, it is most useful in the torpid non irritable, and chronic form of the disorder, or what the Germans call *cold* scrofula, Wutzer is of the same opinion and these writers along with Sobernheim, rather deprecate its employment in what they call scrofula with erethism or inflammatory struma Hufeland and Glaeck value it chiefly in the painless lymphatic variety, and believe it to be detrimental when there is much pain, increase of temperature, great redness, tension and hardness of the diseased part

From my own experience I should say, that unless the inflammatory action going on is *very intense* and much febrile erethism present, there is no reason why iodine should not be given and it is just as useful as when the diseased part is devoid of all redness or discoloration bearing in mind that in the former case we have a more advanced form of the disease to deal with In cases where the attendant *hectic* runs high iodine is certainly contraindicated, except in very small doses, and in particular combinations but as regards the local forms, such as swollen cervical glands &c, with discoloration, heat of skin, or even suppuration with active local symptoms, there is no reason that iodine should not be given internally as well as when those symptoms are wanting, though, of course, its *topical* application is sometimes impossible I have seen scrofulous ulceration, attended with great local irritation, heal most rapidly under the use of this drug, whilst under other agents it was increasing But this is a grand point for you to recollect, that if in scrofulous patients affected with an active form of disease, the attendant inflammation was of the common or sthenic type, *then* the iodine might be contraindicated, but this you know is not the case the inflammatory action is of a peculiar, a specific form, and only occurring in a particular constitution, and against the tendencies of such a constitution iodine wages war This inflammation being a local manifestation of a ... diathesis, iodine is to be employed in curing it As to the question whether iodine does not exert *more* power in those cases where the action is more chronic, less active in its character, is another thing altogether—generally I think it does, but this is not a reason why it is *contraindicated* in the opposite varieties

Some persons have endeavoured to deprive iodine of its reputation, because, in the practice of those who have gained so much good from it, great attention was paid to general hygienic treatment, and to the latter alone would they award the praise But I think it might be asked Will iodine, in cases almost totally deprived during treatment of proper hygienic care—as in the poor patients of dispensaries, &c.—do more good in the greater number of them than anything else? To this the answer must be in the affirmative Of course, if *much* good be seen to accrue from it under such circumstances, *still more* will be experienced when it is combined with the hygienic treatment I have already recommended, and which has been so successfully put in practice by M Lugol But so will more good be found to arise from the use of colchicum in gout if the patient will drink table beer instead of Madeira, more benefit from cupping in pneumonia, if combined with antimony, calomel, and ipecacuanha In fact, the same rule may be applied to every drug, in complicated instances requiring treatment

Although I would impress upon you a very high opinion of the powers of iodine, at the same time you must remember that there exists no universal remedy which can answer all the indications met with in the numerous phases of this disease, but that dietetic and hygienic regimen the improvement and alteration of the digestive functions by bitters, aromatics, and neutral salts and modifying the crasis, &c of the blood by preparations of iron, are to be had recourse to, along with iodine itself Upon due attention to these principles much of the value obtained from this agent will depend, and in many instances you will find that, unless it be combined with *quinine*, or an alkali, your progress will be slow, but, on these being added, improvement of the patient becomes sure But still you may often give alkalis iron quinine, &c, and for a long period and until iodine is resorted to, amelioration is slow in the extreme, if at all This proves in my opinion, the fact that this drug has more power over the constitutional tendency than any other, it somehow combats more ably the abnormal states I have told you about, than does anything else But, inasmuch as numerous steps and stages of diseased action and lesional changes are involved in all cases where we have open and tangible forms of scrofulous disorder, so do we have many indications and one remedy, even though it be iodine, may not be equal to all, and therefore do we see reason to combine its administration with that of something else

Iodine may be given at any period of life, it does not matter whether the patient be a month or fifty years old, and it may be used internally or externally A very great difference of opinion exists as to its proper doses and the relative value of the combinations, some give it in large doses, others in very small Although I am not so frightened of large doses as some persons are, I prefer greatly, small ones, not that I dread much the production of "iodism," or "iodinous erythism," but chiefly gastro enteric irritation, from which the patient will be forced to suspend, or entirely give up, a most useful agent, before it has had time to affect the constitution In those large doses, recommended by some, it has such a tendency to pass off by the kidneys, and sometimes by the bowels, that very little of the drug gets into the system so as to pass into intimate combination with the tissues of the body

I generally prefer giving the *iodide of potassium* to any other form, sometimes I add the iodine itself to the solution But I find that in children I can continue the former by itself much longer than I can any other state of this drug You will find that to the youngest children one grain of the iodide in distilled water, sweetened *at the time of administration*, may be given three times a day with safety and advantage. If

the child be a year old you may add from 1-10th to 1 8th of a grain of iodine to the solution, if deemed requisite Your doses will go on increasing up to three grains of the iodide of potassium with 1-3rd of iodine, according to age and other circumstances. The vehicle I recommend you is distilled water, and the mixture may be sweetened when it is given, not *before*, for decomposition will ensue in a short time According to some, the iodine and iodide of potassium ought to be given in large quantities of liquid, or else, in all probability, a precipitation of the pure iodine will take place when it comes into contact with the gastric secretions From small quantities of *which* I have found no inconvenience result, and a small amount for children is a great thing, you know

I have alluded before to a combination of *quinine* with the iodide of potassium, and this I recommend you, with the strongest assurances of its value It is a combination which I can safely say I have seen do wonders in the more chronic cases attended with much debility—I know of nothing like it The mixture is certainly not *chemically* proper some iodine is set free especially if there is much excess of sulphuric acid in the solution But this does not hinder me from using it, as I know it is valuable therapeutically considered, in fact, many of the combinations and forms in which iodine is given are not right, *chemically* viewed, but I think in practice they are highly valuable, *water* for instance, only dissolves 1-7000th of its weight yet you may give it in this vehicle sweetened with syrup at the time of administration

For external use I generally employ the compound ointment of the London College rubbing it over glands, the scalp, &c, undiluted, in the young st child needing it Very rarely, indeed, have I found it too strong When a solution is wanted I employ the compound tincture and generally undiluted I have now and then used a lotion of the iodide of potassium in distilled water, varying from ℈ gr to ℥j to the ℥j of water In particular cases, when you wish to produce much counter irritation, I recommend you the following, —

Dissolve ℨj of iodine and ℨjss of the iodide of potassium in ℥ss of alcohol This may be painted near the affected part, and vesication will ensue

With iodine and the ioduretted iodide of potassium, I always find I can answer most indications, and when quinine is added to the iodide, I want no other form of the iodine combinations But other persons, you know, often use the *iodide of iron*, the *proto iodide* and *biniodide of mercury* the *iodide of lead* externally, and various other forms For information upon these agents I must refer you to Pereira and others

Some have great faith in the *chlorides of barium* and *of calcium*, as also of *sodium* and others in *arsenic, silver*, and *gold* I never employ any of these except here and there *arsenic* in certain cases of chronic skin diseases in the scrofulous child. I do not doubt but what the others may do good, but I am so contented with *iodine* that I prefer adhering to its use alone

Of the *alkalis* and *mineral acids*, and of *hemlock* and other narcotics, all of which have at times been vaunted to the skies, I have nothing particular to say There of course exists plenty of indications for their especial employment, under different circumstances, but they have no *special* relations to *scrofula*, that I am aware of.

There is one agent I must not forget to speak of, viz, *cod-liver oil* This has lately been much praised. I have administered it in about twenty cases, not more, and certainly found benefit from its use Many persons speak very highly of it indeed, but, after all, I think its reputation will greatly subside You may begin with a teaspoonful of it three times a day to young children, gradually increasing it. You may use it endermically also

Bromine is rising in reputation. *Pepsin* was once used. The *extract of walnut-leaves* is a powerful weapon in the hands of some practitioners, more particularly abroad

Now, gentlemen, in the above agents you will find many besides *iodine, iron*, and *quinine*, that I have no doubt you may use with great advantage Whilst you are doing so, of course you will have to attend to the state of the bowels, &c, but in no form of scrofula do you want active purgation but in one—viz, in *tuberculous meningitis*—here there is often obstinate constipation, which you have to overcome, and also to keep up continued peristaltic movement For this purpose I think you will find that at first aloes, with the sulphate of potassa, will be the best combination you can give, afterwards, rhubarb with jalap In other cases *rhubarb*, with the *sulphate of potash* or with *soda*, and often combined with the *powder of calumba*, will be found very serviceable In many nothing is better than, simply, *castor oil*

I must now caution you against what you are not to do this is not to give *mercury* in scrofula I state the *general rule*, mind I do not mean to affirm that a grain or two of hyd c creta, with a little rhubarb, soda, or calumba given at bed time, for a *few* nights, is always bad practice, on the contrary, I think it is often very good Or, again, that small doses of the [illegible] in the *compound tincture of cinchona* is not often serviceable—far from it, what I would imply is, that in children hyd c creta or [illegible] continued day after day, or week after or the putting of the child under a course of mercury, is not only useless, but highly detrimental, that giving calomel and lang ly and avouring to affect the system by it, it possible in scrofula is in 99 cases out of 100, bad practice indeed If it be true, and I believe it is that after the absorption of mercury important changes are effected by it in the qualities of the blood and in the action of all organs, more especially those of organic life and that these changes are of such a nature as to do anything but effect what is so desirable in 99 cases out of 100 of scrofula its use will receive no support from reasoning *a priori* If it be true that under the use of mercury the coagulability of the blood be diminished the proportion of clot, and therefore of fibrine and serum, becoming smaller it the formation of albumen and mucus sink to that of serum, and the whole organic functions of the patient become less consistent, less cohesive (Dietrich) if mercury diminishes the number of the red globules of the blood (Lane), if it changes the negative, healthy, electrical condition of this fluid to a positive one (Dietrich), if it be a weakening agent a sedative (Cornaldi, Bertolo), if mercury be, or do all this why is it useful in scrofula? "A full, plethoric woman, of a purple red complexion, consulted me for hemorrhage from the stomach, depending on engorgement without organic disease I gave her mercury, and in six weeks blanched her as white as a lily —(Lane in 'Fergus on the Diseases of Women')

I should be, however, one of the last to ask for *a priori* or theoretical reasons why a special drug should be given in any disease so long as *experience* told us it really was useful and therefore, though mercury did do all this and many things more, and yet cured scrofula I would use it but does it? What form of scrofula does it cure? Does it cure tuberculous phthisis, meningitis, peritonitis, or disease of the cancellated tissue of the bones? Does it heal up scrofulous ulcerations, or diminish enlarged cervical glands? Does it improve in general appearance the poor little mesenterically diseased remnant of an offspring of the miserably poor tea-drinking, meat-wanting washerwoman? Does its face become clearer in its complexion? Do the legs become firmer, and their flabby hanging folds of tegument filled up and tense? Or does not mercury still further debilitate its system and give rise to fresh outbreaks of scrofulous disease? I believe it does I should tell you that, in the Dublin School, there has arisen a class who, in certain cases of tuberculization, advise a "rapid mercurialization" to be had recourse to, chiefly, I believe, in certain cases of pulmonary tuberculization and of scrofulous inflammation of the hip and knee joint There is not a better practical school in the world than the Dublin, but in this I should decline following it

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF MEDICINE.

Meeting of June 1, M BOUILLAUD in the Chair.

GONORRHŒA

A report was read by M. Gibert on a paper by M Worbe, a military surgeon The object of the communication was to propose a method calculated to prevent the contagion of venereal diseases, and to arrest them at their outset. The plan recommended by Dr Worbe consisted in lotions with a weak solution of corrosive sublimate, a fluid which he also considered as the best injection which could be used for the early removal of gonorrhœal discharges Dr Worbe had not founded his opinion upon any experiments, but merely upon induction. It did not rest upon any other proofs than those which the author derived from a chain of reasoning, plausible, it is true, but insufficient to demonstrate its accuracy in the absence of facts The reporter, therefore, merely proposed the thanks of the academy to the essayist, and that his paper be deposited in the archives of the society

M Velpeau examined successively three questions connected with the subject Could chancres be arrested in their incipient state in such a way as to render general treatment by mercury unnecessary The reporter seemed to think so. M Velpeau himself believed it was possible, but that it was extremely rare It chancre was a purely local disorder it certainly might be destroyed with safety but how long did it remain local, what was the length of time during which cauterization might still prevent the penetration of the syphilitic poison into the system? These were points which were unsettled The second question towards which M Velpeau would direct the attention of the academy was that of chancre in the urethra M Velpeau had seen many persons with secondary and tertiary syphilis twenty or twenty-five years after simple gonorrhœa their numbers were too great to permit of them all having had urethral chancre. M. Velpeau therefore was disposed to believe that gonorrhœa might be syphilitic without chancrous ulceration in the urinary duct With regard to the abortive treatment of gonorrhœa, M Velpeau would say that the solution of nitrate of silver often arrested blennorrhagic discharges in a few days

After some remarks by M Adelon and M Rochoux M Cloquet stated that he had for many years abandoned the method of cauterization of chancres at an early period of their existence, because he had in several instances found that it had led to the formation of bubo M Cloquet was of opinion that one-third of urethral discharges was syphilitic, another third herpetic (*dartreux*), and the remainder of a simple inflammatory nature the great difficulty was to distinguish these varieties from each other

M Roux felt the most profound conviction that in syphilitic gonorrhœa the urethra was not ulcerated. As to the sudden suppression of urethral discharges, he was of opinion that gonorrhœa should in a great measure be abandoned to nature, and that the methods employed for its rapid termination materially increased its dangers.

M Gimelle stated that in the course of six years he had the good fortune of curing four patients affected with gonorrhœa, in none did he find any ulceration of the urethra

M Renaud said that he had been a long time engaged in researches for the purpose of ascertaining the precise period of general infection in cases of farcy in horses, and what was the effect of cauterization of the primary sores on the intoxication of the system The analogies between farcy and syphilis were numerous, and

gave some value to his experiments. Cauterization of the primary sores, twelve hours after their first appearance, was insufficient to prevent the passage of the morbid poison into the blood.

M. Lagneau did not believe that cauterization of the primary sores in syphilis could destroy their specific nature. Out of ten thousand cases of gonorrhœa, M. Lagneau did not think that more than one could be found of urethral chancre.

M. Rochoux agreed with the preceding orators; out of a thousand cases of gonorrhœa not more than one perhaps presented chancre in the urethra.

The conclusions of the report were then adopted.

MUSCULAR CONTRACTION.—WRY NECK.—M. Bouvier communicated a case of ancient muscular contraction, with the *post-mortem* examination. A man, aged eighteen, received, at the battle of Trafalgar, a blow on the neck from the fall of the yard of a ship. The injury was followed by stiffness of the neck, which was drawn towards the left side. The contraction lasted forty-two years. On dissection, the sterno-cleido-mastoideus muscle was found to have lost nearly one half of its length, and to be considerably modified in its texture; the arteries and veins were altered in their shape and in their course, and the cervical vertebræ were also much changed in their form.—Meeting adjourned at five P.M.

ACADEMY OF SCIENCES.

Meeting of May 31; M. BRONGNIART in the Chair.

EFFECTS OF THE INJECTION OF VARIOUS SUBSTANCES INTO THE ARTERIES. BY M. FLOURENS.

In a former communication we stated that, having injected ether into the arteries, M. Flourens found that its effects on sensibility and motility occurred in inverse order to those resulting from inhalation. Inhaled ether destroys sensation before motion; the contrary is the result of the injection of that substance into the vascular system. In his present paper M. Flourens stated that, having repeated the same experiments with acetic and oxalic ether, with alcohol, sulphuric acid, and ammonia, severally, the same facts were observed as after the injection of sulphuric ether: for instance, six grains of ammonia diluted in ʒj. of water were injected into the left femoral artery of a dog, in the direction of the heart. Instantaneously the posterior extremities were paralyzed. The sciatic nerve was then exposed; when it was pinched, the animal uttered violent screams, but no movement whatever was noticed, excepting some extremely weak fibrillary contractions. Oxalic and acetic ether, alcohol, and sulphuric acid, yielded precisely similar results. The injection of ℥ss. of essence of turpentine in the right femoral artery of a dog produced effects slightly different from those above described. Loss of motion was accompanied by a state of violent tetanic contraction of the muscles. The injection of 20grs. of nitric ether caused immediate death.

Having thus discovered substances which paralyzed motion without impairing sensation, M. Flourens had not despaired of finding others endowed with contrary powers, viz., capable of destroying sensation without affecting motility. With this view, he tried the effects of an aqueous solution of the extract of belladonna: its results were negative. But it was not a little remarkable that, after this failure, the powder of this root of belladonna yielded the effects sought for, and in the highest degree: six grains of this powder suspended in ℥ss. of water were injected into the right femoral artery of a dog, and immediately motion was lost in the posterior extremities; but the sciatic nerve having been exposed and irritated, the animal betrayed no pain whatever, although fibrillary contractions were present in a most evident manner. Powdered hemlock, four grains; valerian, four grains; pepper, two grains; Spanish snuff, two grains, produced exactly the same effects. The essayist was led by these experiments gradually to try the most inert and inoffensive powders, such as oak-bark, lycopodium, and liquorice root. Thus, four grains of the latter, suspended in ℥ss. of water were thrown up into the crural artery of a dog; the sciatic nerve was pinched, torn, lacerated, the animal giving no signs whatever of pain; but fibrillary contraction persisted throughout. These experiments, added M. Flourens, were all repeated frequently with unvarying results. In a physiological point of view, none were more surprising, and none, perhaps, were more certain.—Meeting adjourned at five.

HOPITAL DU MIDI.

CLINICAL LECTURE. BY M. RICORD.

The singular remarks made at the Academy of Medicine, June 1, on the subject of syphilis, warrant us in reproducing the following lecture, delivered by M. Ricord on June 5, in answer to the various allegations made against his doctrines.

At a recent meeting of the Academy of Medicine various questions connected with syphilis were brought before that illustrious society, and opinions which we cannot possibly coincide in having been expressed by men whose views are in general entitled to a high degree of consideration, it becomes our duty to show you the fallacy of its air of reasoning which led to erroneous conclusions. One of the points upon which all seemed to agree was the identity of nature between gonorrhœa and primary syphilis. M. Velpeau, for instance, stated positively, that urethral discharges might be productive, like chancre, of secondary symptoms no ulcerations existing in the urethra. In support of this assertion, the learned professor added that he had seen many persons labouring under secondary and tertiary syphilis twenty and twenty-five years after a simple gonorrhœa. How, we would ask, did Professor Velpeau positively ascertain that the patients had never been affected with any other symptoms but a simple urethritis? Is it not by the assertion of the patients themselves? and is that assertion sufficient to establish the fact that simple gonorrhœa alone was present? Considering the difficulties which are occasionally met with, even by the most experienced and able practitioners, in the diagnosis between simple and chancrous gonorrhœa, we should say the unsupported assertion of the patient was decidedly insufficient, and must go for nothing. What! a stonemason is affected with orchitis, and, when interrogated on the fact, says that twenty-five years previously he had gonorrhœa; and further attests that it was a simple inflammation—a word of which he is incapable of understanding the value—and his assertion is to be blindly credited! The supposition is too absurd to require further notice.

M. Cloquet goes more roundly to work. He has never met with urethral chancre; we are sorry for it, but not for his sake, as he seems to be quite easy in his mind as to the nature of urethral discharges: one third is simple, another third is syphilitic, and a last division is herpetic. Thus science is established; we have nothing more to do than to burn our books—a perusal of which we would, however, previously recommend to M. Cloquet, and to treat in an arbitrary manner every three cases, according to this elementary, we may add simple, division. It would not, in our opinion, lose any part of its value, if the learned surgeon would also furnish us with the means of distinguishing from each other these herpetic, syphilitic, or simple gonorrhœas.

What shall we say to our master, Professor Roux? He places his hand upon his heart, and declares he feels the most profound conviction that in syphilitic gonorrhœa the urethra is not ulcerated. For convictions we entertain the greatest regard, especially in surgery; points of faith are not to be discussed, and against implicit belief we can find no argument. M. Gimelle in six years has had the *good fortune*—(ô Moliere, greatest of comic writers!)—the *good* fortune of losing four patients affected with urethritis, and in none did he find chancre. M. Rochoux adds, that not one case in a thousand presents urethral chancre. Whilst M. Lagneau, enlarging with his subject, cannot believe that one ulcer will be found in ten thousand! We must acknowledge that we should vastly like to see the statistics on which these assertions are based; but, as we do not think they have been ever brought to light, we must consider them as having been strictly confidential, and closely concealed in the capacious intellects of the two learned orators, and given to the world only in an unguarded fit of enthusiasm.

Such are, gentlemen, the various arguments which were brought forward in order to prove the identity of gonorrhœa and chancre: can we call them arguments? We leave them to your appreciation. Let us now lay before you the reasons which induce us to form in this question an opinion altogether dissimilar from that adopted by the academicians we have quoted. In the first place, simple induction: the mucous membrane of the urethra enjoys no immunity from inoculation of chancre: if chancrous pus finds its way into the urethra, and comes into contact with the slightest erosion or laceration, there is every reason for supposing that here, as elsewhere, a chancre will be the consequence; doubtless, this should be much less frequent than simple inflammation; and we may also notice that the cases of secondary syphilis in which the chancrous origin of the disease is not detected are comparatively rare; but it is not reasoning alone which shows the possibility of the existence of chancre in the urethra: ocular demonstration is sometimes obtained. Gonorrhœa is not, thank Heaven, usually a fatal disease: still, we have had what we cannot call the *good fortune* of losing two cases of gonorrhœa since the last fifteen years, and in those two cases we pointed out the presence of chancres, numerous and characteristic: they were presented to the academy by ourselves, and their existence officially admitted by the reporter of the commission named to investigate the matter (the same M. Lagneu, whose memory seems to have failed him on this occasion.) Besides, it is not necessary that the surgeon should have the good fortune of losing his patients for the purpose of convincing himself of the existence of urethral chancre in cases of syphilitic gonorrhœa. The signs of this affection, which we will in a few moments recal to your memory, are sufficiently well marked to leave no doubt on the mind; inoculation can assist in giving further proof, and often the chancre, at first concealed in the canal, extends towards the meatus, and, appearing at the orifice of the duct, completes the demonstration. We are not, therefore, like M. Cloquet, satisfied with merely dividing gonorrhœa into classes; we also add the signs by which they are to be distinguished. In gonorrhœa virulenta (always the result of chancre in the urethra), what is called the period of incubation is longer than in simple uretritis: that is to say, that the discharge from a chancre is during the first days of its existence so trifling as not to be noticed. The secretion is of a sanious rusty hue, and of a thin watery consistency. One lip of the meatus is usually puffed, and on pressure of the glans penis between the finger the seat of the chancre is readily ascertained by its distinct and circumscribed hardness. When the sore is not far removed from the orifice, it may also sometimes be seen by separating the lips of the meatus, or by the use of the speculum urethræ of Sigalas. All these signs give a well, founded probability of the existence of chancre, but an absolute certainty can be obtained only by having recourse to inoculation.

Such are the motives which lead us to differ *toto cœlo* from the opinions so unhesitatingly laid before the academy: in that illustrious body, to which we have not the honour of belonging, we have no opportunity of explaining our views; and we could not permit you to be misled by what we consider to be fallacies, particularly when they are placed under the patronage of names which we are taught justly to respect.

TREATMENT OF TÆNIA.

A woman, aged thirty-three, was admitted into La Charité on the 4th of April, in the wards of M. Rayer; she had been since fifteen years of

age suffering from the presence of tapeworm. At first nausea, vomiting, and diarrhœa were the only symptoms, but portions of tænia were shortly expelled, and the malady continued during five years without intermission. She was then admitted into the Hôtel-Dieu, and submitted to a treatment which she cannot describe, but which succeeded in causing the expulsion of a large quantity of tænia, and delivered her during three years from all further annoyance. The cure appeared firmly established; the tænia returned, however, and since seven years the patient had tried numerous methods of treatment without any success. The characters of the worm having been well ascertained, in the exhibition of a dose of castor oil, M. Rayer prescribed seventy-two drops of the ethereal oil of male fern, to be made up into twelve pills, six of which were taken in the morning and six in the evening: two hours after the exhibition of the last pill ℥iss. of castor oil was given to the patient, who expelled in numerous fragments sixty-six centimètres of tænia. The accidents have since completely ceased, and no return of the parasite in the motions has been noticed.

M. Rayer prefers the oil of fern to the decoction of the fresh root of wild grenadier, which expels, it is true, with almost perfect certainty, the tænia, but produces symptoms resembling those resulting from the absorption of poisonous substances of an irritating nature.

D. M'Carthy, D.M.P.

Pericarditis and Mercury.—Dr. Latham says, in English practice mercury is given from first to last, but it is for a time as if it were not given at all, for it produces no sensible effect. Common antiphlogistic remedies, however, are able again and again to mitigate and subdue symptoms; and so, at the end of a week or ten days, the patients are still alive, yet they are ready to die; but in a great majority of cases they do not die. Salivation arrives late, and seems to save them.

Engorgement of the Uterus with Hemorrhage.—The mouth of the womb, says Dr. Meigs, in his translation of Colombat de l'Isère's work, is enlarged in proportion to the engorgement, and this, as well as the whole surface of the tumour is the seat of a sanguine exudation, which though often considerable and permanent, does not at all diminish the congestion. If the parts are explored by means of the touch and speculum the neck is found to be tumefied, softened, and of a more or less deep colour. The os, covered with clotted blood, appears smooth to view, but somewhat uneven to the touch; by gentle pressure a slight sensation of crepitation is perceived and an oozing of black blood produced, which escapes as from a sponge. When the disease has reached its last stage, the skin assumes a yellowish-straw tint; the eyes seem dull; and, in some women are observed to retain a certain degree of wonted robustness, it is because the surface of their bodies has become the seat of a general bloating, which conceals the wasting of their muscles. On examination *per vaginam* the neck of the uterus is found to be macerated and transformed into a sort of ulcer, presenting a layer which is softened and putrid, surrounded by a hard and, as it were, scirrhous tissue. Hemorrhagic engorgement which has reached this stage is extremely serious, and there is no hope of seeing tissues, so profoundly changed return to their normal condition. In general, the danger of the disease is in proportion to the violence and duration of the uterine hemorrhage.

Tubercular Disease of the Peritoneum.—Mr. J. Elkington presented lately to the Birmingham Pathological Society, the stomach of a woman sixty-five years of age, who had died of this disease. It appears to have existed for about six years. She suffered from violent spasmodic pain in the side, sometimes the right, and at other times the left, on the slightest exertion or on taking certain articles of food; a sensation of pain after eating, and sometimes vomiting, violent palpitations of the heart, constipation and depression of spirits. The countenance exhibited great anxiety; tongue coated with deep white fur in the centre, brown at the edges, and tremulous; pulse 100, small and compressible. There was pain over the whole of the stomach, but no tumour could be discovered. The treatment consisted in the application of leeches; after their removal a blister, a saline mixture every four hours, with two pills, composed of pil. hyd., ext. colocynth, and hyoscyamus, at bedtime. Under this treatment the pain over the stomach became much diminished; tonics were then given, and she departed to a distance, and was lost sight of for some months. Three days before her death Mr. Elkington found her with suppression of urine, distended abdomen, and vomiting fetid matter. On the *post-mortem* examination a gallon of fluid was found between the layers of omentum. The stomach appeared contracted to the size of a closed fist, and was overlapped by the liver; it was hard on its external surface; both anteriorly and posteriorly were large deposits of a pinkish colour, one in particular posteriorly, and nearly the size of a nut, which had quite a calcareous appearance. The peritoneum in the upper part of the abdomen was healthy; the pelvic portion contained the pinkish deposits, easily recognised after being washed with water.

Mania.—A lady, thirty-one years of age, came under the care of Mr. Ray, of Sheffield, in consequence of an attack of mania, which appeared to be the result of anxiety and distress. All the functions were healthy. Blisters were applied, and tartar emetic used both externally and internally, and in four days produced the most beneficial effects. The patient has since continued perfectly well.

The Diarrhœa of Infants.—Dr. West concludes, from *post-mortem* investigations, that the diarrhœa of early childhood is at first merely an excessive secretion, and not the result of any appreciable morbid change; and that the anatomical alterations of the digestive canal are the consequences of the diarrhœa, not its cause, whence it happens that their extent is usually proportionate to the severity and continuance of the flux.

Constipation in Young Persons.—Dr. Dick considers this rather a sign of health than disease, arising from too great dryness and solidification of the fæcal matters, and are thus reduced to so small a volume as not sufficiently to excite peristaltic action. This form of constipation usually disappears spontaneously at that time of life when, less exercise being taken and the development of the body being completed, absorption goes on less actively in the bowels, the mucous surface of which is again plentifully lubricated with mucus, as in the first years. The cure at the outset ought to be sought alone by attention to diet. The food should be pultaceous and herbaceous. This failing, injections of tepid water of considerable volume should be employed. If this is insufficient, a medicated one should be had recourse to, consisting of gruel, with olive or castor oil, or turpentine, or infusion of senna. If some aperient appears indispensable, aloes combined with myrrh, galbanum, or sulphur, fulfil the object intended. Castor or olive oil are perhaps the next best remedies. If the constipation of youth be not mismanaged, it generally ceases from the twentieth to the twenty-sixth year.

Mode of Administering Aperients to Children.—Phosphate of soda may be used conveniently as a condiment in soup in the place of common salt. Children may be unconsciously beguiled into the taking of the medicine in this way, and it will be found an excellent purgative.

Carminatives and Tonics.—Cullen's opinion was that coriander-seeds correct better than any other carminative the griping effects of senna. Cascarilla, says Dr. Dick, is an excellent aromatic tonic, which agrees with most stomachs. It may be either given by itself, or else conjoined to stronger tonics or purgatives. Thus it corrects the cold and griping tendency of senna and neutral salts. In a course of tonics we may often advantageously commence with cascarilla, and go on to gentian and quinine.

Mode of Detecting Morphia in Case of Poisoning.—M. Mermu's method is to wash with water, slightly acidulated with acetic acid, the solid matter ejected from the stomach. The product of the several washings is to be mixed with any liquids which can be collected. If one has liquids only at disposal, these are to be mixed with the water acidulated as above. The resulting mixture is then to be heated, and afterwards filtered; the residue to be evaporated to dryness, and treated with boiling alcohol, to separate the animal matter. To the filtered alcoholic liquid tincture of galls is to be added, made of 125 parts of alcohol with 250 of coarsely powdered galls; the whole to digest fifteen days, which will precipitate the little animal matter dissolved by the spirit, and the combination of tannin and morphia will remain in solution. The liquid mixed with a little distilled water is then to be filtered, and a solution of gelatine added in excess to decompose the tannate of morphia. The morphia then unites to the gelatine, while the tannin is dissolved in the spirit. To separate the precipitate it is necessary again to filter, and when the alcohol is evaporated the morphia will be left.

Hydatids of the Lower Lip.—Dr. Heller, of Stuttgard, has seen five cases in which acephalocysts were developed in the lower lip, and always on its inside. This affection appears first as a small and hard lump, which rapidly increases, so that in one month it may attain the size of a cherry; it gives rise to pain, deformity, and difficulty in moving the lip. The hydatids are seated immediately beneath the mucous membrane, and are transparent. If they can be removed without opening their cavity, they are found to be made up of a rounded vesicle, full of fluid, transparent as water, and with a diaphanous and tender wall. The only cure consists in extirpating the cyst, which must be total, or it will reappear; hence nitrate of silver may be applied after the operation.

[In a case which came under our own notice about six months ago, in a young, delicate lady, seventeen years of age, the hydatid, situated on the internal part of the lower lip, had, in the space of three months, acquired the size of a small hazel-nut. We touched it with tincture of iodine once, twice, or thrice a day, as the patient could bear it, and in three weeks the transparent sac entirely disappeared, leaving a small ulcer with a hardened base; to this we applied occasionally nitrate of silver, which healed the wound. Gentle external friction twice a day, with a little iodine ointment, eventually removed every vestige of hardness.—Ed. *Medical Times.*]

Simple Encysted Growths.—Dr. J. H. Bennett describes these as formed of a cyst, composed of fibrous tissue lined by a smooth membrane. Sometimes the membrane is structureless, or only composed of areolar tissue; at other times it is lined with a distinct layer of epithelial cells, the nuclei of which are very apparent on the addition of acetic acid. The former kind constitutes the vesicles, so frequently found in the plexus choroides, kidneys, ovaries, &c., varying in size from a pin's head to that of a hazel-nut, or even walnut, usually with aqueous contents. The latter kind constitute the cystic growths arising in the follicles of the skin, in the mammæ, ovaries, testicles, &c., which frequently reach the size of an orange, are sometimes much larger, and vary greatly as to the nature of their contents. For the most part they are sparingly supplied with bloodvessels, and seldom cause inconvenience, except from the deformity they occasion when situated externally.

Compound Encysted Growths.—These are of two kinds. The external sac may contain on its internal surface secondary or even tertiary cysts, which may be sessile or pedunculated, or the growth may be divided into numerous departments by divisions of the fibrous sac. This is the true multilocular encysted tumour. The external cyst in all these cases is formed of fibrous tissue. The internal surface is smooth, sometimes with, at others without, an epithelial layer. The primary as well as the enclosed cysts are, for the most part, richly supplied with

bursæ, and hence they are peculiarly prone to certain exudation which has undergone various kinds of development, as well as to ulcerate. These growths frequently attain an enormous size, measuring several feet in circumference, whilst their internal membrane may secrete more or less rapidly gallons of fluid.

Popliteal Aneurism successfully treated by Compression.—Mr Jolley, one of the surgeons to the Torbay Dispensary, received under his care a tailor, thirty-six years of age, on account of popliteal aneurism. It had existed for a year, and for a fortnight before Mr Jolley saw him he was confined to his bed. The tumour occupied the whole of the popliteal space, and the limb was much reduced in size. On the 16th of February, firm compression was made on the tumour, which was gradually increased to the 20th, when pulsation was less perceptible; the pressure disturbed his rest, and the leg was very œdematous. On the 2...th the tumour burst, and he lost a pint of blood; it was stopped by pressure. On the 1st of March a ligature was applied to the femoral artery, without loss of blood. The aneurismal tumour was poulticed, on the 3rd there was a free discharge of fetid pus. On the 8th the foot and leg had become gangrenous, and it was deemed necessary to perform amputation.

Diagnostic Sign of Tubercular Affection of the Peritoneum.—Dr Seymour regards vomiting of a peculiar matter, at first green, so dark that it is only to be compared with that which the sea acquires at great depths, a blue as intense nearly as that of indigo, deep green when regarded in one way, blue in another, as diagnostic of tubercular affection of the peritoneum. Dr. Seymour says this disease is generally confounded with mesenteric disease, but that it is much more frequent—in the ratio according to his experience, of five to one. This disease he considers as not absolutely incurable, while he considers iodine to be the remedy on which the chief reliance is to be placed. Mercurials are considered to be injurious.

Concretion in the Appendix Vermiformis of an Infant.—Professor Holmes, of Montreal, relates the case of a child, two years old, large and healthy, which had been indisposed for a week with tenesmus, and inclination to remain long at stool. On the eighth day the face became suddenly pale, the skin cold, and the pulse nearly extinct; he sank rapidly, without loss of consciousness, and in a few hours expired. On dissection, on raising the small intestines, all the portions in contact with the cæcum were seen to be in a state of intense inflammation, in parts nearly black from extreme congestion. The appendix vermiformis was in its natural situation and scarcely changed in colour, but on the left side a small portion was softened and broken down, exhibiting a rupture, the sides of which were quite dilated. In the appendix a small concretion, about three-tenths of an inch long and two-tenths broad, was found, filling up its calibre. It was of a white colour, as if calcareous, and pretty firm, though crushed without difficulty between the finger and thumb. No feculent matter could be detected as having escaped, and the concretion was between the perforation and the natural aperture of the appendix. A fortnight previous to being taken ill the child had had several fits of violent crying, for which no cause could be discovered at the time.

Therapeutic Remedies in Scarlatina.—Dr J. Kubik says that the use of nitrate of potash, acetate and tartrate of potash, and a ... copious, pale, and albuminous urine, with steady ... ration of the pulse. Blood-... in ... urine, on the contrary, with a sensation of burning and aching in the lumbar region, renders the employment of oily and emollient remedies necessary.

Dislocation of the Hip Joint.—... reports the following case: A servant girl, twenty years of age, sustained a dislocation of the hip joint from a fall; the head of the bone being on the dorsum of the ilium. Three days after the injury the patient was first seen by the surgeon, and the following method used for its reduction. After bleeding, and giving nauseating doses of antimony, the patient was laid on her back on a low table, so that the legs projected over the end of the table, the ... foot supported on a stool, and the left held by an assistant. A strong sheet was placed between the legs as a perineal band, and, brought round the pelvis was given to another assistant to produce counter extension. A second sheet was passed over the lower part of the abdomen and the pelvis, the ends of which were held by two more assistants, so as to keep the patient firmly down on the table. Lastly, another sheet was passed round the upper part of the thigh, by which a fifth assistant was forcibly to draw the upper end of the bone outwards. The surgeon now taking hold of the limb, and bending it as much as possible to a right angle with the body, stooping down, placed the limb over his left shoulder, so that the lower part of the limb hung over his back. Fixing the limb in this position, and forcibly raising himself to the erect position, forcible abduction being at the same time made by the hand placed around the upper part of the thigh, the head of the bone was at once made to resume its place in the acetabulum.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

CASE OF CYANOSIS, WITH A DESCRIPTION OF THE APPEARANCES PRESENTED ON DISSECTION.

By F. Le Gros Clark,

Assistant Surgeon to St Thomas's Hospital, and one of the Secretaries of the Society.

W. B., aged nineteen, shoemaker, was admitted into St Thomas's Hospital in July, 1846. He was of spare make, and his complexion was remarkably livid, skin cold and dry, lips swollen and blue; he suffered from urgent cough and extreme dyspnœa, especially in the recumbent posture; the superficial veins of the neck were distended and there was, at times, a jugular pulsation, pulse quick and labouring; the impulse of the heart was natural, but its sounds were superseded by a very loud, prolonged, systolic bruit, heard over the whole region of the heart, but most especially over the aortic valves; the sound, however, did not extend beyond its arch, in the direction of the aorta, but spread out laterally from the point where it is heard in its greatest intensity with an equal degree of force along the course of the left branch of the pulmonary artery, to the periphery of the chest. The sound was also heard on the right side, but to a more limited extent: there was, also, a systolic bruit over the apex of the heart. These symptoms were unrelieved by treatment, and he died on January 2nd, 1847. *Post-mortem.*—The liver was large and dense, the spleen was thrice its ordinary bulk, but apparently unaltered in texture, the lungs presented tubercles at different parts, the heart was large; the left side presented no abnormal appearance of consequence, but the right auricle (especially its appendix) was much dilated, and there was an oblique communication between the auricles; the walls of the right ventricle were much hypertrophied, being nearly twice as thick as those of the left, and the cavity itself was slightly encroached upon. In place of the usual arterial outlet from this ventricle, there was a contracted circular aperture, about the diameter of a writing quill, which communicated with a small muscular chamber or compartment between the ventricle and pulmonary artery—the long axis of the ventricle itself being curtailed to a corresponding extent. Above this aperture there was a second outlet from the ventricle, of similar form and size, which opened into the angular interval between two of the aortic semilunar valves. The canalis arteriosus was shut, and closed by what appeared like a patch of organized lymph in the pulmonary artery. The bronchial arteries were unusually large and tortuous, as was also the arteria comes nervi phrenici, which terminated in the lung. The author remarks that the symptoms during life were satisfactorily accounted for by the *post-mortem* appearances—the dilatation of the right auricle and hypertrophy of the corresponding ventricle being dependent on the obstructed arterial outlet from the latter. The morbid condition of the liver and spleen he considered as probably indicative of some function performed by these organs vicariously of the lungs, and that the large size of the bronchial arteries was due to the exigencies of the lungs, dependent on the obstruction of the circulation through the pulmonary system of vessels.

CASE OF ENCEPHALOID DISEASE OF THE BRAIN INDUCING AMAUROSIS.

By J. Dalrymple, Esq.,

Surgeon to the Moorfields Ophthalmic Hospital.*

Miss B., about twenty-eight years of age, had been totally blind about four years, but the ocular symptoms date nearly a twelvemonth previous, commencing with dimness of vision in one eye, and gradually involving both in total darkness. There were no morbid appearances in either eye, and, with the exception of the iris being sluggish, there was little to indicate the extent to which the blindness had proceeded, for the pupils were never much dilated, and never wholly lost the power of contraction. About the same time Mr Dalrymple first saw the case, there were obscure symptoms of some disease of the brain, severe pains at the back of the head, some partial numbness of one side of the face, and occasional jerking of the muscles of the right arm and leg. These symptoms entirely disappeared under a full course of mercury, and never returned in any noticeable degree. The blindness, however, continued. By careful dietetic and hygienic treatment, Miss B. enjoyed good health, only complaining of occasional vertigo, and subject to frequent attacks of "faintishness," which occurred at irregular intervals, and lasted but for a few minutes. In the first week of February, 1847, this lady died suddenly, with little or no premonitory symptom of illness. On examination of the body the day after death, a large encephaloid tumour was found at the base of the brain, involving the chiasma of the optic nerves, and extending back as far as the pons Varolii; it then entered the middle lobe of the brain as high as the level of the lateral ventricle, on the right side, which it compressed and nearly obliterated. The left side of the brain was healthy. The third nerve on the right side passed through the tumour, and the fifth nerve on that side was partially overlapped by it. No other nerve suffered by its pressure. This lady had an attack of measles three years previous to the development of any ocular symptoms. This attack was very severe, accompanied by delirium, strabismus, and dimness of vision, and although it was supposed she had entirely recovered from this illness, the author of this paper surmises the origin of the encephaloid disease may be referred to the cerebral inflammation which occurred at that time.

A CASE OF TETANUS FOLLOWING A LACERATED WOUND OF THE CORNEA, WITH A TABLE OF CASES OF TETANUS WHICH HAVE OCCURRED IN ST GEORGE'S HOSPITAL SINCE JANUARY, 1841.

By George Pollock, F.R.C.S.

J. S., aged thirty three, was admitted into St George's Hospital, under Mr Keate, on the 10th of January, 1847. He had that morning received a cut from a gig-whip on the left eye, which lacerated the cornea, dividing it through its entire thickness, and extending obliquely across from one margin nearly to the other. The aqueous humour had escaped, but there was no prolapsus iridis, and but little pain or chemosis. Goulard's lotion was applied, and an antimonial and aperient saline ordered every six hours. On the following day the lids were distended and tense, and there was great chemosis, the conjunctiva almost hiding the cornea; the pain also was great in the globe and forehead. Six leeches were ordered to the left temple, and warm fomentation. The above symptoms were still further aggravated on the following day, when several punctures were made in the upper lid, which afforded immediate relief. On the third day,

the leeches were repeated, and three grains of calomel and half a grain of opium were ordered twice in the day On the sixth day, the visible portion of the cornea was cloudy, and on the seventh there was purulent discharge from the tense and projecting globe On the evening of the same day, the muscles of the face on the right side appeared contracted, and the patient complained of stiffness about the jaws On the ninth day, trismus was fully established, and the hemiplegic condition of the face had become more distinct He had been blistered and cupped on the previous day A puncture was made into the projecting globe, and gave exit to some foul pus General tetanic symptoms subsequently supervened, and he died on the following morning, an ineffectual attempt having been made to affect him with the vapour of ether On examining the body, the vessels within the cranium seemed to be congested, as were those of the mucous membrane lining the larynx and pharynx. The liver and kidneys were also gorged with blood The globe of the affected eye was completely disorganized, its different component structures being scarcely at all distinguishable The author considers the above case interesting from its extreme rarity, as he is unaware of any record existing of a similar lesion producing corresponding results The apparent paralysis of the face he also regards as an interesting complication, and it was unexplained by the *post mortem* examination The irritation and distress occasioned by the attempt to administer the vapour of ether were such as to forbid perseverance in this endeavour to relieve the patient's frightful sufferings In the tabular view which the author gives of ten other cases of tetanus admitted into St George's Hospital since 1811, it appears that only two recovered Seven of the fatal cases were traumatic, and the symptoms of the disease declared themselves within three weeks of the receipt of the injury, with one exception In four cases the brain was rather congested and in one there was softening of the spinal cord The author remarks, that no satisfactory conclusions can be drawn from the treatment of these cases, both opium and Indian hemp having proved uncertain and unsatisfactory remedies

MEDICAL SOCIETY OF LONDON.

Dr Marshall Hall read a paper on the Convulsive Affections of Infants and Children

The author began by alluding to the dangers attendant on infantile convulsion, to its consequences to mind, limb, and life, and to the possibility of idiocy, or liability to epilepsy, being its result He then made reference to the causes, forms, and effects of such convulsions and the mode by which they are induced, and then proceeded more particularly to consider them He dwelt especially on

1 *The terms employed* to designate certain forms and symptoms of them, and on one especially, laryngismus stridulus, which the author contended was no more a disease than cough was a disease, or "any other symptom of disease was a distinct disease" He said, that laryngismus was not always stridulous, but depended on the same causes, whether it was or was not so, the most dangerous forms of it were those which were noiseless He would associate this symptom, which was certainly one of great peculiarity and danger often, with contraction of the hand, which he would call chirismus, and with that of the foot, which he would style podismus, the term sphincterismus, too, might be applied to spasm of the sphincter ani, or neck of the bladder. "Let the termination in *ismus* be used only to designate a symptom and that of a purely nervous or convulsive character

2. *The predisposition* to convulsive affections, and laryngismus more especially, was very marked. The latter had been known to affect a whole family The cause of such predisposition is obscure was it hereditary? was it the effect of locality, or emanations from the soil?

3 *The Causes* —No irritation of the cerebrum or cerebellum could immediately produce muscular spasm, as experiment had shown again and again But irritation of the membranes of the brain might excite it, as appeared from an experiment which he had performed, and recently detailed Irritation of the medulla oblongata, or medulla spinalis, produced the most frightful spasms The incident nerves, when affected at their origin in the cutaneous, mucous, or other tissues, were the most frequent source of the attacks The condition of the gums in teething, gastric, or intestinal disorder, matters retained in the lower part of the alimentary canal, the atmosphere itself, especially when north, east, or north east winds prevailed, perhaps certain vapours, these were all insisted on as being intimately connected with the production of convulsion or that form of it called laryngismus Strabismus, or the spasmodic condition of the hand or foot, might arise from teething, &c, but the larynx was very apt to be affected by the north or east winds, or other conditions of the atmosphere He also associated laryngismus stridulus with undue excitability of the spinal centre when it seemed got rid of, it was very apt to recur Hence the precaution of persevering with remedies longer than would otherwise be necessary

4 *The Influence of Sleep* —He alluded to the frequent occurrence of convulsions at this period, chiefly epilepsy There was congestion of the nervous centres then, probably unusual excitability of them Altogether it produced a state favourable to convulsive seizures

5 *Cerebral Diseases* —On this the author forcibly insisted He referred to the consequences of inflammation, tubercular granulation or tumours, and effusion at the base of the brain, and also to the congestion of pertussis

6 *Excited Reflex Actions* —By far the greater number of convulsions were of a reflex nature Laryngismus was most effectually avoided by removing every exciting cause of reflex action He would chiefly guard against four causes of such action first, irritation of the trifacial nerve, which took place in teething second that of the pneumogastric nerve third, irritation of the spinal nerves, and fourth the effects of the atmosphere upon the larynx, under certain circumstances The organs affected in a convulsive seizure were precisely those which its pathology would lead us to expect the larynx the sphincters, &c The author then called the attention of the society to certain bronchitic hepatic, and renal symptoms, and to the condition of the urine, points which needed further investigation He then dwelt on the effect of—

7 *Emotion, passion* and showed how great and important was the part which they played in the affections he was treating of He enforced the necessity of bearing them in mind fully in certain cases, he showed that they often constituted the real and only objection to the use of the gum lancet, which consequently should always be cautiously employed

8 The effects of augmented excitability were insisted on States of the nervous system, induced by mild electricity were compared with those occasioned by disease The results of an excess of excitability were entered into irritants then acted, which at other times would be inert A change in the direction of the wind, even, was not without bad consequences Strychnia induced a species of laryngismus Emotion, hysteria, epilepsy, tetanus, hydrophobia, all affected the larynx in a special manner

The author next described those affections of the cerebrum which were consequent on convulsions,—the congestion, the effusion, the occasional paralysis, the risk of idiocy, &c He then passed on to the question of sudden dissolution, demonstrating how difficult it was to foresee it often, and stating how frequently it happened when the patient appeared in progress to recovery It was the result of common asphyxia, but not rarely of what he had called secondary asphyxia, which he believed was closely dependent on the blood of the coronary arteries being unduly arterialized The r[illegible]s of asphyxia should be enforced promptly in such cases of sudden death

Some observations were then made on the diagnosis of convulsions, in which the transient, or permanent, or complicated character of symptoms, as the case might be, were all pointed out as modes of assistance in conducting the inquiry. The author drew attention to the *post-mortem* appearances, which varied as the disease was centric or eccentric, or according to the mode of death There might be the results of inflammation within the cranium, or nothing found whatever but the appearances proper to asphyxia Lastly, he made some practical observations upon prevention and treatment, as to the latter, insisting on an accurate diagnosis as an indispensable preliminary, on a due attention to the complications of the affection, on the necessity of bearing in mind all the varied forms of irritation, and applying the appropriate remedies without delay, on having regard to the state of the patient during the time of sleep, on protecting it from cold air, &c. And, if he had shown the application of the physiology of the nervous system to its pathology, he had gained the object which he had in view in bringing the subject before the society

REVIEWS.

Observations on the Treatment of Lateral Curvature of the Spine, pointing out the Advantages to be gained by placing the Body in a Position to produce Lateral Flexion of the Vertebral Column, combined with the After Application of firm Mechanical Support With woodcuts By Edward F Lonsdale, Fellow of the Royal College of Surgeons, &c London John Churchill, Princes-street, Soho, pp. 116

The subdivision of labour in the profession has its advantages, when an individual directs his attention to some particular department of medicine or surgery, having studied the science closely as a whole Nor is it without its disadvantages, as in pure surgery, where there must be an almost irresistible temptation to the use of the knife in certain accidents and diseases, that the operator may show his dexterity and save himself much after trouble The particular department to which Mr Lonsdale has directed his attention offers no temptation of this kind, and, as it is one where a knowledge of mechanics as well as therapeutics is especially requisite, is very proper for especial study. It is truly lamentable to contemplate the number of victims, interesting on account of their sex and age, whose health and beauty are sacrificed to that all powerful deity *fashion* The education of young females is begun, continued, and ended in accordance with certain established usages, which, instead of producing elegance of figure and gracefulness of action, too frequently lay the foundation of disease or deformity. An "establishment for young ladies" has laws as fixed and immutable as those of the Medes and Persians, and to infringe one is little short of an unpardonable sin It is no wonder, therefore, what with discipline at school and at home, sedentary occupations, cramped positions, and tight lacing, that very many young females of the middle and upper classes should become the subjects of that peculiar deformity for which it is the object of Mr Lonsdale in the present treatise to make known to the profession a mode of treatment he considers superior to those generally used, and which in his own practice has been eminently successful

Our author observes that the "lateral curvature is almost always found to be on the right side, and classifies the principal causes under three heads

"*Predisposing causes*, as general debility, producing weakness of the muscles and ligaments, the deficiency in strength showing itself more readily in the spine than other parts of the

body, owing to the peculiar structure of the vertebral column, [illegible] to the [illegible] to support [illegible] the pressure [illegible] trunk on the two sides of the [illegible] the inner side of the [illegible] the [illegible] which the [illegible] on the right side [illegible] also from the liver being pressed [illegible]

"*The Immediate Cause* [illegible] throws the spine out of its natural [illegible] continued for any length of time, without the being active muscular exercise employed [illegible] intervals to redress any [illegible] have been produced, so that by degrees the deformity slowly and imperceptibly in[illegible]

"*The Superadded* [illegible] *Cause.*—The mechanical weight of the head and upper extremities, which tend daily and hourly to throw the spine more out of the perpendicular line, when the curvature has once [illegible]. Awkward positions, both in sitting and standing, which are now employed by the girl to give herself relief. Lastly, the muscles of the back continuing to act in a [illegible] from the upper to the lower part of the spine, more particularly the set of muscles on the left side, which draw the upper part of the spine to the lower. The muscles also on the right side tend to increase the deformity, when there is a disposition to a second curve to be formed, by the lumbar portion occupying a situation to the left of the median line, and in severe cases, this portion of the muscles may pass over, or be completely displaced to, the left side of the spinous processes of the lower vertebræ." In the treatment he proposes to overcome the [illegible] of the spinal column by artificial support,—to replace the natural position of the vertebræ, ribs, scapula, and clavicle, to sustain the resistance of the [illegible], and to attend to the irregular muscular development of the two sides of the body. In order to accomplish these purposes, he uses an instrument which consists of a broad steel hoop placed round the pelvis, grasping the broad portion [illegible] above the crest of the ilium and the trochanter of the femur. To support the depressed side of the trunk, a crutch is adopted to the [illegible] hoop, which is to support the depressed shoulder and to remove the weight of the upper extremity. To reduce the curve of the spine, pressure is applied by means of a broad plate padded and shaped so as to grasp the projecting ribs and scapula laterally as well as posteriorly, and so attached that it will admit of being mechanically moved in the direction that will tend mostly to overcome the existing convexity.

With the use of this instrument, Mr. Lonsdale employs the recumbent position, as an adjunct only in the treatment of lateral curvature. Here he objects to the usual method of placing a patient on her back, preferring the side on which the projection formed by the curve exists as more in accordance with scientific principles, in this manner "in lending the curve by overcoming the resistance of the ligaments, and bringing the ribs and vertebræ out of their abnormal condition, by the pressure that is made upon them." He employs a couch of a peculiar construction to accomplish this, upon which the patient must lie an hour or two every day. During this time the instrument for support is removed but is immediately replaced when the patient rises from the couch "to retain any advantage that may have been gained. [illegible] muscular exercise is to be judiciously employed. Our author considers that in some cases, when the attempt is made to cure the deformity by this alone, that it is productive of more harm than good. He thinks that muscular exercise can be used with advantage in those cases where the spine has been brought by mechanical treatment nearly into the correct position, or when, from the age of the patient, or from the short duration of the curvature, the spine admits of its being brought into its natural erect line with the aid of very slight pressure." The position for exercising the muscles must be one that throws the whole spine more backwards than forwards. The volume is illustrated with a few woodcuts of the instruments [illegible] of lateral curvature. [illegible] fault in the author's style [illegible] the same thoughts, which [illegible] the book, it adds nothing to [illegible] argument.

We think that the plan of treatment recommended is based upon scientific principles, and that it is much more calculated to produce beneficial results than the mere recumbent position, combined with exercise of the muscles.

On the Education of Idiots and Children of Weak Intellect. By W. R. Scott.

However much the science of phrenology may have been pressed beyond its proper limits, and made to explain many phenomena of mind and life which are by their very nature inexplicable, all are unquestionably phrenologists to the extent of admitting that the brain is the organ of the mind, and that various qualities of the mind are improved and strengthened by constant practice as surely as the muscular tissue is strengthened by training of a parallel kind.

Guided by a consideration of this fact, the author proceeds to consider, in the pamphlet which we have now under notice, the best means of raising from their depths of intellectual darkness the unfortunate individuals who are denominated by the too comprehensive term *idiot*, comprehending as it does, mental aberrations of every shade and kind.

The subject, unquestionably, is a most interesting one, and worthy of universal attention, but its consideration is not new, even in England, as the medical attendants of our large lunatic asylums will testify. On various occasions there have been given at Hanwell little reunions and fancy fairs to the less boisterous of the lunatic inmates, and among them idiots, in the common acceptation of the term, who have proved themselves before the public to be susceptible of education, to the extent, at least which the author of the pamphlet under notice contemplates. "It is vain to elevate, he says, "the imbecile mind into eminence in anything is not to be expected, but that they may be taught better habits, decent manners, and given obedient and improved dispositions, and made useful members of society, so far as performing the common occupations in life, is certain in most instances, where imbecility and the merest animal existence now alone are exhibited."

The pamphlet contains an interesting account of the progress made in the education of idiots in Prussia, by Messrs. Saegert and Sachs, and altogether it is a good exposition of the subject.

TO CORRESPONDENTS

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s., Quarterly, 6s. 6d.

Delta.—*We know nothing of the inquest to which our correspondent refers. The verdict may have been in accordance with the principles of justice. The juryman who maintained the right of nominating a second medical practitioner ought to have been supported by the others.*

T. J., Cleveland.—*The incompetency, illiberality, and selfishness of the Council of the College of Surgeons have long been proverbial. It is not impossible "that in their security they may have their foundations undermined."*

Omicron.—*Dr. Rigby's Lectures on Midwifery appeared not long since in the* Medical Times.

Student.—*Medical Galvanism has been usefully employed in many cases to which our correspondent refers. It has no doubt been turned to some account by quacks, who have found it very successful.*

A Non-medical Reader, Manchester.—*The want of proper nourishment is a frequent cause of typhus fever, and, though this may appear at first as a simple form, it may at last acquire a very virulent character.*

B. A., King's College.—*The ultimate solid constituents of carcinoma, a good writer on the subject says, are, granules, nucleated cells of spherical, elliptical, irregular, or caudate shape, free nuclei, and fibrillar substance; with these is associated in variable quantities a semi-transparent fluid blastema, obviously apt for the generation of new solids. Capillary vessels are always discoverable.*

Mr. T. Oughton *has our thanks for his communication.*

Jacobus, Halstead.—*We think not.*

Mr. T. Rich *will receive a private communication from us.*

A Country Apothecary.—*The committee sits twice a week with closed doors. It is a proof that the adopter of the bill has no faith in its ultimate success.*

E. E. C., Bermondsey.—*We noticed the very puffy advertisement, in the daily* Times, *last week. It is a bookselling trick. "Great cry and little wool."*

An Incautious Student *must learn wisdom for the future. Dear-bought experience is in general that which is prized the most.*

A Surgeon.—*Certain institutions require that a candidate possess both the Hall and College certificates. If it were not for this very few would trouble themselves about the diploma. Sir B. Brodie, as spokesman for the Council, declared that it is no proof of professional ability.*

A Subscriber, Trinity College, Dublin.—*The tincture of iodine has been applied to the scalp, it is said, with success in some case of hydrocephalus.*

Mr. Beal.—*Most assuredly.*

A General Practitioner.—*The qualifications will do. Address G. Ross, Esq., Secretary, Hanover-square Rooms.*

Zeta.—*The paper is too long. It would not suit our pages.*

Sharp.—*The "Rejected Addresses" are frequently published by a contemporary.*

T. R. S.—*The magistrates, under the circumstances, have no power to order remuneration to the medical witness. The fee is two guineas if a post-mortem examination is made.*

A Friend and Old Subscriber.—*Question 1. No. 2. Under the Act for the Recovery of Small Debts. 3. The fee is a honorary one. 4. Apply to any respectable bookseller.*

Mr. G. Halford.—*The "Medical Annuity Fund" is an institution which should create the interest and command the support of the profession.*

A Student of Downing College, Cambridge.—*The Parisian hospitals are excellent places to obtain a practical knowledge of the profession. There are greater facilities of studying the disease which he mentions than in England. French certificates will not qualify for an English diploma.*

Med. Baccalaureus.—*Forcibly compressing abscesses, for the purpose of emptying them after they have been punctured, is highly improper. It is no matter of surprise that the patient suffered so much. Rough handling will only be resorted to by rough surgeons.*

Thomas N., Malmesbury.—*Homer's work in a nutshell is not to be compared with it.*

A Member of the National Institute.—*The parties were misled. We should hope they will see their folly before long.*

We beg to acknowledge the receipt of the address from the honorary medical board of the Liverpool workhouse.

Philo, Dublin, *wishes to be informed "where he can obtain the most accurate account of glanders, as it is found in the human subject."—The last edition of Cooper.*

Medicus, Dublin, *had better advertise, and will then speedily find some gentleman who will make arrangements with him upon the terms he mentions.*

Mr. H. G. Dalgairns, Graville, Havre de Grace, *is thanked for his kind offer, which is very* [illegible]

Medicus.—*If the chance of* "THE SHABBY BILL" *becoming law depended on merits in it, or discernment in Parliament, we should say at once the profession may be quite at its ease. There can be no chance of its success. But, in the present state of parties, it depends on no such contingencies; and the only way to defeat it surely is to oppose it energetically. Our correspondent should forward his petition immediately.*

Senex *is quite accurate in his estimate; but his accuracy (not through* his *fault) is so fatal to its victim's character, that the unreflecting world would call it scurrility. We must, therefore, decline the letter.*

M.D.—*There can be doubt of the strength of the grounds on which we have applied for a new trial, and, though our correspondent's point has not escaped us, it was really not required for the success of our application. In Westmininster Hall there is only one opinion on Judge Pollock's address to the jury.*

A Student *may graduate without any such preliminary.*

A Rural Practitioner *should apply to the Court of Queen's Bench for a* mandamus. *There is no doubt the coroner was in fault—as is, indeed, clearly established by Lord Denman's judgment against the West Middlesex coroner.*

F. B. H.—*Although the Apothecaries' Society have the means now in their hands of putting down all pretended apothecaries by a very summary and very efficient process—indictment for misdemeanour—it is only exercised by the society against notorious quacks. Our correspondent may, therefore, have no fears.*

A Practitioner, *who complains that if the new bill pass he will lose his privilege of not being tasked as a constable or juryman unless he consent to badge himself a "member" in the registration list, should petition forthwith against the bill.*

Letters and communications have also been received from Mr. Edwin Morris, Mr. David Burns, Newport-Pagnell; Mr. Wm. Smith, Belper. Delta; T. J., Cleveland; Studens, B. A., King's College; A Non-medical Reader, Manchester; Mr E. Rich; Jacobus, Halstead; An Incautious Student, E. E. C., Bermondsey, A Country Apothecary; Philo, Dublin, Med. Baccalaureus, Medicus, Dublin; Thomas N., Malmesbury, A Member of the National Institute; Mr. H. G. Dalquirns, Granville, Havre de Grace; A Student of Downing College, Cambridge; F.R.S; Mr. G. Halford; A Friend and Old Subscriber, A General Practitioner, Zeta; Mr. Beale, a Surgeon, and Mr. Millett Davis, George-street, Liverpool.

THE MEDICAL TIMES.

SATURDAY, JUNE 12, 1847.

THE COLLEGE, THE COMPANY, AND REFORM.

The profession has been lately edified with an account of two new discoveries, especially interesting to it:—by the one is shown how to make a surgeon in a very short time; by the other, an effectual method for the extirpation of quacks. The first process has been tried with unfailing success in the examining-room of Surgeons' College, and the other within the precincts of the Old Bailey. By the first, a pastry-cook has been dubbed a college member; and, by the second, a druggist has been compelled to doff a medical title. These are significant discoveries, at a time when the general practitioners of this empire are seeking to procure such a measure of reform as shall confer upon them rights and privileges of which they have been long deprived, and which at the same time shall effectually check the growth of quackery. Like a deadly upas, this has taken root within the sacred enclosures of medicine, and, under the fostering care of institutions ill adapted to the exigencies of the profession, it has shot forth from its wide-spreading branches twigs which, if suffered to fasten themselves in the soil, must eventually darken it with the shadow of death. Hitherto, neither the colleges nor the public have lent a helping hand to extirpate the growing evil—the one viewing it as a source of personal and corporate aggrandizement, the other charmed into a dangerous repose by the promising appearance of its foliage. The labour, therefore, of first cleansing, and then cultivating, the ground has devolved upon the "working class" of the profession—the general practitioners, and the eventual production of good fruit will be the reward of their arduous efforts.

The recent conduct of the College of Surgeons, and the construction which has been lately put on the penal clause of the Apothecaries' Act, will not fail to help the cause of reform; by showing its advocates not only the kind they need, but the advantageous position they occupy to enforce it. For two successive weeks we considered it our duty to animadvert on the conduct of the Court of Examiners in Lincoln's-inn-fields, for granting a testimonial of fitness to practise surgery to an individual who had only studied one year in a medical school. This is one of the most convincing proofs, if more were wanting than the profession already have, that the council care not who is let loose on the public, or with what title to practise, so that they may have a good dividend arising out of diploma fees. The Taunton homœopathist did not wend his way to Apothecaries' Hall, in Water-lane, with the hope of obtaining their certificate: there the funking-room was dreaded more by far than the aristocratical visage of Sir Benjamin Brodie, or the piercing eye of Orator William Lawrence. The chink of the sovereigns was known to be all-powerful in relaxing the features of the one into the blandness of affability, and the stern glance of the other into the smile of benignity; while the examiners of the plebeian company, with their six-guinea certificate, required something more than the gold to make them propitious. Now, we ask if any measure of reform, short of one which will strike at the root of the corruptions in the College, will do for the profession? As it is now constituted, it is a disgrace to the medical institutions of the country, and throughout its whole career it has basely endeavoured to keep its members from the enjoyment of corporate privileges, and to bring them under a yoke, that a favoured few may place their feet upon their necks in their ascent to seats of honour. A registration bill will no more remedy these evils than the book which is annually published of the members' names, while it will double rivet the chains of slavery, by perpetuating corporate distinctions. The education clause is merely a gilded bait to catch fools: for, while it allows a practical examination for the diploma, it does not enforce one; and it will permit the mammon-loving councillors to indulge their propensities in spite of all the remonstrances of an indignant profession. Never can any substantial good be enjoyed till there be a thorough change in the administration of the affairs of medical corporations; or till a college be established whose officers shall be responsible to the members at large, and who shall hold for limited periods their sacred trust. The great object of a change we conceive to be to secure an honourable position for the general practitioner; to remove every real cause of discontent; and, by granting to each those privileges which justly belong to him, to unite in one harmonious whole the different orders of the medical commonwealth. While we should think that the recent disreputable conduct of the College authorities has opened the eyes of all to the necessity of reform, and to the law that is required, the recent trials and convictions under the Apothecaries' Act for illegal practice should teach the general practitioners that, with so good a barrier against aggressions from without, it may also prove a most efficient help to reform within. It is now established beyond all doubt that there is the power to inflict summary punishment on those who without authority, or for pecuniary reward, administer medicine to the sick. The Society in Blackfriars are possessors of this law, and they hold it in trust for their licentiates, the greater part of whom possess a double qualification; and it can only be resigned by the majority of the profession demanding the same. We are no advocates for the Company continuing a medical licensing body, though we are bound to say that it has not only checked the rampant exercise of power in the authorities of the College of Surgeons, but has forced them to raise the standard of qualification of candidates for the diploma. A trading company, however, is not a corporation suitable for the government of a learned profession, nor is the position in which their licentiates stand to them a whit better than the members of the College of Surgeons to their institution; yet we must give honour to the Apothecaries for their efforts on behalf of medical education. They have raised it vastly superior to what it was when they obtained their act in 1815; and they have always manifested solicitude for the welfare and efficiency of those over whose interests they preside. Even Mr. T. Wakley, who in bygone days put them into petticoats and mounted them on broomsticks, as the "old hags of Rhubarb Hall," has appeared to exercise a friendly feeling towards them in his Medical Registration Bill, for he would still permit them to grant certificates to practise without the trouble of prosecuting offenders. The Company, however, has declared its willingness to forego these privileges on condition that a charter of incorporation be granted to a new college, in the management of whose affairs the general practitioner shall have a voice. This is the grand foundation of sound Medical Reform, and for which he must laboriously work, and patiently wait, till it is firmly laid. The "penal clause," retained with tenacity by its present possessors, till this is accomplished, will hasten its consummation. The value of this portion of the Apothecaries' Act is well understood by those medico-political tinkers who would use it with some "soft sauder" to bottom the saucepan originally manufactured by Sir James Graham, but purloined from him by Mr. Wakley. The "old ladies," however, are too sharp-sighted to allow the propensity of appropriation to be exercised by the *honourable* member for Finsbury without a check; and if he hopes to complete his work at their expense he will find himself sadly deceived.

Registration offers no high boon to the profession which it does not already possess, and it is certainly a thing of subordinate importance compared with the efficient organization of medical men. Already are they enrolled in the books of the different institutions to which they belong, and it is the height of folly to imagine that an act of Parliament to enforce registration would

at the same time check the bold pretensions of ignorant quacks Moreover, the passing of such a measure would have the injurious effect of postponing to a far distant time the settlement of those differences which unhappily prevail so much in the profession Recent events have taught it an important lesson that organization and incorporation are the only means to repel insult and to maintain respectability, and, this being accomplished, it will be no longer desirable that the Apothecaries' Company should retain the power of licensing practitioners in medicine, or of punishing those who unlawfully assume them

"THE SHABBY BILL"

PARLIAMENT will be dissolved about July 16th —the SECRET COMMITTEE on Medical Reform will have finished its sittings in a few days, there is, therefore, yet time to smuggle "THE SHABBY BILL" through the House, if the profession do not immediately set itself in motion Never were decision promptitude—vigour more required The author of "the shabby bill"—however great his intellectual indigence does not *want* adroitness, the members are now thinking of personal prospects as infinitely more important to them than anything so contemptible as this mischievous scheme of our only "*medical representative*" The Government is too occupied with self defence to venture on troublesome opposition, there is no chance, therefore, but in our own activity and energy Let meetings be held in every district in which they are possible, and, where such combinations are inconvenient or impracticable, let each practitioner petition for himself There must be no delay

The defects of "THE SHABBY BILL" are as cardinal as the measure itself is petty

1. It does not settle the great point of counter practice by druggists On the contrary, it does much to encourage further encroachments, by throwing increased legal difficulties around a subject already too much surrounded with them

2 It does nothing to secure representation in the medical government of the profession The irresponsibility of which the profession has complained as the principal source of half our calamities remains just as it was If anything be done it is to corroborate and confirm that irresponsibility

3 Education is left just as it is—save for deterioration This [illegible] all institutions to the *highest* it degrades them to the lowest level In self defence there [illegible] respectable institution in the country that must [illegible] shorten its *curricula* and lower its examinations, if the "shabby bill" become law [illegible] will [illegible] the future candidate, [illegible] equipped to cure every defect of an [illegible] examination, [illegible] come insolvent [illegible] worse ones in the race of low terms [illegible] defective examinations

4 It gives the Secretary of State [illegible] interference in our concerns, which [illegible] may be most troublesome [illegible] can be of no efficacy or use [illegible] matter In fine, if you can, [illegible] ridiculous [illegible] of the First Secretary of State [illegible] purpose, pretending to investigate [illegible] judicate upon [illegible] the relative qualities practically, of [illegible] examination by Glasgow teachers in the north, or metropolitan teachers in Lincoln's Inn!

5. It gives the sanction of Parliament (which has hitherto been wanting) to that infamous injustice to the surgeons of this empire—the recent surgical charter that charter which without such confirmation, is legally null and void

6 It leaves the vast body of medical practitioners in an infinitely worse position than they have ever before occupied It leaves them unprotected, for it virtually annihilates the act of 1815, it will introduce to their level a new horde of semi-educated young men, who will be admitted to universal practice on *one* qualification, and that a low one, and it finally excludes them from that charter of incorporation which can alone set right past indignities, and give efficient security for the future What had the general practitioners done to merit so malevolent a project for their ruin? Is this to be the penalty of their independence? This the punishment of their universal excommunication of the bill's author? We will not pretend to say, but this we will affirm, that they will deserve all that is meditated against them, if they do not address Parliament as one man, and without an instant's delay, against this most iniquitous of foolish projects

— —

A WORD TO THE PROFESSION

WE cannot urge too strongly upon our readers the propriety of immediately petitioning against Wakley's Registration Bill—so called, but in fact, a bill to degrade and destroy the general practitioners of this country Registration, *justly* accomplished is undoubtedly a good thing, but its concomitants in this bill are vicious and disastrous in the extreme

A strong reaction against this measure is now going forward in the provinces, the members of the profession at Southampton have almost to a man petitioned against it and in another column we have printed a copy of a petition from Liverstone, signed by nearly all the general practitioners around that neighbourhood Other petitions are in progress A great number of gentlemen in the Tower Hamlets have forwarded petitions to the House against the bill, and there is a general sensation in the metropolis in condemnation of the measure The eyes of the profession are gradually opening to the extent of the evil which this bill would inflict if it should become law, and the opposition to it is likely to be very active and general

The profession are under obligations to our correspondent, "Vox Veritatis," who has ably demonstrated the injurious tendencies of the bill, and we trust that the profession will speedily and powerfully act upon his suggestions, and petition, from one end of the country to the other, against so dangerous a measure It is particularly important that petitions should be forwarded *immediately*, while the special committee is sitting Individual petitions will be as effectual as others Numbers are wanted

The *Special Committee* to which we have alluded appears to be entirely under the thumb of Mr Wakley, who has contrived that its meetings shall be held with *closed doors* No fact could more clearly demonstrate this individual's conviction of the injustice of his bill, of his dread of an honest inquiry into its [illegible], and of his resolution to carry it into [illegible] by every dirty manœuvre and back stair [illegible] Why should this special committee [illegible] meeting, rather than an [illegible] inquiry, free to all the world? Mr Warburton's committee was *an open one*, but Mr Warburton was an honest man. Herein lies the difference.

We have heard of certain other intriguing attempts of Mr Wakley to burke the inquiry, which in due time we will make known. The pear is not yet ripe.

CIVIL RIGHTS *v.* CORPORATE RIGHTS.

TO THE GENERAL PRACTITIONERS OF MEDICINE, &c.

GENTLEMEN,—There are two factors in every question of civil polity; and it is just in the degree that we are enabled by judgment and experience to compare and weigh them, that we can arrive at a sound decision on any point subject to dispute I should be doing no credit to myself, and a positive injustice to your good sense, if I attempted, by partial arguments and in a partisan spirit, to thrust my views upon your attention, and to require your assent to opinions and principles, which I might seem either unable or unwilling to establish by an honest, unbiassed, and comprehensive survey of the elemental truths and the contingent relations that constitute the question respecting which my views and opinions may be urged.

I shall never cease, through the medium of a fearless press, to advocate the interests and independence of my class in the profession, but I shall also feel it my duty, on necessary occasions, to recur to original principles in order to show that the opinions I enforce, and the policy I promote, are founded in justice and truth If I can thus convince your mind of the immutable foundation on which my advocacy rests, any warmth of expression I may employ will not only be excused but justified. There is an undying and irreconcilable antagonism between truth and error Truth admits of no compromise —her association with error is reluctant, the union is one of coercion, and cannot be, for any length of time, approved or maintained It should be our business to resist the violation

My object, gentlemen, in addressing these letters to you has chiefly been to induce you to stand fast by your original demand of a *Charter of Incorporation* for the general practitioners of medicine of this country There is unfortunately such a variety of interests among the members of our profession, that it is exceedingly difficult, during any lengthened period, to direct their *unanimous* efforts to the attainment of any specific object There is a want of that elevation of view, and freedom from personal bias, that alone can harmonize the conflicting forces, and conduct their exertions to a successful result This is deeply to be lamented—it makes our labours trivial, our professional character contemptible, and our integrity suspected A vicious and unprincipled press has, hitherto, assiduously fostered these elements of discord, and has found its interest in arraying them in practical hostility and factious retaliation Nothing is so dishonouring to our profession, or can be more inimical to our true interests Let us learn better, and act more wisely

The great cry now vociferated in favour of this Medical Registration Bill, and often urged on my attention, is, that all individuals in the country have *equal civil rights*, and no corporation should be permitted to exercise a power that prohibits any qualified man from practising in any part of the kingdom This is one factor of the question. The *civil rights* of each individual may be the same, as a member of society, the law that applies to one, applies, or ought to

apply, to all, but it is a great mistake to imagine that civil rights, so called, can either ignore or confer professional rights. The only rights that are on principle inalienable are natural rights: these, in a state of civil society, are enjoyed under certain restrictions, the principle of these rights is immutable, but the mode and the extent to which they may be exercised are as various as there are forms of civil government. Civil government also confers rights, but these rights affect the individual only in his relations to society and the state. In the same manner and for the same reason that civil government limits natural rights, so professional bodies are invested with powers to limit civil rights. Professional or *corporate rights* are the second factor of the question.

Civil rights and corporate rights are in mutual antagonism, and must be equally respected. If the doctrine of civil rights were carried out to its extreme limits, our profession would be annihilated as a learned body, and a certain number of individuals would be licensed by the State to practise medicine in the same way that persons are now licensed to sell "*pepper, tobacco, and snuff.*" This is the evil tendency of the Registration Bill. The medical question is regarded by its author simply in this point of view, and if his bill were to pass through the Legislature, and to remain for ten years the law of the land, no arrangement would exercise a more direct influence in overthrowing our corporate organization, and *abolishing us as a profession!* Mr. Wakley is not a man of sufficient mind to embrace this question. Of an energetic temper and with a ready command of expedients, his intellectual powers are of a limited order, and he totally incapable of grasping a complicated question with that firmness and clearness which is necessary to a thorough understanding of its bearings and to form a decisive line of action to realize it in fact. He is fully acquainted with all the details of the subject, but cannot comprehend it as a whole. Hence he is always the advocate of partial schemes, and the malignant critic of general measures. *He is a man of a low intellectual order.* Mere cleverness is his characteristic.

Gentlemen, the same principle of aggregation that prompts men to form themselves into civil communities, unites them also in corporations. Men feel that divided and isolated exertions avail little to the fulfilment of great public objects, and that power is always exercised most beneficially in combination. Hence associations are formed for the transaction of merely temporary purposes, or for the immediate accomplishment of final measures, when, however, the object is permanent, and requires a perpetual exercise of supervision and authority, either to work it out in fact or to maintain its efficiency, the association becomes a corporation, the transitory combination becomes a permanent establishment, and a part of the civil government of the empire.

Corporations are formed for two objects: the preservation of special interests, and the promotion of the public welfare. In early stages of society these two objects are considered practically incompatible—or, rather, the conservation of the special interests of the body is deemed the only end to be achieved, and the public good is regarded either as in antagonism to it, or as included in it. The public, in pursuance of their civil rights, insist upon the antagonism, the corporations, in defence of their privileges, retort that their independence secures the public welfare.

At the present period of society, gentlemen, clearer notions of these matters obtain. The public good is the great end of legislation in all its subdivisions, so far is the peculiar privileges of corporations are in harmony with the interests of the public, they are founded in truth, and are impregnable by the violence of faction or the vulgar outcries of aspiring selfishness.

Now, gentlemen, in our own case there can be no question *that the interests of our profession are identified with the welfare of the public.* The public's good is achieved by providing *duly qualified* medical attendants in all circumstances of accident or disease, and there can be no doubt that the welfare and respectability of the profession depend upon the *educational attainments* of its members. It is, then, the *paramount duty* of of every medical corporation to provide for, and require, a *high standard of qualification* as the condition of membership.

How is this duty to be enforced, and the end attained? Corporations are essentially selfish, and seek the advancement of their special interests, and the more the circle of their interests is contracted the more selfish they become. This is a necessary evil of corporations, but *it is* an evil only when it counteracts the free and expansive operation of exterior agencies which are subservient to the public good. It *is now* the great and self-destroying evil of our corporations. Their interests are too exclusive and override the general welfare: they are injurious to the profession, and pernicious to the public, and they cannot be permitted to retain this invidious, hostile, and destructive supremacy. The remedy is that *each class* in the profession having its present separate interests shall have an *individual control* over its own standard of education. The time may come when the separate classes will find that their interests are one, and that one government should be one also. This principle is now in progress of fruition; it is not yet popular, but will be attained in the future.

These, gentlemen, are the two factors of the question involved in the scheme of a general registration of the profession, and how are they to be reconciled? A large section of the profession, now practising under the interdict of laws and corporate privileges, plead their civil rights, though they should remember that the phrase, in this instance, is merely a figure of speech, that civil rights are conferred by the laws, that corporate rights are in fact civil rights, and those who practise contrary to the statute have no civil right so to do. Nevertheless there is a principle of civil right, variously denominated justice, equality, &c., which though not in all its phases embodied as a legal fact, exercises too powerful an influence on the destinies and duties of society to be overlooked, and I am well content that this principle whose oracle is public opinion, shall assume to itself the character of a civil right.

Reason upon this subject, gentlemen, in any manner and to any extent we may, we shall find that no measure of Medical Reform can be satisfactory that does not comprehend and reconcile these two principles. While we concede the civil rights of one section, we must secure the integrity and the honour of the whole body, and, through it, the public welfare. Any other proceeding is partial, quackish, and injurious. A low demagogue, an intriguing adventurer, or a malicious enemy, may affect to serve us by promulgating schemes that, being narrow and unsound in principle, can only set us at variance; but I trust that the respectable and well-informed portion of the profession will visit such conduct with merited indignation and scorn.

The policy of the NATIONAL INSTITUTE offers a common ground for all honest reformers to unite and operate on for the attainment of their respective objects. It is the only policy that will bear inquiry—that is truly liberal, and therefore just and honourable. The gentlemen comprising this body are willing to grant equal rights to all qualified members of the profession, and at the same time seek to establish the profession on a sure, just, and comprehensive basis. They desire no exclusive privileges, on the contrary, they will admit all qualified practitioners, who may wish to join them, to all the rights and immunities they may acquire for themselves. Their policy is the only one that embraces both factors of this question, and resolves the dispute. In whatever light we may regard this subject, however we may turn it about, and examine it in its varied aspects, we are still driven to the same conclusion,—that an INCORPORATION of the *general practitioners*, embracing *every qualified member of this branch of the profession*, is wise, conciliatory, and truly liberal, and the only plan equal to the solution of the difficulties of the question, and to the satisfactory fulfilment of the various exigencies of the medical profession.

I have the honour to be, Gentlemen,

Yours, very faithfully,

VOX VERITATIS.

MISCELLANEOUS CORRESPONDENCE.

DR. BUTTERLANE ON THE OXIDE OF SILVER AS A REMEDIAL AGENT.

My attention having been directed to a communication respecting the oxide of silver from Mr. Underwood which appeared in the *Pharmaceutical Journal* a fortnight back, I beg to offer a few remarks on the subject. I introduced the remedy to public notice nearly six years ago; and, having been constantly in the habit of using it and distributing it extensively, I have doubtless had as much experience in its preparation and compounding as most persons, but no mischance has ever befallen me or my patients from its explosive property, which, indeed, the genuine oxide of silver does not intrinsically possess. If, however, the substance be incorrectly prepared or injudiciously combined, I cannot guarantee against a chemical action occasioning explosion. On the contrary, such will infallibly be the case in some instances. The formula for preparing the oxide of silver which I recommend is as follows:—Dissolve four parts of the nitrate of silver* in distilled water; also rather more than two parts of the hydrate of potash in a separate quantity, freeing it by filtration from the oxide of iron and other impurities; mix and let stand for an hour, stirring frequently with a glass rod, the supernatant liquid will be found a solution of nitrate of potash, the freedom of which from nitrate of silver may be ascertained by taste, or by testing with hydrochloric acid, showing that complete decomposition has been effected, otherwise more solution of potash should be added, the fluid is then to be poured off, and the precipitated oxide of silver to be washed repeatedly with distilled water until it is found to remain perfectly clear and quite devoid of all taste and alkaline reaction. The precipitated oxide is then to be drained on filtering paper and thoroughly dried at a temperature of about 150° F. If preferred,

* The grey nitrate should be used, as I do not feel assured that the white variety is always a proto-salt.

the oxide of silver may be prepared *ab initio* from pure metallic silver itself.

Neither lime nor any other alkali will answer the purpose of decomposing the nitrate of silver as well as the potash; and the preparation with ammonia is dangerous in the highest degree, as well as objectionable on other accounts. When the oxide of silver is prepared as I have described, neither heat, friction, nor percussion will occasion any explosion. It may be combined with any vegetable extract or powder without any material decomposition ensuing; nor will it, I believe, be altered in its chemical nature by either starch or sugar. The conjunction of oxide of silver with confection of roses is injudicious, as a salt of silver is liable to be formed, though certainly the tendency of metallic oxides to be acted on by the vegetable acids (gallic, malic, or citric) varies much. The combination of essential oils with the oxide of silver is exceedingly objectionable, for the chemical union of the oxygen with the silver is not very powerful; neither is that of the hydrogen and carbon in the essential oils; the substance in question, therefore, being intimately commixed, silent or explosive combustion will inevitably ensue, the oxygen and hydrogen forming water, while the silver remains in a metallic state, or is converted into a carburet. An analogous, though more complicated, action, I think, takes place when the vegetable acids are concerned. I should not recommend any druggist to dispense a prescription wherein the oxide of silver and an essential oil are conjoined without communicating with the prescriber if possible.

The combinations of the oxide of silver which I chiefly employ and should recommend are as follow:—

1. With extract of gentian or camomile.
2. With extract of hyoscyamus or conium, to which I often add a small proportion of ipecac.
3. With inspissated oxgall.
4. With the aqueous extract of opium.
5. With compound cinnamon powder.

The pills should never be rolled or kept in carbonate of magnesia.

I trust that the insertion of these few remarks may attract the attention of the numerous readers of your valuable periodical, and be a means of preserving a valuable remedy from undeserved discredit.

MR. DERMOTT AND MR. BLAKE.

[To the Editor of the Medical Times.]

SIR,—Much has been lately said and written respecting the mode in which Mr. Blake obtained his diploma from the College of Surgeons; and as he attended the lectures delivered in the School of Medicine and Surgery to which I belong, and, moreover, as a point of honour, I must see justice rendered and truth stated concerning my pupils, I may, perhaps, claim the privilege of intruding a simple fact or two upon the columns of your justly popular journal.

It is a fact that Mr. Blake, during the whole of the time he was attending my school (twelve months), was unremitting in his studies, morning, noon, and night; in fact, no student could have exhibited a greater degree of application than he did.

He was constantly engaged in dissection, and I verily believe that he did not miss a single lecture or demonstration delivered by me during the whole of the above-mentioned period; moreover, I think that the same can be said of his attendance upon the lectures on all the other branches. As a consequence of this unceasing and almost unprecedented application, he learned more in one year than many learn in three, and, as the ultimate result, he passed his examination.

He came under the old (two-year) regulations, as they are termed: he commenced his studies with me in the spring of 1845, and during the ensuing winter he petitioned the College that his summer certificates might be received in lieu of those of a second winter, on the alleged grounds (as well as I can recollect) that he was a family man with many children, and that his practice in the country was most materially injured as the result of his absence. I also gave him the following certificate, of which I preserved a copy (as I do of most of my business documents), and which I fortunately met with a few days ago, every word of which certificate I can aver is strictly true:—

"I certify that Mr. John Dore Blake has unceasingly and most diligently attended my lectures during the summer of 1845, commencing on the 1st day of May last, and terminating in the latter end of the July following. That he also very diligently dissected during the above period, and performed under my superintendence many of the capital surgical operations.

"That he is also attending with the strictest diligence the present winter course now delivered at the Charlotte-street School of Medicine.

"G. D. DERMOTT.

"Dec. 11, 1845. Bedford-square."

With regard to the manner in which he passed the four years preceding his studies with me I was perfectly ignorant; and as to how far he imposed upon the College by false statements and certificates regarding this matter, also in what degree the College scrutinized his vouchers regarding the said four years of preparatory medical education, is of course a point which concerns the College authorities and Mr. Blake. Certain it is that no honourable man, be he teacher or no teacher, can countenance imposition practised either upon a public body or private individual. Whatever may be the merits or demerits of the parties, imposition and deceit are bad in principle.

I know nothing about Mr. Blake's private concerns, nor have I communicated with him in any way whatever since he passed; but with regard to the sneer of Mr. Blake having been a pastry-cook, surely this in the abstract is no disgrace; let the low origin of the great Hunter himself be remembered, at least so far as the grovelling estimation of monied and family-privileged vulgarians go. It is surely an ominous index of a wretched state of the profession when worldly *status* and wealth are regarded in preference to professional and scientific acquirements.

As stated by you, Sir, in your leader of last week, "If there is anything more calculated than another to overstock the profession it is this—fixing a high price for medical education in the schools, and requiring but a small amount of knowledge to pass an examination."

Ay, Sir, the enormous golden tolls, combined with the system of family patronage, most unchristian in principle, and murderous by wholesale in their tendency—these are the bane of the profession, a curse to the community, and the great source of misery and disappointment to the unsuccessful but deserving medical aspirant.

Your obedient servant,

G. D. DERMOTT.

28, Bedford-square, June 9.

CORONERS AND MEDICAL WITNESSES

[To the Editor of the Medical Times.]

SIR,—In reply to the question by "W. Smith, Esq., Surgeon," in No. 399 of your Journal," In whom rests the power "of summoning the medical witness—is it at the option of the coroner or the constable?" I state, for the satisfaction of the profession generally, that, being placed in a similar position to the one detailed in his communication, I put the same question to a medical coroner of eminence and one learned in the law. His reply was, that, "in the first place, the coroner has a right to select any medical man he pleases, and that he need not call in the one who was in the habit of attending, or who last attended the deceased;" but he goes on to say, "the jury or anyone of them has an equal right and power to call in any other medical man or half a dozen if they please, unless they are satisfied with the coroner's nominee." It is therefore obvious that the best mode of proceeding would be to acquaint oneself with the names of the jury (which can be obtained of the constable), and request any one or more of them to call in the medical attendant of the deceased, who in general would be the most likely to afford a correct clue to the cause of death. In many instances this is only an act of justice due to the medical attendant: various reports go abroad respecting the death of an individual; an inquest is held, no *post-mortem* taken place, the opinions of the distressed relatives are received upon professional points of extreme nicety, and a verdict is given to the prejudice of the medical man without any opportunity having been afforded him for explaining or justifying his conduct. Surely in any medical bill for the improvement of the profession some clause should be inserted to make it compulsory that the gentleman who last attended the deceased (and perhaps the family medical attendant also) should invariably be called in.

I remain, Sir, your obedient servant,

FREDERICK RICHARDSON.

Cheltenham.

[The "learned coroner" is clearly wrong. The coroner is governed by the Medical Witnesses Act, which leaves him no discretion.—See Lord Denman's famous judgment.—ED.]

[To the Editor of the Medical Times.]

SIR,—I beg leave to forward, at the request of one of your correspondents, a description of an instrument for the injection of the vapour of ether *per anum*, as alluded to by me in your journal in February last.

I am, Sir, your obedient servant,

J. W. MOSES.

St. Asaph, June 8.

For the sake of accurate description, the instrument may be divided into three parts.

1st. A glass bottle to hold the ether.

2nd. An elastic gum bottle to receive the vapour.

3rd. A long tube, with several perforations at the extremity, for introduction up the rectum.

The elastic gum bottle is fitted, by means of a short tube connected with it, into the mouth of the glass bottle; and the long rectum tube is inserted firmly into the opposite side of the elastic bottle.

Mode of using the Instrument.

The bottle containing the ether is placed in hot water; the vapour ascends and enters the elastic bottle, which, when pressed upon or grasped with the hand, forces the ethereal vapour through the long tube, which has been introduced *per anum* in the first instance; and thus the quantity required may be regulated at the will of the operator or his assistant: an advantage over the respiratory plan, where the inhalation depends upon the patient.

[To the Editor of the Medical Times.]

SIR,—In opposition to the statement promulgated in last week's *Lancet* concerning the number of petitions against Mr. Wakley's Medical Registration Bill, I beg to inform you that on the 10th ult. I forwarded to Sir W. Clay, *six* petitions against the bill, containing the signatures of forty-nine members of the Tower Hamlets Medical Association, collected in one day; and, had time allowed, many more might have been added; though it is stated in that journal, after a list of petitions in favour of the bill detailed with the utmost minuteness, that the total number of petitions against it to 21st May was five, and the signatures thirteen.

As I think such a misstatement ought not to pass uncontradicted, I shall feel obliged by your giving publicity to the above fact in your next number.

I am, Sir, your obedient servant,

GEORGE C. DALE, Hon. Sec.,

Tower Hamlets Medical Association.

19, Commercial-road, June 9.

Dr. Oschatx has discovered the art of making a very good paper from wood without the aid of nitric acid, or great mechanical force.

BLAKE NO BLOCKHEAD.

[To the Editor of the Medical Tim

SIR,—I have seen your notice of [illegible]ake's case at Taunton, and really I think [illegible] poor man has been very badly used.

Having been for thirteen years employed in the production of pastry and other indigestible trash, and thereby been the cause of no small amount of dyspepsia and innumerable pains in the bowels, his conscience smites him, and he determines upon the *only* step he can take to remedy the mischief he has occasioned, by becoming "*a doctor*," *or the next thing to it*; and, being cloyed with the sweets of *preserving with sugar*, longs for the more exalted sweets of *preserving by physic*.

Well, he comes to London, learns that "*acid. tart.*" does not mean "*sour pie*," and in twelve months is found *fit* to practise AS A SURGEON!!!

Now, had the excision and removal of the stomachs so disturbed in function been the proper treatment, who could complain? Imposition and false representation notwithstanding, he had been found "*fit and qualified so to do, by examination, as attested by the signatures of the Court of Examiners*" (but I may be pardoned for entertaining very strong doubts, as to whether his qualifications *fitted him for anything else*), and, having been found so qualified, I think the man must have much less sense than he had impudence, if, on the polite request of the secretary, he gave up what he had undoubtedly *proved* his competence to gain, ay, and had paid for, forsooth!

I have been engaged in the practice of medicine and surgery for thirty two years only, but, till now, I always thought that the latter branch required something more than a knowledge of *carving a veal-and-ham pasty*, or *slicing a tongue*.

I am, Sir, your obedient servant,
J. LONG SPLENI, M.R.C.S.E.
London, May 31.

DR. SHEARMAN'S INTERPRETATION OF "THE MEDICAL REGISTRATION BILL."

[To the Editor of the Medical Times.]

SIR,—Dr. Shearman, of Rotherham, has taken upon himself the office of intrepreter of the Registration Bill, for the benefit of your readers, and he professes to foresee not only how it will "come out from the committee," but also how it will "work" in practice.

Dr. Shearman may be more competent than the whole body of the Council of the Institute; but his letter in the Journal of May 19, instead of proving his superiority, appears to me merely to reproach and abuse them by his misrepresentations.

Dr. Shearman says in his first four reasons, that "the intended legalization of medical men (not qualified for general practice according to the present law) by the Council and by Mr. Wakley's bill, are the same thing in effect;" whereas, Dr. Shearman knows as well as they do (because they have so often told him), that the Council would legalize such medical men *in the first instance only*, to prevent retrospective legislation. The doctor's fifth "reason" is equally incorrect.

Dr. Shearman, moreover, informs your readers "what the profession have a wish to demand," but does not tell us how he acquired a greater stock of information on that point than that which the Council have collected. Dr. Shearman knows which class of disputants "think rightly" on the subject, and leaves us to presume, physicians; inasmuch as he is "a physician," and "he thinks rightly."

"There is nothing like leather."

Taking the whole tenour of Dr. Shearman's letter, *I suppose* he means to say,—"that in the nineteenth century, general practitioners, instead of advancing, should have a retrograde movement in acquiring their general and medical education, and in the extent of their efficiency for performing the duties which they undertake;" I may therefore be allowed to ask Dr. Shearman, whether he writes for the benefit of the physicians, or for that of the public.

Remaining, Sir, yours very truly,
East Retford, May, 1847. W. ALLISON.

[To the Editor of the Medical Times.]

SIR,—We, medical practitioners of Thirsk, have severally written to Mr. Churchill, the publisher of "The Provincial Medical Directory," to complain of an inaccurate entry in his work, in regard to the medical qualifications of Wm. Hall Ryott, practising at Thirsk. We take this opportunity of appealing through the medium of your journal to the medical public, whether any value can be attached to the accuracy of Mr. Churchill's publication, when he has so uncourteously refused to furnish us with the information by whose authority such entry was made, or even to acknowledge the receipt of our letters. We must confess that we cannot but regard his conduct with great suspicion, and especially when our correction of the error was in accordance with his own printed request.

The individual referred to is inserted in the directory as having graduated at Edinburgh in 1840, &c. &c.

We have caused the records of the University of Edinburgh to be searched from 1795 to 1846, and no such name as that of William Hall Ryott can be found there.

We are, Sir, your most obedient servants,
JONAH HORNER, M.D. Edin., and M.R.C.S. Edin.
THOMAS HAYMES, M.R.C.S.L., L.A.C.L.
JOHN HUTTON, M.D. Edin., and M.R.C.S. Edin.
Thirsk, Yorkshire, June 1.

GENERAL MEDICAL ANNUITY FUND.

A meeting of the subscribers and friends of the General Medical Annuity Fund, convened by circular and advertisement, was held on Tuesday, the 1st of June, at the George Hotel, Northampton. Edward Daniell, Esq., of Newport-Pagnell, in the chair.

The Chairman stated that it was unnecessary for him to enter at length into the object of that meeting, nor would he detain them now by any observation either upon the value and importance of the institution sought to be established, as he had already propounded his views so fully to the medical world: and if he could judge from the vast pile of letters upon the table, from the repeated assurances he had received from gentlemen residing in all parts of the kingdom, the necessity of a provision for our decayed brethren, and for widows and orphans, ceased to be problematical. Indeed such an institution was loudly called for, and he had no hesitation in saying that it would be a disgrace to the profession if they allowed either apathy or neglect to prevent the establishment of a general fund for such holy purposes. He had been told by a music-master, that day, that an institution did exist for professionals of that order; and all knew that the mechanics who were connected with the order of persons called "Odd Fellows" had made provisions for their widows and orphans. He heartily hoped a grand effort would be made, but he would detain them no longer, otherwise he should anticipate the secretary's report; he should therefore at once call upon the secretary to read the report.

THE REPORT.

The object of the General Medical Annuity Fund is to secure for the superannuated members of the medical profession, and for their widows and for their orphans, such assistance as may be required, which shall in some measure relieve their necessities. The most limited o[illegible]er cannot fail to have seen many instances [illegible]cessity and distress in the families of the profession—instances which have arisen from the precarious nature of the profession, from limited sources as to returns and capital, from the expense of purchasing an insurance, and from the uncertainty of their lives. It is a fact well ascertained that fewer medical men out of a thousand arrive at the age of sixty-six than from the members of any other profession. It was various observations of this kind which induced Mr. Daniell to be anxious to establish a society which should raise a fund, by a limited annual subscription, from the many, which should meet the cases of necessity and distress experienced by the few. It will be my duty to detail to you the steps which have been taken to accomplish this most desirable object, to state to you some of the reasons upon which the calculations of this society have been based, and to suggest for the consideration of gentlemen present such hints as may, I trust, assist you in your deliberations of this day, and enable you to lay the foundations of a society in such a manner, and on so wide a basis, as to secure for itself the confidence and the sympathy of the medical profession throughout the kingdom of Great Britain. It was about the month of May, 1845, when Mr. Daniell first proposed the establishment of this society, in a letter which he addressed to Dr. Streeten, as the secretary of the Provincial Medical and Surgical Association; and the result of that correspondence was, that at the annual meeting of that association, which was held at Sheffield in the month of July of that same year, Mr. Daniell submitted his proposition for the establishment of an annuity fund, and it was proposed by him, and seconded by Dr. Robertson, "That a committee of the association be appointed immediately to consider, discuss, and arrange the best preliminary steps for the establishment of a self-supporting institution connected with the Provincial Medical and Surgical Association, to be called 'An Annuity Fund for Decayed Members of the Association, and for the Widows and Orphans of Members.'"

On the next day the following gentlemen were announced as forming the committee on Mr. Daniell's proposition for an annuity fund:—Drs. Robertson and Kerr, and Messrs. Terry and Faucloth, of Northampton; Dr. Mackness, of Hastings; and Messrs. Ceely, of Aylesbury; Rumsey, of Gloucester; Jackson, of Sheffield; Garlick, of Leeds; Haxworthy, of Sheffield; Greenwood, of Horton; Paget, of Leicester; Crosse, of Norwich; and Appleton, of Hitchen.

In the meantime, the attention of many gentlemen having been arrested by Mr. Daniell's proposition, a variety of suggestions were made to him by parties interested in such an undertaking, and the substance of this correspondence was laid before the meeting of the committee, which met at Dr. Robertson's, of Northampton, on Monday, the 8th day of September, 1845, when the rules and regulations were determined upon; but, as those minutes have been very freely circulated, it may not be necessary on this occasion to read that paper. An adjourned meeting of the committee was again held at Dr. Robertson's on Thursday, the 15th day of January, 1846. At this meeting no formal business was transacted, but a long discussion took place upon the principle upon which the society was based, and as to the mode in which its operations could be best conducted.

For some months the attention of your secretary was busily occupied in attending to the business of the society, and in conducting its extensive correspondence and; in company with Mr. Daniell, he attended the annual meeting at the Provincial Medical and Surgical Association, held at Norwich, on the 19th and 20th days of August last, when Mr. Daniell presented a report at one of the meetings of the association. Having read the report, Mr. Daniell addressed the meeting upon the subject, and moved the proposition, "That the conduct of the committee appointed at Sheffield for carrying out the project of a General Medical Annuity Fund be approved by this annual meeting of the Provincial Medical and Surgical Association, and that this fund be considered as an integral part of this association;" and the motion having been seconded by Dr. Hunter, of Lynn Regis, a dis-

cussion arose thereupon. The meeting having been addressed by Drs. W. Conolly, Chambers, and Forbes, and by Messrs. Kitchen and Daniell, the President, Dr. Soulby, moved, as an amendment, "That this Annuity Fund be not considered an object of this association," which was declared carried, and the original motion was consequently lost.

The decision of the meeting at Norwich deprived the Annuity Fund of that home which its projector had sought for it, and it became Mr. Daniell either to abandon his proposal or seek the establishment of the Annuity Fund as an independent and distinct society. After long consideration he addressed a letter to each of those gentlemen who had subscribed to his fund, as well as to all others who had intimated to him their wish for the establishment of the society. The answers with which Mr. Daniell has been favoured from a large number of his correspondents have encouraged, if we may not even say justified, him in calling this present meeting of the friends and the supporters of the General Medical Annuity Fund; and if I have not already, Sir, wearied the attention of yourself and the meeting, permit me to travel somewhat out of the beaten track of an ordinary report, and deferentially to offer for the consideration of this meeting the suggestions which have occurred to my own mind as relating to the business of the day; and, although I cannot hope that in all points my views will be found to correspond with your own, yet I shall be content, and my end will be answered, if any hint of mine should facilitate your labours, or happily form a channel in which your deliberations may flow.

The question of to-day, then, turns upon this hinge—shall Mr. Daniell's project be abandoned, or shall this meeting take such steps as shall lead to its triumphal—its final establishment? I can hardly imagine that you can be disposed to abandon this society, formed as it has been under such auspices, and calculated as it is to meet long-acknowledged wants; that all the letters written, all the statements published, all the services rendered, all the expressions of interest and sympathy which the society has called forth, should all, all become utterly void and useless, and that we can return to our homes and there for ever banish from our minds the recollection that the institution has had an existence—surely not.

Here, then, comes the question—is the assistance already rendered, and the assistance already promised, sufficient to justify further movements in the establishment of this society? To assist you in deciding this question, let us turn and look to the past, and we learn from the statement which I now, Sir, lay before you, that up to last Saturday evening, seventy-five gentlemen have subscribed to this fund the sum of £190, together with donations, and that forty gentlemen have not only promised to become subscribers, but have offered their services as honorary secretaries for their own immediate localities—a service the value of which cannot be too highly estimated, as the interest which these gentlemen will feel in the welfare and progress of the society will tend to its ultimate success.

Under date of Nov. 15, 1845, Dr. Jephson, of Leamington, has promised Mr. Daniell, that if he succeeds completely in establishing the fund, he will give 100 guineas towards its support. Let me now proceed to suggest to you some hints as to the alterations which are required in the rules and regulations of the society. First, then, as to the officers: these, in some cases, will require a change in their names, and I am sure that you will permit me to suggest that our truly excellent treasurer should be appointed your president, and that your treasurer should be the "Northamptonshire Union Bank." The trustees should be gentlemen who are subscribers to the fund; and you will probably request Dr. Robertson and Mr. Paget, of Leicester, with Mr. Terry, of Northampton, and Dr. Symonds, of Bristol, to act as such. An augmentation will be required of the number of elective managers, and, in addition to Mr. Fairclough, of Newmarket; Mr. Appleton, of Hitchen; Mr Elkington, of Birmingham; Dr. Cowan, of Reading; and Mr. Peter Martin, of Reigate, the names of Mr. Rogers, of Newport-Pagnell; Mr. Parker, of Woburn; Dr. Roberts, of Bangor; Dr. Alloway, of Clonaslie; and Mr. Lambert, of Sowersby.

You will, probably, feel it right to continue the rules, that no annuity should be paid to a subscriber unless he has paid his subscription for five successive years, as an adherence to this rule will act as a check against any improper application; and the interest of that capital will not only supply a resource for the payment of the current expenses, but will enable the directors to make up those occasional variations in the funds a society, which are to be naturally expected in an institution of this kind. Some alterations will, probably, appear to you as necessary in the rate, as well as in the mode, of the payment of the annuities; and it might greatly conduce to the interests of the society to pay four annuities of £25 each to either superannuated members, or to their widows, or to their orphans, as the case may be, for every one hundred subscribers. If there should not be more applicants than there are annuities to grant, then, as a matter of course, the officers of the institution will decide upon the applicants; while on, the other hand, should it prove otherwise, then the secretary would transmit a list of applicants to each subscriber, and the largest number of votes would secure the annuity.

It will also be advisable to determine whether it would not be desirable that the annual meetings of the society should be held in different towns in the kingdom, where gentlemen may reside who feel an interest in the prosperity of the institution. These suggestions, together with other alterations which will probably be resolved on at this meeting, will be required to be worked in mosaic into the present rules and regulations; but as it will be, impossible to-day to give that calm attention to the drawing up of the amended rules as such a service requires, you will most probably see fit to determine the general plan of operation, leaving the details to be carried out under the direction of a small sub-committee; and in the meantime it may be thought advisable to transmit this statement of your affairs to each subscriber to the fund. I have the satisfaction of announcing that I have had an interview with Mr. Neison, the author of Vital Statistics," respecting the society; and, as soon as our rules are matured, he has engaged to examine into their nature and bearings, and he will then be able to determine whether a nominal entrance fee, which should be regulated by the age of the subscriber, could be added to our rules, so that the society should have the benefit of being enrolled under the act of Parliament made for that purpose. It is impossible for me, Sir, within the limits of this report to detail to the meeting the various suggestions which have been made to Mr. Daniell and myself, as to do so would be only to peruse the pile of letters now lying upon the table; suffice it to say, that many of the hints have proved of essential service to us in our labours; while, on the other hand, the tendency, though perhaps not the actual design, of the writers of others would be to convert our simple but comprehensive scheme into an ordinary insurance company. But it cannot be too often repeated, that the design of our institution is to help that class who have not had the power or the disposition to avail themselves of the advantages of life-insurance companies. I think that I may be permitted to say that, in conducting the correspondence of this young but, I trust, rising society, I have spared no labour to detail its objects and its advantages; neither has this been an easy task, for in a measure our society is sui [illegible], but not completely so, as there are other societies in this kingdom established on somewhat similar principles, but merely local in their operations. Indeed, we may take, as an illustration of our plan, in its development and character, the process adopted in the management of the Art-Union of London. It m[illegible]ly be supposed that, of the thousands whi[illegible]ribute their annual guineas to that soci[illegible]me do so with a desire to assist the cultivating of the fine arts, and some with the remote prospect of gaining a prize; just as it may prove with us: some may contribute annual guinea upon the principles of the pu[illegible] philanthropy, some from a pure sense of duty, and some from a remote contingency of receiving its assistance; while none would refuse or become degraded by obtaining the prize of an annuity, if the chances of this mortal life rendered such assistance requisite. I trust that I may be permitted to close this tedious report by the expression of my wish, that as that society from its small beginnings has become a national society, so may our infant cause come to the stature of a man, and by its manly strength aid every needy member of the medical profession, cheering the widowed heart, and securing to the orphan that comfort and assistance which the visitation of Almighty God may have laid upon him.

H. L. Smith, Esq., of Southam, observed that he would not on any account propose anything likely in any way to obstruct the establishment of Mr. Daniell's fund, which he thought admirable, but it had occurred to him, that we should even go beyond it, and provide homes for widows and orphans. The expenses of renting a house was often of serious consequence to a poor widow; he should like to see homes for widows and orphans in every county town in England, and conceived that the nobility, clergy, and gentry would be ready to assist in such a work.

The Chairman observed that such a thought had struck him, and he believed in one of his letters, he rather thought to Mr. Estlin, of Bristol, he had thrown out the idea; but the funds subscribed to this institution were for an expressed and understood purpose, and could not be directed from that purpose. He was delighted, however, with Mr. Smith's suggestion, and trusted a time would come when such a project might be established.

Dr. Gardner, of London, congratulated Mr. Daniell as to the present prospects of the General Medical Annuity Fund. He felt assured that it must succeed. He admired its simplicity: the calculations could not be otherwise than correct, as four annuities in every one hundred subscribers would clearly yield £25 each; and the capital accumulated in the five years which elapse before annuities would be granted would form a fund to fall back upon when necessary. He highly approved of the provision. He would be delighted to offer his services as honorary local secretary, and pledged himself to exert all the energy he possessed in the execution of his office.

W. Lambert, Esq., of Sowerby, Yorkshire, could not but say that he felt disappointed: for, when he first read Mr. Daniell's proposition, he thought the whole medical world would rise simultaneously to support such a project. It appears, however, he was mistaken; still there was enough to encourage perseverance, and he trusted Mr. Daniell would relax nothing, either in spirit or energy, to complete the noble work he had begun; he should therefore propose "That Mr. Daniell's plan for a General Medical Annuity Fund be proceeded with, and that the report and suggestions of the secretary be adopted." He felt the utmost confidence both in the projector and secretary of the fund.

Dr. Gardner seconded the resolution.

Carried unanimously.

H. L. Smith, Esq., observed that there could be no hesitation in carrying out the project, for it was a capital beginning. He then gave instances of very flourishing institutions, the commencement of which were much inferior to this, nay, some, where the projector, had been both chairman and committee.

Thomas Parker, Esq., of Woburn, asked when annuities would be granted?

The Secretary replied, clearly, even with our present members, four of six would be granted at the end of the five years.

A discussion ensued upon Dr. Shirley Palmer's project, as detailed in the *Medical Times*, when the secretary demonstrated to Dr. Palmer the utter impracticability of his plan on ... nt calculations, drawn from the statistical ...

... meeting was then addressed by Drs. Robson, and Pritchard, of Northampton; R. Martin, Esq., of Holbrook, Suffolk; Thomas Parker, Esq., of Woburn, &c.; and the conclusion was, that the General Medical Annuity Fund, proposed by Mr. Daniell, be considered established; that the honorary local secretaries be instructed in their duties, and supplied with proper documents, and that a sub-committee be appointed, to meet at Newport-Pagnell, for the reorganization of the "rules" and final adjustment of all matters for the working of the same; that the sub committee be composed of the following gentlemen:—Dr. Pritchard, of Northampton; Edward Daniell, Esq., Newport-Pagnell; John Rogers, Esq., Newport-Pagnell; H. L. Smith, Esq., Southam; Dr. Barker, Bedford; Thomas Parker, Esq., Woburn, Beds; and J. G. Leek, Esq., Thrapstone.

Mr. Daniell having read Dr. Jephson's letter, under date of Nov. 15, 1845, announcing his intention of presenting a donation of one hundred guineas so soon as the society was formally established, it was resolved—"That the grateful thanks of this meeting be given to Dr. Jephson for the promise of his very handsome donation of one hundred guineas on the establishment of the society, and the secretary do inform the Doctor of the formal establishment of the General Medical Annuity Fund." It was further resolved, "That the next general and annual meeting be held at Leamington, at such time as may suit Dr. Jephson's convenience, and that he be requested to preside at the same."

N.B.—A financial report, list of members and honorary local secretaries, with new rules and regulations, will be published after the 30th of June next—the conclusion of the second year. Gentlemen desirous of acting as honorary local secretaries will please to signify their intention to Mr. Joseph Staines, secretary, Newport-Pagnell, Bucks.

The following petition has been presented by Mr. Hawes, on the part of the Council of the National Institute, to the House of Commons. It deserves, and no doubt will receive, an attentive reading. The objections to the bill, as well as the general state of the profession, are put in a nucleus, and are concisely given. We call upon the profession to send petitions of a similar nature to the House of Commons forthwith. They cannot work with too much energy in so important a matter:—

"TO THE HONOURABLE THE COMMONS OF THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND, IN PARLIAMENT ASSEMBLED:

"The humble Petition of the President, Vice-Presidents, and Members of the Council of the National Institute of Medicine, Surgery, and Midwifery,

"Showeth—That your petitioners represent the wishes and interests of a very large number of general practitioners in medicine, surgery, and midwifery in this country, and have been duly authorized and empowered by their constituents to make known their views in reference to all questions in which the interests of this class of the profession may be involved.

"That your petitioners respectfully urge upon your honourable House that the general practitioners in medicine comprise nine-tenths of the profession in this kingdom,—that they are practising under a great variety of qualifications—some being licentiates of the Society of Apothecaries, some members of the Royal College of Surgeons, and others being possessed of both these qualifications, whilst there are many who hold either a diploma or a degree from a Scotch or Irish college.

"That in consequence of this great diversity of qualification, the general practitioners are not, as a class, represented in any collegiate institution, and their interests are consequently neglected by the governing councils of those institutions to which they are nominally attached. That this great evil has operated most injuriously upon the welfare of this body—has created jealousies among the different sections of the profession, and has defeated every attempt to carry out a useful measure of Medical Reform.

"That, moreover, the standard of qualification for practice is exceedingly various, and in some instances has been studiously kept low; so that no sufficient guarantee has been afforded to the public of the efficiency and skill of the medical practitioner. That it is expedient that the great mass of the population in large towns and in rural districts, who are almost wholly attended in cases of accident or disease by the general practitioner, should be provided with a medical attendant competent to undertake every exigency, and well instructed in all branches of his profession; it is, therefore, highly necessary that the present arrangements of the profession, which tend so directly to frustrate this object, should be amended, and the profession reconstructed upon a more just, uniform, and comprehensive basis.

"That your petitioners seeing the advantage that has accrued to the profession and the public by the exertions of the Society of Apothecaries in increasing their curriculum of study, and elevating their standard of examination for the general practitioner, earnestly pray that the powers conferred by this act upon the society may not be impaired or subverted by any other measure until the powers of the society, in reference to the education of this class, be transferred fully and completely to another body.

"That your petitioners are strongly of opinion, that this object can be certainly attained only by a separate incorporation of the general practitioners of this country by royal charter, and they feel convinced that, until this incorporation be granted, no measure for the reform of the profession can receive due and unbiassed consideration from the profession at large, on account of the various interests and opinions of its component members.

"Your petitioners believing, therefore, that the future welfare of the profession must depend upon the education and independent action of the class of general practitioners, regard the Bill for the 'Registration of Qualified Practitioners, and for amending the Law relating to the Practice of Medicine in Great Britain and Ireland,' with great dissatisfaction, and believe that it is, in most of its provisions, highly objectionable, and would be prejudicial to the public interests and injurious to the medical profession if it should become the law of the land.

"That the said bill, whilst professing to establish a correct registry of qualified medical practitioners, aims at the subversion of the only protection which the public and the profession possess in the act of 1815, by which the education and attainments of the general practitioner have been raised to their present standard.

"That it would in future permit persons possessing a single qualification as a physician, or as a surgeon, or as an apothecary, only, to practise the three branches of the profession, who, according to the present laws, are unqualified so to do—thereby necessarily encouraging an inferior curriculum of medical education.

"That, without providing an efficient medical board to share the responsibility, it would give the Secretary of State the most arbitrary power over the profession; that it would give an equally arbitrary power to the councils of the several colleges, which might be exercised to the total ruin of individuals or classes, without the offences being clearly defined, or any constitutional appeal provided.

"That the mere certificate of the Registrar would constitute the only legal title to practise—thereby destroying the privileges of the Colleges of Physicians and Surgeons, and also of the Apothecaries' Society.

"That it would tend to continue and give increased facilities for practising medicine to the chemists and druggists, which the interests of the public require should be suppressed or controlled.

"That thus, although usually regarded as a mere Registration Bill, if enacted into a law, it would subvert all the existing relations of the profession, without settling any of the main important points of the long-agitated question of Medical reform—on the contrary, it would leave the question of medical education in the same unsatisfactory state as previous to the passing of the Act of 1815.

"That your petitioners entertaining these strong objections to the said bill, most earnestly pray that your Honourable House will not allow it to pass into a law.

"And your petitioners will ever pray.

"R. R. Pennington, President.	George J. Squibb.
Thomas Martin, V.P.	James Clayton.
Nathaniel Clifton, V.P.	Edward Stuart.
John Nussey, V.P.	Henry Ancell.
John Propert,	George Webster.
John Bowling.	Edward Headland.
John Dodd.	...ed Hardwick.
John Sutton.	...ward D. Moore.
George Thos. Dale.	...ry P. Fuller.
Wm. Cooke.	John Merriman.
James Bird.	John Sim Smith.

Isaac Hurst, Bedford.
George J. Seale, Landport, Portsea.
James Stedman, Guildford.
Thomas Warner, Cirencester.
Richard Hughes, Stafford.
James Bedingfield, Stowmarket.
John R. Keele, Southampton.
John Colthurst, Clifton.
T. Hebert Barker, Bedford.
John Thompson, Nottingham.
C. M. Burnett, Alton, Hants.
William Allison, East Retford.
William F. Dickenson, Ulverstone.
Brewster S. Seabrooke, Brighton.
Richd. Thos. Hunt, Ridgefield, Manchester."

TO THE HONOURABLE THE COMMONS OF GREAT BRITAIN AND IRELAND IN PARLIAMENT ASSEMBLED:

The humble Petition of the Medical Practitioners residing in the Town of Ulverston, and in the Hundred of Lonsdale North of the Sands, in the county of Lancaster,

Showeth—

That your petitioners have deeply to regret the introduction into your Honourable House of a bill entitled "A Bill for the Registration of Qualified Medical Practitioners, and for amending the Law relating to the Practice of Medicine in Great Britain and Ireland," which does not embrace the fundamental principles of Medical Reform, but is calculated to perpetuate the present dissensions which unfortunately distract the medical profession.

Although your petitioners are fully sensible of the advantages that would accrue to the profession and the public by a legal registration, and by an amelioration of the present laws relating to medical practice, yet they are impressed with a full conviction that the bill, if passed in its present state, will inflict a most serious injustice upon that class of practitioners to which your petitioners belong, and which comprises a great majority of the medical profession.

Your petitioners, therefore, humbly entreat that the present laws regulating the medical profession may not be interfered with until a charter of incorporation has been granted to the general practitioners, based upon the principles advocated by the National Institute of Medicine, Surgery, and Midwifery.

And your petitioners will ever pray, &c.

Signatures to the Petition from Ulverston, and the Hundred of Lonsdale North of the Sands.

*C. S. Kennedy, Ulverston.

William Spence, Dalton-in-Furness.
Edward Hall, do.
Joseph Cowperthwaite, do.
Isaac Grundy, do.
W. F. D. Dickinson, Ulverston.
Roger Hesketh Barton, do.
Joseph Barnes, do.
R. Dann, do.
Charles Gibbon, do.
Atkinson, Broughton-in-Furness.
Robson, do.
Atkinson, Pennybridge.

ORIGINAL CONTRIBUTIONS.

SURGICAL CASES.

Communicated by EDWIN MORRIS, Esq., M.D.M.R.C.S., &c., Surgeon to the Spalding Dispensary, &c.

CASE I.—EPULIS OF THE SUPERIOR MAXILLA, INVOLVING A GREATER PORTION OF THE ALVEOLAR PROCESSES OF THE RIGHT SIDE, TOGETHER WITH THE OPERATION FOR ITS CURE.

Robert M., aged fifteen years, a scrofulous youth, was admitted into the Union Infirmary, May 7, 1847. His mother informs me, that about three months since he first began to suffer from uneasiness in his right cheek, accompanied with slight swelling; he suffered more from the pain during the night than day. After a time the second molar tooth became loose; he then applied to a medical gentleman, and requested him to extract it; he did so; the tooth was quite sound, and a small fleshy tumour was pushing it out of the socket. After the tooth was removed the tumour grew rapidly, in spite of caustic and the application of nitric acid. The friends of the youth, being alarmed for his safety, brought him to me for my advice: upon looking into his mouth I observed a fleshy, lobulated, spongy sort of tumour, occupying half of the mouth, overlapping a greater portion of the tongue, and projecting to the fauces, and filling up the space between the cheek and the teeth, and bulging the former considerably outwards; it was firmly attached to the socket from which the second molar had been extracted, and involved the gum and alveolar processes beyond it: a portion of the tumour was in a state of ulceration from the application of escharotics; it bled freely if touched. I called a consultation of medical gentlemen, when it was unanimously decided that the tumour had its origin from the alveolar ridge and socket from which the tooth had been extracted, and that it was of that character that nothing less than the complete removal of the diseased mass, together with that portion of the superior maxilla from which it originated, would suffice for its cure. I therefore, on Thursday, May 11, in the presence of my medical friends, removed the tumour, including a portion of the superior maxilla, extending from the canine tooth to its tuberosity, in the following manner:—The boy being seated in a chair and his head supported by an assistant, I commenced by making an external incision, extending from below the malar bone, a little in front of its junction with the zygoma, to the upper lip, which I completely divided; the superior coronary and transverse facial arteries were secured, and the flaps reflected back, when the tumour was fully exposed. I then extracted the canine tooth, and afterwards, with a scalpel, made an incision along the palate, also through the soft parts externally, where I intended to divide the bone; with a strong pair of bone forceps I now cut through the superior maxilla, where I had previously extracted the tooth, and afterwards at its tuberosity, and then placed a broad chisel above the tumour, and with a hammer drove it into the substance of the jaw, and wrenched the diseased bone removed from its bed. There was a good deal of hemorrhage, but no further vessels required ligature. Having cleared out the mouth of the coagula, and the bleeding having ceased, I brought the wound in the cheek together by two sutures, and placed one needle in the upper lip, with a twisted suture, as for harelip, and applied a few strips of plaster. When I saw the boy in the evening I found him comfortable, and very little bleeding had taken place: I ordered him to have sago and rice-milk, and gave him an opiate for the night.

May 15, ten A.M. He has passed a very good night; the wound in the cheek appears to be uniting; a slight bloody discharge has taken place from the mouth. Seven P.M. Going on favourably; repeated the opiate.

May 16. Has passed another good night; to have an enema immediately; has taken plentifully of sago and rice-milk. Seven P.M. Has had a copious evacuation, and feels much better; to discontinue the opiate

May 17. Slept well all night, and wishes to get up. The wound in the cheek has united; to have beef-tea, sago, &c.; bowels have been well relieved again.

May 19. Progressing favourably; removed the plasters; the wound looks healthy; also removed the interrupted sutures; the twisted suture at the margin of the lip I thought it prudent to allow to remain. To walk daily in the garden.

May 29. Up to this date the boy has done remarkably well, and his friends being desirous of taking him home, I allowed him to leave the infirmary with an understanding that he should be brought to me once or twice during the week.

CASE II.—CASE OF CONGENITAL PHIMOSIS, WITH THE FORMATION OF 118 CALCULI UNDER THE FORESKIN.

Robert Franks, aged eighteen years, a fine athletic youth, was admitted into the Union Infirmary April 9, 1847. He stated that he was much troubled with gravel, and that he had been attended by an apothecary, but "his medicines did him no good." He saw him only two days before his admission, and gave him a bottle of medicine; he states that he has come into the union infirmary to be cured of his complaint. Upon examining the penis as he stood up, it presented a most singular appearance: the head of it was the size of a large orange, and hung down between his thighs; indeed, the weight was such as to elongate the penis considerably; the veins of the prepuce were much enlarged. Upon grasping the enlarged prepuce, and rotating it about in the hand, a distinct grating could be felt, indeed, it was exactly like handling a bag of marbles; the orifice of the prepuce was so small that I had great difficulty in passing the end of a probe through it. He states that when he passes water the prepuce first fills, and swells out; he then grasps it with his hand, and forces the urine out through the contracted orifice; he did this in my presence. He has never been able to have sexual intercourse; indeed, when an erection takes place, it must present a very formidable appearance. Having stated to him the nature of his complaint, and the operation necessary for its cure, he begged I would at once relieve him, as he wished "to be like other men." I, therefore, without further ceremony, slit up the prepuce by means of a director and bistoury, and turned out from beneath the foreskin 118 calculi, varying from the size of a millet-seed to that of a nut; the glands penis was remarkably small and shrunken. Having washed the parts well out, I ordered warm-water dressing. The youth went on afterwards very well, and on the 26th of April was discharged cured. The calculi were white and polished, with an uneven surface, and, when divided, presented a luminated appearance, and gave out a strong ammoniacal odour: they appeared to me to be composed of the ammoniacal phosphate of magnesia.

VENTILATING PANES.—Amongst the last inventions to facilitate good ventilation, Mr. Bowie has recently registered a pane of glass wherein small holes are drilled obliquely, an inch or an inch and a half apart, thus giving an upward direction to the current, with a view of avoiding inconvenience to the occupiers of the apartment.

THE LATE POISONINGS AT KENSAL NEW TOWN.

On Wednesday morning Mr. Wakley, M.P., and the jury empanelled on Tuesday, the 1st inst., at the Porto Bello Arms, Kensal New Town, resumed the inquiry into the circumstances attending the deaths of Thomas Hickman, aged thirty-three years; James Bonomay Hickman, aged nine years; Harriet Elizabeth, aged six years; Mary Anne, aged four years and ten months; John, aged three years; and Henry, aged one year and five months; the unfortunate father and five children who died from the effects of poison on Sunday, the 30th ult.

Anne Sullivan was the first witness called. She deposed that she lived close to the cottage of the deceased. About two o'clock on the afternoon of Sunday, the 30th of May last, the deceased, Thomas Hickman, sen., came and called to her. She went to him, when he told her he wanted her to see his wife and children. She immediately went to the cottage, when he asked her to look at his wife and children, as they seemed to be very sick after only eating some rhubarb pudding. She found them all vomiting and evidently very ill, and asked him if she should fetch a surgeon, when he told her to go to Mr. Abercromby, the surgeon, which she did, and he immediately attended

Mr. John B. Abercromby deposed that he was a licentiate of the Apothecaries' Company, residing at Kensal New Town. On the afternoon of Sunday, the 30th of May, between two and three o'clock, he was called in by the witness Sullivan, and on entering the cottage he found the father, mother, and aunt all vomiting. He asked them what they had eaten, and the deceased Thomas Hickman answered, some rhubarb pudding, which had disagreed with them. Witness said he was certain it was something more than the pudding that had disagreed with them, and asked if they had not also eaten of some meat, seeing some baked mutton on the table; but he was informed that they had only partaken of the pudding, and that sickness had immediately followed. Witness, therefore, considered that they had been poisoned, and sent home for a medical gentleman, who was dining with him, and who instantly attended. Witness asked them if they had any suspicion of any one having wilfully poisoned them, but Hickman said he had not. Suspecting from the symptoms that they were suffering from the effects of arsenic, witness mixed some flour of sulphur with yolk of egg and milk, and administered it. Mrs. Hickman and the aunt were at that time incessantly vomiting, and, considering that it would prove a serious case of poisoning, witness sent off a messenger for Dr. Barnes, of Notting-hill. After witness had been there about an hour and a half, Mr. Brown, surgeon, of Kensal-green, came in, and was immediately followed by Dr. Barnes. That was about four o'clock. The vomiting had by that time in some measure abated, and witness and the other medical gentlemen considered it would be an advantage to keep it up. The boy James, however, soon fell into a state of collapse, and died about six o'clock. Several others were soon similarly affected, upon which mustard poultices were applied to the chest, and ammonia, &c., were administered to them; but they gradually sank, and four more of them died before twelve o'clock at night. Thomas Hickman, the father, did not die until the next day (Monday), at twenty-five minutes past twelve o'clock at noon. The latter never rallied, but yet he retained his senses until within a few minutes of his death. The remaining three of the nine persons, viz., Mrs. Hickman, Caroline Bonomay (her sister), and Thomas Hickman, (the eldest son), survived.

The Coroner: What marked difference did you remark in the symptoms of those who are now alive and those who sank?—Witness: Their pulse was not so low and they did not fall into a state of collapse. Had omitted to state that he had also administered hydrated pyroxide of iron as an antidote.

By the Coroner: Did not use the stomach-pump in any of the cases, as it would have been choked up by the first draw. Had since opened the bodies of Mary Anne and Harriet Elizabeth Hickman. Mary Anne, who was aged four years and ten months, died at half-past ten o'clock on the Sunday night, eight and a half hours after swallowing the poison. Witness then proceeded to describe the result of the *post-mortem* examination.

The Coroner: What do you consider the cause of death?—Witness: I consider the cause of death was poison. I have ascertained the nature of the poison to be arsenic, having found it in both the pudding and the vomiting matter, by adopting the usual tests. I have got both the metal with me and the arsenic itself.

The witness here produced a small narrow phial with arsenic in its white state, and also a small pill-box with it in a metallic state.

The Coroner: You say you have found arsenic in the vomiting; have you also found it in the contents of the stomach and in the intestines?—Mr. Abercromby: Not in the cases of either Mary Anne or Harriet Elizabeth.

The Coroner: Now, in the case of Harriet Elizabeth what difference did you discover?—Witness: Her œsophagus was pale throughout, while the other was rosy; also at the beginning of the ilium in the first was an injection, but in the other it was at the end. The cause of death was the same in the one as it was in the other. The contents of both stomachs contained proof of poison. Reinch's and Herapath's tests slightly showed arsenic. The appearances resembled those of spasmodic cholera, and the stomachs were all collapsed.

The Coroner: Did you make any inquiry as to who made the pudding?

The witness replied that he had asked who had made the pudding, and Caroline Bonomay (the aunt) replied that she had. He then asked her if any one had access to the flour before it was made, to which she replied in the negative. He also asked her if any one had access to the pudding after it was made, to which she said, "No." At that time Mr. and Mrs. Hickman and her sister were in the front room together, and the children in the back room. The aunt then appeared to recollect, and said it must have been that powder which she had found in a bag, and which she had mixed into the flour-bag out of another flour-bag. Witness immediately asked how much it contained, when she said about a tablespoonful and a half. Mrs. Hickman then said to her husband, "Hickman, it must have been one of those white powders which you keep about the house." Hickman then said, "Oh! then it's nitrate of silver." Witness replied, "No, it's not that, it's something else." Hickman then said, "It then must have been that white arsenic which I have had for many years, and which I thought had all been thrown away." Witness immediately asked to see the paper in which it was, and the aunt said she had used it to light the fire, which she said was the reason that she emptied one bag into the other. Neither bag was to be found. Did not know what had become of the second flour-bag. Had searched the house, but had not found it.

The Coroner: After that statement was made to you did you make any remark?—Witness: No, I did not.

The Coroner: Did Hickman, sen.?—Witness: No, he did not; nothing beyond that the arsenic had been kept in a glass bottle, which had been broken, and it had then been put into paper. Witness knew before that he had arsenic in the house, as he had been in the glass trade. Hickman made no charge against any person of having given it purposely. He made no accusation whatever against his wife's sister, but seemed only to blame his own carelessness in not destroying it before. Had seen Hickman privately, but he never stated anything tending as a charge against any one. Nothing whatever had occurred in witness's presence to indicate even a suspicion in his mind of the arsenic having been intentionally administered. Witness noticed no difference in the vomiting of the wife or the sister from that of the others of the family. Had heard a great deal respecting the case in reports out of doors, some of which, to his own knowledge, were altogether unfounded.

Mr. George Brown deposed that he was a member of the College of Surgeons, and resided at Kensal-green. He had heard the statement of Mr. Abercromby as to the general treatment and appearances, which he fully corroborated, and would only state, in addition, that, when he first went there, about a quarter past four o'clock on the Sunday afternoon, he found the pulse of the children scarcely perceptible, and that they were in a state of collapse. The pulse of the two grown-up females and the father were much stronger.

Mr. Abercromby was here recalled, and asked by the coroner if, when Hickman spoke about the bottle which had contained the white arsenic having been broken, he stated when it was; to which witness replied, that his impression was, that Hickman said it was when he removed to his present cottage, about three months ago.

Mr. Brown further stated that he had made a *post-mortem* examination of two of the bodies, and that in his opinion their deaths arose from arsenic, as he had found arsenic in the contents of the stomach. Found it all in a very large quantity. The father suffered so much more than the others that a blister was put on him.

Dr. Robert Barnes, of 1, Park-road, Notting-hill, deposed to having been present at all the *post-mortem* examinations, and also on the Sunday afternoon, and he fully agreed with the statements of both Mr. Abercromby and Mr. Brown as to the general treatment and appearance of the sufferers.

The Coroner said the evidence given by the medical gentlemen just examined had placed beyond doubt the fact that the deceased had died from the effects of arsenic. All they wanted now, therefore, was to learn under what circumstances the poison was administered.

Mrs. Sullivan recalled: When witness went to the cottage the elder Hickman told her to look at his wife and children, who were intolerably sick, and he sent her for Mr. Abercromby. Heard that gentleman ask if anything had been put into the pudding; and heard the aunt say that at half-past six that morning she wanted a piece of paper to light the fire, and took a paper bag off the shelf. Hickman did not accuse her sister-in-law of having done it intentionally. From all that witness saw and heard of the affair she was convinced that it arose from accident. Hickman had been in the glass trade, and tried experiments at home on glass. Witness was in the habit of seeing them all every day. Never heard any threats uttered by either the wife or her sister against any of the members of the family. Hickman said he thought the arsenic had been destroyed long ago, and he also told witness that no one knew in the house that it was arsenic but him. Witness was present when the pudding was made. Mrs. Hickman and her sister began it together, but the former cut her finger, and therefore the sister finished it alone. The pudding was mixed in the dish in which it was baked. Mrs. Hickman put the flour into the dish, and, after she had mixed it, finding there was more in one compartment than in the other, she took a handful out and put it into the other.

Thomas Hickman deposed that he was not quite twelve years of age, and that he was the son and brother of the deceased. They sat down to dinner on the Sunday in question between one and two o'clock. It was his mother who told him the dinner was ready. They began with the pudding first. His mother and aunt made it. Had never seen any powder about, or known that there was any poison in the house. Flour was generally kept in the front room in a cupboard. Did not see the second flour-bag after the pudding was made. Had never heard any person, either in the family or out of it, threaten to poison his father. His mother was first taken ill. [illegible] eaten much before she was [illegible] Mary was the second, and he [illegible] two. When taken ill he [illegible] pain in his chest, was very [illegible] burning in his throat. The [illegible] in on the Saturday from the [illegible] ate a plateful of the pudding.

Mrs. Harriet Hickman was next [illegible] her sister being first removed from the [illegible] deposed that she was the widow of the [illegible] Her sister came into her room on the [illegible] morning, about half-past six o'clock, and [illegible] witness was not well, said she would light the fire. She looked about for some paper, and found a flour-bag, and asked witness what was in it. Witness told her flour, believing at the moment that it was, and her sister put it into the other flour-bag and used the paper. The week before witness's husband had opened a basket which was in the back room, and contained things he had used in his business, and amongst other things that he took out was a bag with some powder in it, and he asked witness what it was. She told him that she thought it must be arrowroot, that had been left from the time some of it had been used when the children had the measles, and she took and put it on one of the shelves in the back room, from which her sister must have taken it. Her husband used to keep a great many things in his possession, with which he used to make experiments in different kinds and colours of glass, in small crucibles over the fire. Her sister had only left her situation on the Tuesday before, and came there to stay till she got another.

Caroline Bonomay was then called in and examined. She gave an exactly similar account of the affair, saying that she took the paper bag off the shelf in the back room, and after speaking to her sister about it said, "There can be no harm in turning this out into the other bag;" and did so, and lighted the fire with the bag. There was only about a tablespoonful and a half of powder in it. She ate a plateful herself, and was going to take some more, but at that moment her sister called her to the children, who were vomiting in the other room.

Policeman Anderson, D 35, who was called in, about four o'clock on the Sunday afternoon, deposed that although he spoke to Hickman and his wife on the subject of the poison they gave no one into his custody, nor accused any one of having wilfully poisoned them. They had every opportunity of doing it had they thought so.

The Coroner then addressed the jury, and said there had been a great many most unfounded reports in circulation respecting the case. It was in his opinion a most deplorable thing that a calamity like that, in which a father and his five children had lost their lives, was not sufficient, and that persons should raise reports injurious to the characters of the survivors, in order to make things worse. He had adjourned the inquest in order that every inquiry might be made into the case, and now there was not a single tittle of evidence left which could throw any additional light on the question, the evidence having clearly shown that the deaths were the effects of the arsenic. That point being settled, the jury had also heard the evidence of the survivors, in which there was not the slightest disagreement, and which, he was convinced, was true. It, however, certainly was a melancholy case that a father of a family should keep poison in the house, as had been stated, and make experiments with it over the parlour fire.

The jury immediately returned a verdict, "That the deceased persons had died from the effects of arsenic eaten in a rhubarb pudding, mixed with the flour by the wife and sister in ignorance of its nature, it having been left carelessly within their reach on a shelf by the husband, but not with evil intent,"—this being a verdict equivalent to "Accidental Death."

The inquiry occupied several hours.

THE POTATO DISEASE.

A very full meeting of the Royal Agricultural Improvement Society was held, with closed doors, on Friday week, for the purpose of receiving authenticated reports of the actual condition of the potato crop, with a view of elucidating to what extent, if any, the last year's blight had shown itself. Sir Robert Kane presided. The Duke of Leinster, the Earl of Charlemont, and several other leading members were present.

The secretary stated that he had received various communications from several places respecting the state of the potato crop, giving different accounts of its appearance up to the last few days. Messrs. Higgins and Sons, of College-green, stated that they had planted a lot of "early [illegible]" in the open ground in January [illegible] of which had been saved with great care; and about the same time they had also planted a few sets in a greenhouse. They both came up well, and appeared healthy until the early part of last week, when they all manifested unquestionable symptoms of disease, similar in its appearance to that of last season. Those that were under glass and those in the open air were affected at the same time and in the same manner.

Messrs. Purdon, proprietors of the *Farmer's Gazette*, stated that they had issued a circular to the secretaries of the different local farming societies, requesting them to send in returns of the exact state of the crop in their immediate neighbourhood, and the great majority of returns already received described it as still apparently in a healthy state, and all the other crops looking exceedingly well.

Mr. Monsell read extracts from reports of several persons employed by the Board of Works, in drainage, from different parts of the country, stating that the disease had attacked the stems generally underground, though the leaves and stalks appeared still healthy and flourishing.

A letter was also read from Mr J M Spong, a practical agriculturist in Carlow, stating that within the past week he had travelled over large portions of Carlow, Kildare, and the Queen's County, in company with some gentlemen whose names he mentioned, and that they had found the first symptoms of the disease existing generally It manifested itself in the stem, low down, near the set or seed, under the earth, and afterwards advanced into the leaves and branches. It appeared to have attacked the autumn or early-planted potatoes to the greatest extent; and even the English reds, which had escaped the disease last year better than any others, appeared generally affected at present.

Mr. Spong's statement was accompanied by several specimens of potato plants, which he stated he had procured in different places in the above counties, and which, upon being examined by the council, appeared to contain evident symptoms of the disease as above described. They were also inspected by Professor Allman, and other practical and scientific gentlemen, who fully concurred in the above opinion, and considered that the disease resembled in its leading features the epidemic of last year.

Considerable discussion then ensued as to the course it would be most prudent and advisable for the council to pursue, so as to produce the best information relative to the exact nature and extent of the disease, and to suggest such remedial and precautionary measures as might be deemed prudent and advisable The chairman was clearly of opinion, in which his Grace the Duke of Leinster and the other members fully concurred, that their best course was to seek, through the machinery at their command, for the most accurate information on the subject, and, at the same time, to take advantage of the present timely warning to suggest such substitutes for the present crops as may, upon inquiry, be deemed advisable, and can be planted in time.

Accordingly it was ordered that a circular should be prepared and sent to the secretaries of the different local farming societies in connection with the central [illegible] the council having received [illegible] parts of the country, leading them [illegible] that the potato crop in those districts [illegible] already showing partial signs of disease, deemed it right to direct the attention of all growers throughout the country to the necessity of immediately examining their respective crops; and, in order to enable them to form a sound opinion on their condition, they subjoined the following short statement of the principal external marks by which the disease can be generally recognised, namely:—

That the disease is to be found in that part of the stem which lies under ground, and may exist although the leaf appears perfectly healthy That it is shown sometimes on that portion of the stem near the surface of the ground, but more frequently near the seed or set, and presents the appearance of a bruise, or dark mark, upon the surface.

The council further recommend, in any instance where a crop appears decidedly affected with this disease, the immediate substitution of Swedish or Aberdeen turnips, or of mangel or cabbage plants, where they can be obtained, all of which may be dibbled into the drills between the potato-stalks without any additional manure.

GOSSIP OF THE WEEK.

Royal College of Surgeons.—The following gentlemen, having undergone the necessary examinations for the diploma of this college, were admitted members at the meeting of the court on the 28th ult., namely, Messrs Daniel Badcock, Sheffield; James Robert Lane, Cranford, Middlesex, Charles Rouse Dutell, Jersey; Joseph Thomas Clover, Aylsham, Norfolk; Thomas Poole Collier, London, Thomas Rhys, Penlline, Glamorganshire, Laurence Clarke, Longford, Ireland, William Pritchard, Abergavenny, Monmouthshire, Joseph Anthony Simons, London, Robert Davies, Llanrwst, Denbigh, North Wales, John Chamberlayne Ingles, Cape Breton, North America; and Benjamin Daniel, Hull At the same meeting of the Court of Examiners, Mr Robert Hastings, a member of the Edinburgh College, passed his examination for full surgeon in the Royal Navy.

Apothecaries' Hall.—Gentlemen admitted members May 20:—Charles King, George Milburn, William Dawson Wilkes, John Smith, Samuel James Augustus Salter, Richard Jones, Ellis Southern Guest, Charles Frederick Augustus Courtney, and William Honner Fitz Patrick. May 27.—Charles Sproule, Edward Dawson Allinson, William Henry Paine, Henry Hides, Alexander Mundell Champnes, Edwin Younge, Francis Henry Blaxall, Henry Heath Corbould, Henry Stevens, and Thomas Hobson. June 3:—George Roper, William Ell-leray, Mark Hazlewood Clayton, Robert Megginson, John Bourne, Charles Wankford Currie, William Denton Dibb, Robert Muriel, Squire Sprigge, George Houseman Macnamara, George Bruce, and Henry Slade.

Naval Appointments.—Surgeons: Dr. H. W. Mahon, to be surgeon-superintendent of the Minerva, convict ship; M. Thompson, to the Odin.—Assistant-Surgeons: A. R. R. Preston, to the Bulldog; J. W. Bradshaw, to the Victory. Assist.-surgs.: Dr. A. Armstrong, F. Manger, and Henry Mathias, to Caledonia; W. Calhane, and James Wood, to Plymouth Hospital. Assistant-Surgeons R. Vinigle, H. French, and T. B. Purchas, to the President.

War-office, June 4.—67th Foot: Thomas Blatherwick, gent., to be Assist.-Surg., vice Webb, appointed to the Staff. [illegible]th: Assist.-Surg James M'Nab, M.D., from the Staff, to be Assist.-Surg., vice Bowie, deceased.—89th: Assist.-Surg. George M'Clure has been allowed to resign his commission.—Hospital Staff: Assist.-Surg. Vere Webb, from the 67th Foot, to be Assist. Surg. to the Forces, vice M'Nab, appointed to the 78th Foot.

M. Herard, [illegible] M. Lisfranc at [illegible] in Paris. [illegible] the [illegible] Government, to the consideration of the Royal Institute of Architects:—1. That [illegible] living, sleeping, or work room shall contain less than 14[illegible] superficial feet, nor shall be less than eight feet high. 2. That such room shall have one window at least, opening at top. 3. Also an open fireplace. 4. That in every living, sleeping, or work-room erected in future some method shall be adopted of allowing the foul air to escape from the upper part of the room. 5. That every such room erected in future shall have some means of continually admitting fresh air. 6. In every public building in which gas is used, to insist on the use of plans to carry off the products of combustion, and not to allow them to escape in a room. 7. That all churches, schools, theatres, workshops, workhouses, and other public buildings shall adopt such methods of ventilation as are approved of by the medical officer of health.

Reward of Illustrious Medical Men.—The Shah of Persia has conferred on Dr. Ernest Cloquet, the decoration of the order of the Lion and the Sun, as an acknowledgment of the services rendered to his royal person, and to his subjects during the time the cholera prevailed in the country.

Melancholy Death.—Mr. Benj. Sheppard, of Worcester, in a fit of temporary insanity, committed suicide by taking prussic acid on Tuesday last. Having exclaimed "it's all right!" he expired in a very few minutes.

Obituary.—On the 22nd ult., aged sixty-seven, Dougal Campbell, Esq., M.D., half-pay surgeon, Royal Artillery, at Boulogne-sur-Mer, where he had been practising as physician for upwards of twenty-five years, sincerely regretted by all who knew him. He claimed the earldoms of Annandale and Hartfell, and his brother, the late Colonel William Claud Campbell, had claimed the earldoms of Crawford and Lindsay.

On the 2nd inst., at Warrington, of fever, caught while attending to his duties at the Fever Hospital, Mr. William Morley, resident surgeon of the Warrington Dispensary.

MORTALITY TABLE.

For the Week ending Saturday, June 5, 1847.

Causes of Death.	Total.	Average of 5 Winters.
All Causes	786	914
Specified Causes	784	909
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	160	166
Sporadic Diseases.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	93	99
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	122	158
Diseases of the Lungs, and of the other Organs of Respiration	202	275
Diseases of the Heart and Blood-vessels	29	29
Diseases of the Stomach, Liver, and other organs of Digestion	77	70
Diseases of the Kidneys, &c.	9	8
Childbirth, Diseases of the Uterus, &c.	12	10
Rheumatism, Diseases of the Bones, Joints, &c.	11	8
Diseases of the Skin, Cellular Tissue, &c.	3	2
Old Age	37	57
Violence, Privation, Cold, and Intemperance	29	28

A

COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the THEATRE of QUEEN'S COLLEGE, Birmingham.

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Subacute and chronic rheumatism; the former very commonly met with in practice, not a sequela of acute rheumatism, observations on the character, continuance, and cessation of the latter, various causes producing subacute rheumatism, illustrations, general symptoms of it, rheumatism resulting from cold caught during an attack of dyspepsia or disordered general health; hereditary rheumatism, resemblance of this to gout, points in which they differ, lithate of soda in gout, and lactate of soda in rheumatism, rheumatism affecting parts that have been injured or over-exerted, illustrations, parts which subacute rheumatism chiefly attacks, particulars in which this differs from acute rheumatism, treatment of the former, illustrations and observations upon them; chronic rheumatism, its characteristics, cases, treatment.

GENTLEMEN,—To-day's lecture will embrace the subjects of subacute and chronic rheumatism.

Subacute rheumatism is the most common variety of the rheumatic affection which you meet with in practice. It exhibits a diversity of character according as it may be more or less severe, and few or many joints may be affected by it. It is not a *sequela*, properly so called, of acute rheumatism. this latter leaves no analogical affection as its natural sequence. Acute rheumatism comes and goes, it may be for a series of years, leaving its subject no worse for its visitations except in so far as nervous debility, through over-active treatment, or injury to some vital organ, from metastasis, may be the issue of it. I have met with cases in which acute rheumatism of the severest kind has been endured every two, three, or more years, for nearly a quarter of a century, and yet the sufferers apparently no worse for their many seizures. The attacks for which I have attended them have been of the most urgent kind, and they have told me that their previous ones have been similar, yet, the attack over, and their strength restored, you would not have suspected that they had ever endured affliction worthy of the name.

Acute rheumatism, *per se*, is not a dangerous affection, except in so far as heroic treatment and metastasis may make it so. The former I advise you to guard against; the latter always to be prepared for. Avoid doing too much, whilst the ailment confines itself to superficial parts; do enough, and do not delay it, when secondary inflammation seizes any deep-seated organ. But, as I have said, there is no danger so long as the limbs only are affected; the ailment may be tedious and painful, but it will be little else; good management will lessen both the duration and the degree of the attack.

In the majority of cases acute rheumatism wears itself out, so to speak. It is not uncommon to find people in adult or advanced life strangers to rheumatism in any form; who were martyrs to its inflammatory type in their younger days. In some instances you have substitutes more formidable than the original, in others, wandering pains in this joint and that, with every change of season, tell us that the articulations have not come off unscathed for the onslaughts they have suffered. These, however, cannot properly be considered *sequelæ* of the acute affection local weakness, left by this latter, is, perhaps, the remote cause, or opportunity rather, of the subacute form, over-exertion or injury of a part will similarly predispose, as I shall hereafter illustrate to you. In ninety-nine of every hundred cases of subacute rheumatism that you meet with you will find that the ailment exists *per se*, and has not had acute rheumatism for its precursor. Various causes produce it. Let us glance at a few of them; what I am now going to say will recal to your minds many of the cases that have passed before us during this session.

A patient comes to you complaining of "aching all over him," as he calls it; he is as sore, he says, as if he had been beaten. Some of his larger joints are painful, particularly on motion; they are a little tumefied, and their heat is above the natural standard. These pains are aggravated by warmth, they are, perhaps, relieved for the first few minutes after having got into bed, but directly that heat becomes confined and accumulated, the pains increase, until the patient feels the bedclothes intolerable, and throws them off in agony. With this state, however, there is little or no redress of the affected parts; there is but trifling, if any, fever; the pulse is scarcely above the natural standard as a rule, and when above this, the impetus is not increased; the artery is easily compressible; there is no rotundity, resistance, or jar under the finger; the tongue is loaded with a white or yellowish-white fur; the complexion looks unhealthy, and the eyes dull, there is no appetite, but frequent thirst, the urine is scanty, and loaded with lithates; bowels costive. You learn that the patient has been dyspeptic for some time, and one day sat in a draught, got his feet wet, was soaked in a shower, or slept one night in a damp bed; and hence his trouble. What in another case might have given rise to simple fever, or favoured the accession of any prevalent epidemic, has in this instance originated subacute rheumatism. In common parlance, such a case is called "a cold."

An individual, dyspeptic, or otherwise disordered, puts on a damp shirt, and, not liking the trouble of taking it off again, presents himself before you the next morning, complaining of rheumatism in his shoulders and elbows, and perhaps in his loins. Another has sat on a damp bank, and lumbago or sciatica is the consequence of his folly. A woman, during the menstrual period, gets her feet wet, and she has rheumatism in her knees very shortly: perhaps it flies thence to the bowels, or to the peritoneum, and the inflammation, if not soon arrested, very soon ends fatally. perhaps the rheumatism flies to the uterus, which then becomes affected with troublesome periodical pains, and its natural discharge is arrested.

A sudden chill, local or general, occurring to an individual out of health, and especially in his digestive organs, is particularly apt to be followed by rheumatism; and this is, more than any other ailment, liable to repeat itself.

Other cases you meet with in which there is an hereditary rheumatic diathesis. This is common in the subacute, but rare in the acute variety of the affection. In the former, you sometimes find that all the members of a family are subject to it, and they will trace its pedigree up to a remote grandfather. Here we perceive a great resemblance to gout, not only in the transmission of the ailment, but in the gastro-intestinal disorder which usually accompanies it. In the rheumatism, however, there is more lactic acid found in the secretions than in gout: in the former, again, lithic acid is generally abundant in the urine; in the latter, it escapes with the perspiration as lithate of soda, or is deposited in this state in the joints, constituting gouty concretions. Lithate of soda is a comparatively rare formation in rheumatism; it would seem that the lactic acid takes the soda at the expense of the lithic. Certain it is, however, that you find lithate of soda in gout, and lactate of soda in rheumatism.

Again, you meet with cases in which joints and limbs are rendered liable to rheumatism through injury or over-exertion. A man falls down and sprains his knee; it troubles him for a time, but at last gets well. If he inherit the rheumatic diathesis, the first cold he takes flies

to that knee, and it will be strange if every subsequent cold do not similarly affect it. Let his stomach get out of order, and the knee will pain him. I am at this time attending a lady, aged thirty, who, three years and a half ago, fell down stairs and hurt the lower part of her back. Since that time, every attack of cold, or of dyspepsia, however slight, has been followed by a repetition of the original pain. I saw a somewhat similar case the other day: a patient, under the care of my colleague, Professor Berry, fell, and pitched upon the point of his right shoulder. The original injury was remedied some time ago, but the man has since suffered from very severe rheumatism in the part. You will find that mechanics and labouring men are mostly subject to rheumatism in those parts of their bodies that are chiefly exercised. Blacksmiths, shoemakers, and others whose arms are mainly employed, if they suffer from rheumatism, generally have it there. Muntz's man, you remember, who was an out-patient some time ago, had this complaint in his left arm and shoulder. He was accustomed to wield a heavy hammer, and I was surprised that it was not the opposite limb that was affected, but learned, on inquiry, that the man was left-handed. Goddard, whose case I spoke of in my last lecture, was a joiner, in an establishment where he was required to do a great deal of sawing and planing. His rheumatic seizures have always been confined to the right arm and shoulder. Millers, who carry heavy weights on their backs, are liable to lumbago and sciatica; so are gardeners, and others accustomed to much digging. The out-patient Pearce, who was so severely afflicted, is a case in illustration. Postmen, and other great walkers, are particularly subject to rheumatism of the legs; old hounds are often crippled with this painful affection.

Subacute rheumatism chiefly seizes upon muscular parts, such as the shoulder, loins, and hips; or parts well supplied with ligaments, as the knee, ankle, and wrist. It is more liable than acute rheumatism to affect muscles solely; and is less liable than this to metastasis to internal organs. In its transference from superficial to deep-seated parts, it rarely shows an increase of activity, at least of an inflammatory nature.

Subacute rheumatism, is not a *sequela* of the acute form, as I have said; it differs from this in the absence, or the great mildness, of the sympathetic fever, and in the local affection not furnishing distinctive evidences of inflammation. The parts are swollen, stiff, and painful, but they are not redder than natural; there is rarely an increase, and often a diminution, of heat. This, in an artificial form, generally increases the pain, and hence the ailment has sometimes been denominated "cold rheumatism," to distinguish it from the other, which was called "hot."

In subacute rheumatism there is more or less acidification, but not to the extent observable in the acute variety; but the gastric and hepatic disorder is often much more manifest in the former than in the latter: this, again, is seldom, the other often, hereditary; this never becomes chronic, and generally leaves the patient as he gets older; the other is always prone to recurrence, to chronicity, and to aggravation in old age.

There is an obvious pathological relation between acute and subacute rheumatism; but still there are items which point out their distinctness, the chief of which is, that they do not run into one another.

The treatment of subacute rheumatism is not a matter of difficulty, except in so far as the task is often a tedious one. The indications to be fulfilled are both general and local. The former chiefly consist in improving the alimentary functions, correcting the secretions, and imparting tone to the system; the latter in soothing or [illegible]thening, as the case may be, the suffering [illegible] Let me recal to you some of the ex[illegible] you have seen.

[illegible]y Ann Hacket, aged fifty-six, was admitted [illegible] hospital on the 5th of November last. She was the subject of rheumatism in a subacute and severe form, which was of about five weeks' duration. She had often suffered from it before The affected parts were chiefly the shoulders, back, and knees. Her tongue was coated with a yellowish-white fur; appetite bad; bowels costive; urine scanty, and depositing a copious red sediment; saliva acid. She was ordered to put her feet, every night, into hot soda and water, and to take the following:—

℞. Inf. gentianæ comp., ℥viij.; sodæ bicarb. potassæ bicarb., aa. ℈ij.; sp. eth. nit., ʒiij Misce fiat mist. cujus cap. coch. magna duo ter die. Cap. omni nocte, pil. rhei c. gr. v.

Under this form of treatment she immediately began to improve, and continued to do so, without one untoward symptom, until she was quite well. In this state she left the hospital in nine days after her admission.

In the same ward (the bottom one), and at the same time with this woman, was a girl, whose name I forget at this moment, the subject of very severe lumbago, caught by sitting on damp grass She was ordered the same mixture as the preceding, except that infusion of calumba was substituted for that of gentian. This girl's stomach was rather irritable, for which reason I made the change. In gastric or intestinal irritability, calumba is one of the safest tonics you can give it will sometimes arrest vomiting after other remedies have failed. The pain this girl suffered at night was so severe that I gave her five grains each of compound rhubarb and compound soap-pill. These procured her some slumber, and relieved her bowels without griping. Her back was ordered to be fomented with hot soda and water three times a day.

This plan soon began to prove successful, for a week had not elapsed before the girl could walk without assistance the length of the ward. It was a curious gait, you remember, but still she had not managed as much locomotion for some weeks prior to coming into the hospital. At the end of a fortnight she was so considerably better that her compound soap-pill was discontinued at night, and her alkaline fomentations in the day. In place of the latter, she was ordered an opium plaster, twelve inches by eight, across the loins; there was weakness of the lumbar muscles, but no pain. The tonic mixture was continued for another week, when there was no further use for it. The girl left the hospital in a few more days, in all respects well, except that her menses had stopped since her attack of lumbago. For this residuary ailment she took with her a bottle of sesquichloride of iron, of which she was to take twenty drops thrice daily. I requested her to call as an out-patient if she did not derive benefit from the drops, and she came in about a month, to say that there was nothing further of which she had to complain.

Jesse North, aged twenty-seven, was admitted into the top front ward on the 21st of January last, suffering from subacute rheumatism. He had been the subject of it for upwards of two months, a fortnight of which time he had been an out-patient; but I advised him to come into the hospital, for whilst he followed his employment (stage carpenter at the theatre) there was little chance of doing him any good. His pains were chiefly in his knees, where they were fixed, and somewhat severe; but he had also flying pains in his shoulders, elbows, and loins. There was little sympathetic fever, and the appetite, though not good, could scarcely be called defective. There was abundant lithic deposit in the urine, and the saliva and perspiration were very acid; the tongue was tolerably clean; there was little thirst, and the bowels were confined. He was ordered an alkaline bath at bedtime, and the following:—

℞. Inf. buchu, ℥viij.; liq. potassæ, [illegible]; tinct. hyoscyami, ʒij. M. ft. mist. cujus capiat. coch. ampla duo ter in dies. Cap. pil. rhei c. gr. v. omni nocte, hora somni.

With this treatment, he steadily improved until the 27th, when we found that he was suffering from synovitis in the left knee. In every other respect he was much better. I had not seen him the day previously, but learned that, on the night preceding this, his knee had become uncovered whilst he was asleep, and exposed to a draught through a window near which he lay. The knee was largely swollen, immovable, and very painful, and there were evidences of fluid in the joint.

A blister, six inches by five, was ordered to be applied to the knee; the mixture to be continued; and the following pills were substituted for the compound rhubarb:—

℞. Pil. coloc. c., pil. sapon. c., opio, aa. ʒss.; pil. hydrarg., gr. x. Misce in massam, dividendam in pilulas xij. quarum capiat ij. omni nocte.

From this time we had nothing to contend with but the trouble in the left knee; the other rheumatic pains were all gone. The inflammation in this joint, however, continued so obstinately that we were obliged to keep open the blister, and give occasional doses of calomel. It was not until a fortnight had elapsed since the occurrence of the synovitis that this could be considered to be fairly at an end. Even then, there was left considerable swelling, and, as a natural consequence, tension and weakness. The following medicines were then ordered:—

℞. Inf. buchu, ℥viij.; liq. potassæ, ʒj.; hydriod. potassæ, ʒss.; sp. eth. nit., ʒiij. M. ft. mist. cap. coch. ampla duo ter die.

℞. Pil. rhei c., ℈ij.; ext. hyoscy., ℈j. Misce et divide in pil. xij. quarum cap. ij. omni nocte.

The knee was ordered to be well rubbed, night and morning, with this liniment:—

℞. Liniment. sapon. comp., ℥ij.; tinct. lyttæ, tinct. opii, aa. ʒss.; potassæ hydriod., ʒiss.

From this time the knee began to improve, as also did the patient's general health; and on the 27th of February, when his note had expired, he was dismissed well. For several days previously he had expressed a desire to return to business, but I prevailed upon him to remain in the hospital that he might further enjoy the advantages of rest and judicious living.

Synovitis is sometimes a formidable feature in the general progress of rheumatism. When very active, and marked by external heat and redness, local depletion by leeches is judicious practice; and the best plan is to bleed well at once, so as to cut short the inflammatory process. When this is less strongly shown, as in the last case, blistering is common enough, and the discharging surface may be kept open if necessary; it is always advisable to do this if there be any fear of accumulating fluid, or the continuance of low inflammation. Either may endanger the joint. Additionally, alkalis and gentle mercurials are valuable. After the subsidence of the active symptoms, preparations of iodine, generally and locally, are useful as agents of absorption.

Chronic rheumatism exhibits no particularities distinct from the subacute variety, except what may be considered the result of the long continuance of the disease. Chronic rheumatism, in fact, is nothing more than a persistent form of subacute. Various causes lead to this persistence. As people advance in life, their liability to rheumatism not only increases, but they lose the power of throwing off an attack. It seldom attains to anything like a crisis, but shows an atonic type, being better one day and worse another, but rarely ever becoming decidedly manifest, and as rarely disappearing altogether. Hence, this long-continued irritation weakens the vitality of the affected part, causes a thickening of its ligamentous or cartilaginous structures, lessens its circulation, and diminishes both its sensibility and motility. Thus, we find joints that have suffered from chronic rheumatism, thicker, colder, and less movable than natural. You saw an excellent example the other day in the person of a female out-patient.

We sometimes meet with chronic rheumatism of the most intractable kind, in adults, and even in young subjects who have passed the period of puberty. This is chiefly amongst those who inherit the rheumatic or scrofulous diathesis; who have become cachectic; have suffered much privation or exposure; or have been largely bled

or mercurialized. The abuse of mercury is a very prolific source of subsequent rheumatic seizures, which are generally severe in proportion to the impression made upon the system by the drug. It is in melancholy cases of this kind that you often meet with nodosity of the joints, periosteal and ...teous thickenings, and sometimes with ...eta paralysis of the affected limbs.

...e treatment of chronic rheumatism is both local and general, and mainly consists in imparting tone and energy to the system and the suffering parts; correcting any undue acidity; ...ating pain by narcotic remedies; and ...ing the absorption of any materials that may be foreign to the joints, or unfavourable to their motion. These things are not usually difficult of accomplishment in young or adult subjects whose constitutions have not been utterly injured; but in advanced age, your chances of doing good are much fewer, and in many cases you are obliged to be content with only palliative measures.

Give me your attention now, gentlemen, whilst I dwell upon two cases of chronic rheumatism which you have seen treated at this hospital—one of them, certainly, as bad a case of the kind as I ever met with. This one was in the person of Edward Neile, aged thirty-one, who was admitted under my care on the 27th of February last. He occupied the top ward. The following is the history of his case:—

He had served for nine years as a private in the Dragoon Guards. He had enjoyed good health up to thirteen months prior to the date of his admission, when he was thrown by a young restive horse, and his back considerably bruised by the fall. This happened at Exeter, and in the regimental hospital of that place his injury was treated and considerably relieved. When convalescent, he caught a violent cold, and the pain in his back returned with great severity, additionally to which he had severe pains in his shoulders, hips, and knees. He was again treated in the hospital during the period of four months, but with little benefit. His joints, he informed me, were largely swollen, hot, and excessively painful, and the pain in his back was so severe that he could not support himself in the upright position. At the end of four months, the regiment came to Birmingham, and he was in the barrack-hospital here, under a fresh surgeon, for upwards of three months, but with little or no improvement. Subsequently, the regiment went to Chatham, and he was three months in the general hospital there; but, making no progress, he was dismissed as incurable, and on leaving the regiment, came to Birmingham to see some friends. When he had been here about two months, he was persuaded to come into Queen's Hospital.

When we first saw him (nearly all of you, I think, were present at my first interview with him) he had a very sunken, careworn look. His appearance was that of a man almost double his age. Face thin and sallow; limbs considerably wasted, except the elbow and knee joints, which were larger than natural, and somewhat tender on pressure. His legs he could not straighten, and said that he had not done so for more than a year; neither could he straighten his back, and the effort of attempting this caused him so much pain that the sweat actually ran down his face. The poor fellow, in fact, was seemingly crippled; he walked with the greatest difficulty, and could not conveniently hobble more than a dozen paces at a time. His pains during the night were so severe that he disturbed the other patients with his groans; and the nurse told us that he often cried bitterly when these pains were upon him. His tongue was pale and furred; appetite very bad; saliva acid; urine depositing a copious red sediment; bowels costive.

He was ordered an alkaline bath at bedtime, to be repeated every third night, and the following medicines:—

℞. Infusi diosmæ crenatæ, ℥viij.; liq. potassæ, ʒj.; hydriod. potassæ, ʒss.; tinct. hyoscy., ʒij. M. ft. mist. cujus cap. coch. larg. duo ter die.

℞. Pil. coloc. c., pil. sapon. c., opio, aa, ʒss. ...e et divide in xij. quarum cap. ij. omni nocte.

In two or three days from the date of this treatment he began to feel better, and to walk better. He expressed a hope that his leading wish would be gratified—to be reinstated in the army. In a week his improvement was so decided, that I felt inclined to change the opinion I had at first formed, that at best his treatment could be only palliative. When a fortnight had elapsed, you know we found him going through the different processes of drill, much to the amusement of the other patients. He then told us that, with the exception of pain in his back, he felt as well as he had ever done in his life. He could straighten his knees, and walk well; his appetite and general health were much better; he had scarcely any pains by night or day; his knees and elbows were less swollen; tongue clean; urine natural; bowels open. He was ordered to continue his medicine, to discontinue his baths, and to have applied to his loins an opium plaster, twelve inches by eight.

This was all the treatment the man had, until he had been in the hospital five weeks, when he caught cold one day, and had a slight attack of diarrhœa, but he had no return of his rheumatism. You remember how he used to show us his muscular capabilities, in testimony, not only of his improvement, but of his fitness to return to his ambitious position in the dragoons. He was in the hospital two months, and left it, to all intents and purposes, well.

As I have before said, this was one of the worst cases of the kind I ever met with; and certainly its recovery surprised me, as it did the poor fellow, who had often been told that he would never regain the use of his limbs. The alkaline baths did him much service; but I am inclined to attach the chief importance to the hydriodate of potass: this is of vast service in cases of this kind, and the more especially if you combine it with *liquor potassæ*. You may make any tonic infusion the vehicle, but I have a liking for bucha (perhaps because I am accustomed to it), for, in addition to tonic properties, it also possesses those of a diuretic and diaphoretic.

The next case I have to speak of, and very briefly, is the out-patient, Pearce, who visits us every Wednesday. He suffers from lumbago and sciatica. When he first came he could scarcely walk, and we learned that his ailment was of about eight months' duration. He was ordered the same mixture and pills as were given in the last case, and an opium plaster was applied to his loins. As you know, he began to improve from the date of his attendance, and the last time we saw him (six weeks from his first visit) gave us good evidence that ere long he would cease to be a patient.

The woman, Dale, in the top ward, came in a few days ago, recommended by the last patient. She has his identical ailment, of thirteen months' standing, but was at first more crippled than he was. Additionally to the medicines he takes, she has her back and hip fomented every night and morning with hot soda and water. She told me to-day that she had felt great relief from her treatment; and, indeed, seeing her up, and eating a tolerable dinner, gave me convincing proofs that her tale was true. I have no doubt that she will soon be well.

I have selected only a few cases to illustrate the treatment of chronic rheumatism. You have seen more than these treated in the hospital during the last eight months, and, without an exception, seen them successful.

In all these cases I advise you to push the alkaline treatment, both locally and generally: the hydriodate of potass is of vast service; bucha is a good vehicle, but you may give any other if you like; with old people cascarilla or cusparia is excellent, and the addition of ammonia is often valuable. Tincture of iodine to the joints, or hydriodate of potass ointment, composed of a drachm of the salt to an ounce of cerate, is a good remedy, when there is enlargement of the proper structure, or nodosity. Alkaline fomentations generally do great good; and an opium plaster, where applicable, or tincture of aconite, is valuable in subduing pain. In old people, remember, your plan must be chiefly sustaining and palliative.

[Erratum.—At the close of the last paragraph but one of Dr. Wright's lecture, last week, there occurred a typographical error. In place of "the lithate of potass is less soluble than that of soda," read *more soluble*.]

A COURSE OF LECTURES ON SURGERY,

BY

SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London; Consulting Surgeon to London University Hospital, &c.

Lecture X.

Gentlemen,—In the last lecture we considered the nature and exciting causes of suppuration in its progressive stages, and sooner or later it accomplishes a discharge of purulent matter, either from an abscess or an ulcerated surface. Before proceeding to the treatment of abscesses, it will be well to notice a little more particularly the nature and qualities of the discharged matter. Healthy pus, the fluid which comes away from a simple or phlegmonous abscess, or a common wound or ulcer, in a healing state, is of a thick creamy consistence, of a light yellow colour, sometimes approaching to green: these are the properties most obvious to the observer. It sinks in water, though, if shaken in that fluid, the latter remains turbid and thick; its weight is nearly that of blood. Under the microscope it is found to be composed of small white globules, floating in a fluid which coagulates with heat, from which it has been supposed by some to be the serum of the blood; from which, however, it differs in important particulars. The globules were supposed by Dr. Pearson to be those of the blood altered in colour in the process of suppuration. Gendrin, who, from the irregularities in shape and size, questions this, notices that the globules of the blood, in moving to the neighbourhood of the abscess, lose their distinctive colour and become globules of pus. In healthy pus the globules are more abundant: it is thus thicker and whiter than unhealthy; it has no smell, and is certainly not acrid or corrosive, as it was formerly the fashion to describe it, nor does it irritate the surface which secretes it. When pus is discharged, however, from ill-conditioned sores or from some specific disease, its smell is offensive, and sometimes disgusting. That which comes away in gonorrhœa may be distinguished from all others by its peculiar smell; while that of cancer makes its presence known throughout the ward by its highly offensive odour. When, during suppuration, disease attacks the constitution or suppurating surface, a change takes place in the quantity and quality of pus secreted; true pus is no longer formed, the discharge is thinner, more transparent, and of fetid odour, and resembles more the nature of the blood: in this state it is termed *sanies*. This fluid is more disposed to putrefy, and may irritate even the suppurating surface. It has more of the serum, and often more of the coagulating lymph, which is probably present in all pus, and a greater proportion of those extraneous parts of the blood which are soluble in water. It differs, however, considerably, according to the nature of the disease producing it: phlegmonous and scrofulous abscesses, cancerous sores, and irritable ulcers, all differ very much in the quantities of their pus. It will be often seen that, where fever supervenes, pus ceases to be deposited during such disturbance, which returns on the diminution of such disturbance; and the same effect is produced by inflammation of neighbouring parts.

Erroneous views have been very prevalent as to the purposes which a discharge of pus subserves in the system: thus it has been imagined that bad humours are conveyed away by abscesses and ulcers, either from local or constitutional disorders. On this account other sores have been by various means induced, as a prevention, before drying up those which exist, and to become their substitutes in the same service. Of the true use of pus, however, we know very little, and the opinions I have just quoted become of little value when it is remembered that it is in healthy constitutions, and from healthy sores, that pus is formed most perfectly; and, provided such sores are not near the organs of life, they may be healed without any of those consequences which must follow if their existence were essential to the suppression of constitutional or local disorders. As supplying a means of communication between a disease and the outer surface of the body, and for the expulsion of foreign bodies, the usefulness of suppuration must be apparent.

When called upon to deal with suppuration in its earlier stages, you will have to form a judgment on the practicability of terminating it by resolution or absorption. As the methods to be taken are the same which have been directed for diminishing inflammation, I need not dwell upon it again at any length. When suppuration comes on, inflammation may be said to take a different form, rather than to be terminated; the excited action of the vessels has obviously not stopped; and, though the appearance is altered, the existence of inflammation must still be recognised. This remark applies particularly to the early stages of suppuration from acute inflammation, since, when an absess has been burst for several days, its acute character may be said to have disappeared. When inflammation has decidedly led to suppuration, it may not be always the best course to repeat the same active antiphlogistic means as have been employed in the former stages of its progress; still it will be well to keep it in check by mild saline medicines, and careful abstinence from anything calculated to stimulate either the system or the part itself. If the pain, tension, heat, and redness be great, the application of leeches, supposing the general health is not low. If you cannot expect to terminate inflammation by resolution, you must make use of warm soothing applications to the suppurating part: these will, with mild medicines and rest, contribute greatly to a favourable result. Where the pain is severe, opium will be a valuable auxiliary. By treatment of this kind you will be using the most likely means to arrest suppuration and disperse matter when it has been deposited, and at the same time of successfully terminating where that course is not possible. With these measures you should also be careful to remove all sources of irritation: the exciting cause, as reason will tell you, must be removed.

When those symptoms of the formation of pus—fluctuation and pointing—which were noticed in last lecture, present themselves, it is a rule in surgery to make an early opening, in order to free the part from the irritation arising from tension and pressure, which may often increase the inflammation itself. Where the system is very low and inflammation reduced, an abscess is more likely to be dispersed, in consequence of the action of the absorbent system; and, by stimulating the various secretions, that pus which is deposited near the absorbent glands will be sometimes dispersed. Although, in practice, the time when any particular abscess should be opened is a matter for the individual judgment of the surgeon, yet there are certain circumstances, under which all surgeons agree they should be opened, when the fact of the formation of matter is well ascertained. Of these are abscesses from acute inflammation, seated amongst adipose and loose cellular membranes; in these, unless provision is made for the escape of the confined matter, sinuses may follow; also where urine, fecal matter, or other stimulating fluid, is extravasated in the cellular tissue, where they are formed under thick fasciæ, or under sheaths of tendons, as under the fasciæ of the thigh, or which contain dead bone, where the matter is in danger of making its way into the chest or abdomen, they should be opened early. Abscesses, also, under the sterno-cleido-mastoid muscle, in the cellular tissue separating the muscle from the parts below, and others near important organs producing great functional disturbance by pressure, as near the neck of the bladder, or near the larynx, trachea, or œsophagus, or other organs. When the matter of an abscess lies close to a bone, it should be opened immediately. So, also, chronic abscesses should not be left, because they may be a long time in bursting, and, for want of opening, will extend.

You will find of the two methods of opening an abscess, by a cutting instrument or by caustic, the former is to be preferred: not only is less pain inflicted, but the end is gained more expeditiously; and, as the texture is only divided, not destroyed, a smaller cavity is left; the outlet may also be made more conveniently, according to the intentions of the surgeon. The use of caustic is now almost confined to those cases in which a permanent opening is required: it is too slow and ineligible a mode to become general—wanting the precision of the cutting instrument. Of these the best, except when only a small opening is required, is the double-edged bistoury; when it has been inserted into the tumour, the size of the opening can be easily increased by moving the edge forward. In determining where to make the opening, you will be guided generally by the presence of fluctuation in a particular part, and by the thinness of the skin: at the same time, you must consider such locality with reference to the facilities which it may give for the escape of the matter.

Sometimes, when the abscess bursts at a point not favourable for the emptying of the tumour, you must make a counter-opening. In such cases it is better to cut through a certain thickness, than allow it to burst *at its point*. After opening abscesses it is necessary to *maintain*, &c., *i. e.*, to prevent the healing of the wound till the cavity is so far reduced as to prevent another accumulation of matter in the same cyst; but this is not always advisable. After the opening of an abscess, the sides of the cyst are gradually (it is not necessary to squeeze out the contents, nor to place lint in the cavity) drawn towards the centre, and are at length obliterated. Some, however, will not heal, but after having been open for some time, from some cause keeping up suppuration—which may be the presence of a foreign body, the position of the abscess, disturbance from neighbouring muscles, or one of many other kinds of excitement—form a fistula. You are in all such cases to inquire what is the exciting cause, and to aim at removing it; and also to make a freer and more direct opening. After the opening of the abscess, the emollient applications are to be discontinued, and common dressing and a bandage put on.

I mentioned to you, that on the bursting or opening of an abscess, there is frequently a change in the constitutional disturbance, much pus is discharged, and the patient is brought very low; hectic, the leading features of which are prostration of strength, with weak pulse and nocturnal exacerbation, comes on; the patient then requires tonic treatment and a more invigorating diet.

It is proper that I should say a few words about this fever: it is distinguished from the symptomatic fever which takes place as the immediate consequence of local irritation upon a healthy constitution. Hectic fever is the remote effect of a local injury on an exhausted constitution unable to react and successfully to struggle against the local evil. It is more chronic in its character, and marked by a state of the pulse, often very significant. A person has a chronic abscess; there is no external local sign, but matter is, nevertheless, forming; and the observant surgeon may often discern its existence by the quick and sharp pulse, the loss of sleep and appetite, and night sweating. Where the disorder is more established, the pulse becomes smaller; it is quicker towards evening, reaching as high as 120, and sometimes higher than this, and always exceeds the customary healthy rate by twenty strokes a minute. The skin is moist; the urine pale and abundant, with sediment; sometimes vomiting, great flushing of the veins, heat of the soles of the feet and the palms of the hands. At a more advanced stage, the night sweats are more profuse, and the evening exacerbation increases; and in the latter stage there is a tendency to diarrhœa. It is observable that when diarrhœa comes on the night sweats disappear and are seen no more.

The surgeon, in this disease, if unable to remove the exciting local cause, cannot be certain of success; he may, however, alleviate the pain, and in so doing he will give the best chance of recovery. If the diseased part can be removed by operation, and the system will bear it, there is hope, and a pure air and nourishing food, easy of digestion, wine and gentle cordials, with opium, bark, and steel medicines, are indicated for maintaining the constitution during its struggles. Hectic comes on quicker in proportion to the nearness of the local irritation to the vital organs. Such sources of irritation often causing hectic when situated in more remote parts of the system, they would be of small consequence: if you can remove the local cause of irritation, the hectic will subside. John Hunter takes notice of this fact, and I remember having seen several joints removed when the patients were in the last stage of hectic fever; the pulse has fallen from 120 down to 50 strokes a minute, and the patient has slept the first night without pain. I have seen patients brought into the operating-room fainting with disease, perhaps of the knee or some other joint, and the comfortable night which has succeeded the operation has confirmed the correctness of John Hunter's remarks.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), M.R.S., Physician to the Royal Infirmary for Children, &c. &c.

(Continued from p. 309.)

In my lecture to-day, gentlemen, I shall conclude what I have to say upon scrofula, in applying the general principles I have given you to the more important divisions I before made of scrofulous disorders. I cannot but feel I have detained you a long time upon our present subject, but its great importance is my best apology for having done so.

Suppose a scrofulous child is brought to you, evincing both by the *artistic* characters and such local signs as enlargement of the lymphatic glands, chronic eczema, &c., that it is scrofulous, but yet not presenting evidences of tuberculous deposit or active inflammation anywhere, you have to find out if the little patient be living in a great town and wants the hygienic influences I have already recommended. If so, the child is, if possible, to be removed to the country and at once put under them. If this removal cannot be accomplished, you must make the best shift you can in the place it lives in. The bowels are to be gently relieved by the use of rhubarb and soda, or, if the dejections be very pale or there is hepatic fulness, a small dose of hyd. c. creta or calomel may be added to the former for two alternate nights, the belly being rubbed with a turpentine or stimulant embrocation; sometimes you will have to follow the above with *castor oil* in the morning. If there is not much debility, the iodide of potassium is to be given alone; if the reverse, combined with quinine, and these in doses graduated to the age. In infants, weaning the child and giving it the wine of iron, will sometimes be the best. In girls between ten and fourteen, if there be much pallor of the face, the sesquioxide of iron in teaspoonful doses may be administered twice a day in treacle. In some

cases, where the cutaneous surface is affected, I have found that the bichloride of mercury in the compound tincture of cinchona will cure that in which the iodide has been unavailing; the dose will vary from one-sixteenth of a grain to one-eighth, three times a day. If the bowels become irritable under this agent, you must suspend it and give a mild narcotic and foment the belly. Very often, during the period in which such a child is under treatment for scrofula, *remittent fever* or some form of *stomatitis* makes its appearance; you must then suspend your present remedies, and give the nitrate of potass or some other saline; and, if *stomatitis* is present with the former, you will find nothing so useful as the chlorate of potassa, and borax locally employed to the oral cavity. For children weak in the loins, &c., recommend the dashing at first of tepid salt water, then of cold, forcibly over the lower portion of the body, and the frequent use of stimulating embrocations. Of the proper diet, &c., I have already amply spoken; of any local measures to be adopted to swollen glands, skin eruptions, I shall speak of presently.

Suppose you have to deal with a scrofulous child in whom there is tuberculous deposit and its changes going on, or there is an advanced state of the disease of the cancellated tissue of the osseous system. You have now to call into requisition not only great judgment in treating the constitutional disorder, but also in mitigating the local affection, which of itself is often sufficient to produce the death of the patient, and in fact, in some cases, we can alone pay attention to the local manifestations: so important and urgent do they become in spite of what may be said of never losing sight of the diathesis producing them. The general symptoms we have to attend to are additions only, to those we are endeavouring to combat when tubercular deposit has not ensued, viz., emaciation, debility, and fever: for let tuberculization in any visceral organ progress, or disease of the bones make way, and we shall have *hectic* with all its attendant train of phenomena. The same hygienic principles are here, of course, to be enforced as before; but unfortunately, in the more advanced stages of the disorder, neither the stomach will bear the food or the appetite demand it, nor will the bodily powers permit of that exposure to air, &c., which otherwise would be so recommendable. Whatever organ indicates there is tuberculous disease going on, I know of no symptom in the earlier stage prohibiting the iodide of potash, and quinine, save nausea and irritability of the stomach; and therefore you may follow the treatment before recommended. Magnesia and hydrocyanic acid in cinnamon or caraway water, or in infusion of calumba, may be employed to mitigate the latter troubles; and the addition of a mustard poultice to the epigastrium, or the use of a strong embrocation there, will be useful resources. If the *meninges* be the structures attacked, the quinine should be omitted, and small doses of iodine given with the iodide of potash; the head being shaved, rubbed well with the compound iodine ointment, blisters applied over the mastoid processes, and the bowels freely opened. In this form of the disorder the *iodides of mercury* have been considered by some to be of considerable service. If the peritoneum or mesenteric glands be attacked, foment the belly well, have it rubbed with the compound iodine ointment, and give the iodide internally. Often iron will be very useful here. The state of the bowels—very various in this form of the disease—will indicate other therapeutic measures to be adopted. When the joints or spine are involved, the iodide, with quinine or iron, are the internal agents to be adopted.

In tuberculosis, when advanced, the treatment of particular symptoms becomes very important; and whether the disorder takes on the acute, chronic, or latent type requires to be considered. I cannot agree with those who state that in acute tuberculosis, or when hectic commences in the very early stages, loss of blood is advisable. I am aware some high authorities support this doctrine, as for instance Sir. J. Clark, Rilliet, and Barthez, but I think the more direct and powerful antifebrile measures, such as antimony, nitre, &c., are the utmost that we can fall back upon; and I may tell you that *antimony* has a very powerful, depressing effect on a child. To check diarrhœa, chalk mixture with aromatic confection and tincture of catechu, or mucilage with the acetate of lead, may be given even to very young children. In many cases you must give them opium, but of course in carefully regulated doses.

The *acetate of lead* often has the power of checking the perspirations as well as the diarrhœa; but the former, when the bowels are not too irritable, may be treated with the mineral acids and a sedative.

The next group of cases I have to allude to are those in which intercurrent attacks of inflammation take place in the course of the tuberculous malady. These attacks may involve the tuberculous organ, or another not so affected. You must remember that when inflammation invades an organ already having tubercles deposited in it, or when it attacks, we will say, the peritoneum, the deposit being in another structure, you have two elements to deal with—the one the inflammatory, the other the tubercular. In all individuals these two elements are not in an equal ratio: for in some the inflammatory action follows much the course of a primitive inflammation—the tubercular being only *presumed* to exist; whilst in other cases there is no doubt about the tuberculosis, and the inflammation is of a chronic or, if I may so call it, of a very unobtrusive character. Whether the peritoneum, meninges, &c., suffer an intercurrent inflammatory attack, general bleeding is not to be had recourse to: for admitting that the inflammation might, in some instances, be reduced, the increased debility arising from the loss of blood would still further promote the progress of the tubercular malady. In such cases, too, as where the meninges are involved, all the bleeding possible would not put a stop to the local circulatory excitement. Loss of blood, by cupping in older children, by a leech or leeches in younger, is the only proper way of diminishing the amount, &c., of the circulating fluid, when such is needed. In these cases blistering is often exceedingly apposite, if the child be not very young; otherwise mustard poultices and stimulating liniments are to be employed, or friction with the compound iodine ointment.

Such are the principles which are to guide you in the more constitutional treatment of the great groups of scrofulous disorders, but which I shall speak of more fully when I touch upon the particular maladies themselves.

A very great importance attaches, in my opinion, to the *local* treatment of some of the varieties of scrofula, inasmuch as, by a judicious application of remedial agents to the parts affected, the constitutional powers, which we are attempting to influence at the same time by general measures, are much assisted in bringing about a cure of the local affection.

In all cases of glandular enlargements, or indurations of the cellular tissue, there is no necessity—on the contrary, the reverse—that the suppuration of such should be enticed or hastened, as is often desirable when such enlargements occur in a different constitution. If the enlargements are small in size, and not firmly adherent one gland with another, or with consolidated cellular tissue, it is better to leave them entirely alone whilst the system is being affected with internal remedies. If, on the other hand, the glands are hard, consolidated, and much enlarged, but not presenting external appearances of much inflammation, you can do nothing better than rub in the compound iodine ointment, night and morning. Whether the patient be two or fourteen years of age, this ointment best answers the purpose. I never find it too strong for the youngest children, if not rubbed in too vehemently and roughly; but of course according to the natural delicacy of the skin, so will be the degree of external irritation it produces: sometimes that is considerable, at others nothing at all. If the glandular enlargement is very tender to the touch, red upon its surface, or soft towards the centre, poultices should be applied for a short time, when, if the irritation subsides, the previous treatment is to be adopted. If, however, it continues, or the part becomes redder, more tender, and softer at the centre, the poultices are to be continued, and matter evacuated when any quantity has been formed. The latter advice applies to abscesses generally; in the scrofulous constitution, never allow matter to accumulate—never think of its removal by absorption. After the collection has been opened at its most depending portion by the knife, not caustic, continue the poultice for a day or so, and then use warm-water dressing, the lint having a few drops of the tincture of hyoscyamus or hemlock put upon it if there be much irritation. Do not continue warm applications too long—you will debilitate the part; and you will find a lotion made of the sulphate of zinc in rosewater much better.

The edges of the wounds, or the sinusses which may form, are often materially benefited by painting them with the tincture of iodine, but lotions of the sulphate of zinc, of copper, or the nitrate of silver, will do much to ensure their healing; when practicable, a compress dipped in the lotion, and applied with a bandage to effect pressure, is very useful. I would recommend you not to use the so-called evaporating lotions to these affections, and I cannot say I have seen that advantage from salt and water which some persons state they have.

In the chronic affections of the cutaneous surface, while internal treatment is being adopted, lotions of zinc, copper, or silver, painting the part with the tincture of iodine, after incrustations have been removed by poultices, &c., or applying the solid nitrate of silver, will generally answer the purpose desired. But these affections, under any treatment, you know well enough, are often exceedingly obstinate to cure.

In inflammation of the mucous membranes stimulating and astringent lotions are better than anything else. Those of the metals I have before spoken of answer very well, and may be applied to the eye, snuffed up the nose, and injected into passages, as the case requires. I have found a lotion of the tincture of the sesquichloride of iron very serviceable in the chronic vaginitis of female children.

Whilst you employ the lotion to the eye in conjunctivitis, you will find that a blister placed behind the ear will facilitate the cure; and you must not allow the patient to be kept in a dark chamber, or wear a large shade. Sometimes the nitrate of mercury ointment with triple its quantity of lard, so as to make it equal to the diluted ointment of the Edinburgh Pharmacopœia, may be placed between the eyelids on going to rest. If there is inflammation of the Schneiderian membrane, which keeps up the irritation in the visual apparatus, the former must be subdued by the application of one or other of the lotions I before recommended.

In *otitis* poultices to the ear, or blisters behind it, with gentle injection of tepid water, are most serviceable. I do not much like attempting to put a stop to the discharge by astringent or stimulating injections here.

In cases in which disease is going on in one of the visceral or internal structures, the compound iodine ointment is to be freely rubbed over the part. It may be applied to the shaven scalp, abdomen, chest, between the shoulder blades, or applications of turpentine, mustard, &c., may be now and then advantageously employed, as also warm sedative poultices and fomentations.

If you have a case of disease of the knee joint to attend to, take care that you lose no time in attacking it. At first blister the part on each side alternately, beginning a little lower down than the centre of the patella, by means of the strong solution of iodine I have before recommended; you may, if you like, use the solid nitrate of silver to effect this purpose. But I think you will find the other very advantageous. In a case

which I am at present attending, and which has the advantage of the advice of Mr. Liston, this application has been found of great avail in allaying the pain and swelling of the joint, and, I believe, that eminent surgeon has had much experience in its use. This treatment should be continued for a fortnight, and during the time the patient is to be confined to the sofa, a pasteboard splint being placed beneath the joint so as to prevent motion of it. Afterwards wash it well with soap and water; cover it with soap cerate, and apply pressure by strapping and bandages. Then apply lateral leather splints so as to keep the joint immovable, and send the child out into the open air to hobble about with a stick.

If the disease continue to progress, inflammation externally making its appearance, and matter forming, the pressure must be ceased, and poultices applied. The matter should be evacuated by a small puncture. As long as *much* discharge takes place, or the integuments keep inflamed, the poultice or warm-water dressing is to be continued; but as soon as they diminish, gentle pressure is to be again had recourse to. If you are fortunate, even after the disease has made great progress, a cure may be accomplished by means of anchylosis; if not, measures must be adopted which do not become me to dwell upon, and for them I must refer you to authorities definitely surgical in their character.

In disease of the spine the counterirritation of caustic issues, I think, you will find the better mode of answering some of the indications, as, also, in disease of the bones of the hip-joint. In all cases of disease of the cancellated tissue of bone the lungs should be carefully examined, since in those cases demanding the severest form of surgical interference much will depend upon the state of these organs as to whether it can be adopted.

DUMAS ON ORGANIC CHEMISTRY. No. XXIII.

(Continued from page 290.)

INTESTINAL GASES.

Commencing the examination of the intestinal gases with those which exist in the stomach, we here usually find mere air, which the animal swallows during deglutition; but, in a short time, a portion of the oxygen of this air is absorbed, and in the small intestine we find the nitrogen alone, to which are subsequently added carbonic acid, hydrogen, carburetted gas, and remarkable quantities of sulphuretted hydrogen. In the normal state, that is to say, in the sound animal, the intestinal gases are never very abundant; but their quantity augments greatly under weak digestions. The kind of food has a great influence over the production of these gases, which always arise, in the small intestine, from the spontaneous decomposition of the aliments. If leguminous substances be eaten, which contain a large quantity of sulphuretted matters, we shall quickly find an abundant production of sulphuretted hydrogen in the intestine.

The digestive tube of the living fœtus contains no gas.

Below are some analyses published by MM. Chevreul and Magendie, giving the constitution of the gases contained in the intestines of four executed criminals.

1. The digestive tube of a young man, twenty-four years of age, who had taken, two hours before his execution, some bread and cheese with water, contained :—

	Stomach.	Small intestine.	Large intestine.	
Oxygen	11·00	0·00	0·00	
Carbonic acid	14·00	24·39	43·50	
Hydrogen	3·55	53·33	4·47	with traces of sulphuretted hydrogen.
Nitrogen....	71·45	20·08	52·03	
	100·00	97·80	100·00	

2. The intestine of a young man, twenty-three years old, who had made the same repas as the preceding, contained :—

Stomach.	Small intestine.	Large intestine.	
bubble of gas, which could not be examined.			
Carbonic acid	40·00	70·00	
Hydrogen gas	51·15	11·60	with carburetted hydrogen.
Nitrogen	8·85	18·40	
	100·00	100·00	

3. Lastly, in the viscera of a subject, twenty-eight years of age, who, four hours before his death, had eaten some bread, boiled beef, and vegetables, and had drunk a little wine, there were found :—

	Small intestine.	Cœcum.	Rectum.
Carbonic acid	25·00	12·50	42·86
Hydrogen gas..........	8·40	7·50	0·00
Carburetted hydrogen ..	0·00	12·50	11·18
Nitrogen	66·60	67·50	45·96
	100·00	100·00	100·00

Professor Jurine affirms that the quantity of carbonic acid is greater in the stomach and small intestine than in the large intestine, and, on the contrary, that the latter contains more nitrogen than the small intestine and stomach—a result which does not altogether accord with the experiments of MM. Magendie and Chevreul. The observations of Jurine were made upon the body of an idiot who was frozen to death, and opened immediately afterwards.

Vauquelin analyzed the gases arising from some diseased animals, when dead; they contained a large quantity of carbonic acid, carburetted hydrogen, sulphuretted hydrogen, and a slight quantity of air.

If cows are suffered to graze in damp clover fields, we often see them quickly swell up, or even die, unless immediate aid be afforded. This disease, which is known by the name of meteorization, has been closely investigated by MM. Lameyran and Frémy, as well as by M. Plüger. It seems to be invariably due to a large development of gas which takes place in the stomach of these animals.

MM. Lameyran and Frémy analyzed the gases, which they procured by puncturing a cow in an extreme state of meteorization. The following was their composition :—

Sulphuretted hydrogen	80
Carburetted hydrogen	15
Carbonic acid..	5
	100

Should the gases accumulated in the intestine present the foregoing composition, we have recourse, for the relief of the animal, to caustic ammonia mixed with water. A drachm of ammonia and four ounces of water are sufficient for this purpose.

M. Plüger also examined the gases derived from two meteorized cows. They exhaled a tainted odour, but did not contain sulphuretted hydrogen. Three fifths of the gas contained in the stomach of one of these cows were absorbed by lime-water, which was rendered cloudy; the remaining portion was composed of oxide of carbon. With the second cow, one fifth of the gas only was absorbed, the remainder being in like manner formed of oxide of carbon. We can at once understand that, in such a case as this, we must have recourse to puncture, as the only means of relieving the animal.

MILK.

We have already given a history of the principal materials composing the milk, and we have found this secretion in the herbivora to be characterized by the presence—1, of caseine; 2, of the fatty matters which constitute butter; 3, of a saccharine matter; 4, of a certain quantity of salts, variable under many circumstances. Let us now consider this fluid in its general characters.

Viewed as the chief aliment of young animals milk has deservedly attracted the attention of physiologists; it, in fact, constitutes the most perfect food, since it suffices for the development of the animal, by furnishing to it organizable azotized matters capable of producing all the tissues of the economy: the calorific aliments, as butter and sugar, and, also, the salts necessary for the development of the osseous frame.

But the interest which attaches itself to the study of the milk augments still more, should we seek to give an account of its production, in whatever point of view this may be presented to us. The milk is secreted by the teats of the female mammifera, towards the end of gestation and after the birth of the young. It is an opaque liquid of a characteristic pure white; when healthy, it is constituted of a solution of caseine, lactose, and salts, in which float isolated and perfectly circular globules of fatty matter; it forms a true homogeneous emulsion, very liquid and mobile. These globules of fatty matter do not present a constant diameter even in the same milk; with much greater reason, therefore, will they be found to vary in the different species of animals. This diameter has wide limits; still we may admit, as a mean calculation, that it is comprised between one and three hundredths of millimètre for most kinds of milk. The globules of the milk in the human female are, in general, according to M. Simon, larger than those in the milk of the cow.

Two very different opinions have been promulgated as to the physical constitution of the fatty globules of the milk. Some physiologists suppose that the fatty matter is enclosed in an albuminous cellular envelope, analogous to the membranes of the adipose tissues. MM. Raspail, Henle, and F. Simon are of this opinion. Others believe that the fatty globules float perfectly free in the milk, similar to what occurs in emulsions.

This latter opinion is founded on the fact that, in the operation of churning, some time before the complete separation of the masses of the butter, we see the globules run one into another, and, in proportion as the operation advances, these give birth to still larger globules, which eventually form broad layers of fatty matter. Another circumstance is cited in support of this view: when we inject milk into the blood of an animal we may, by means of the microscope, readily distinguish the globules of milk from those of the blood into which it is injected; after a few hours, the former are found to run together in greater or less number, and over them a gelatinous membrane is formed, which eventually becomes very visible, from the circumstance of its having a refractive power different to that of the liquid mass itself. Now, M. Ascherson has observed, that, when we drop a little oil into any albuminous liquid, the oleaginous particles are quickly surrounded by a species of membrane of this kind.

But if the ready agglomeration of the globules of the butter, under the influence of churning or under that of the circulation, tends to make us regard them as deprived of all covering, there are other considerations which lead to a totally opposite conclusion. In fact, if the fatty globules which float in the milk were free, we should have merely to agitate the milk with ether to separate them from it; but nothing of this kind occurs; and, after even a prolonged agitation with this fluid, we find the milk remain perfectly opaque. If, however, we add to the milk a few drops of concentrated acetic acid, and then carry the mixture to the boiling point, so as to dissolve all the caseum which it may contain, we quickly see the globules of butter enlarge, as though several of them became joined together to constitute these great fatty drops. Moreover, the liquor, if now agitated with ether, becomes deprived of the whole of its butter. In addition to this character, which in itself leaves but little doubt as to the existence of an envelope around each globule of the butter, we may cite the effect observed on adding to the milk a saturated solution of sulphate of soda or of chloride of sodium. These neutral salts give to it the power of filtering, by leaving on the strainer the whole of the fatty globules, whilst the soluble caseum, the sugar of the milk, and the salts pass through in the clear solution.

Without affirming such a thing to be impossible, I may state that I have not yet been able to deprive the butter, left on the filtor, of the whole of its caseous matter, by prolonged washings in saline water—a fact which would accord with the supposition of the existence of an envelope around the fatty globules.

Authors are not agreed as to the reaction which is presented by fresh milk, when brought into contact with litmus-paper. It appears that the milk, which is alkaline at the moment when is withdrawn, may become acid in the air, in a very short time. D'Arcet and Petit have found it sometimes alkaline, and at other times acid, in the cow; it is alkaline when the cows are at pasture: acid, when they are kept on dry fodder in the stable. The milk in the human female is always very alkaline, and it appears to preserve this property so much longer, as it proceeds from a sound and vigorous woman; it quickly acquires in the air an acid reaction, when derived from unhealthy women.

The milk of the ass, when recently drawn, should, according to M. Peligot, be acid; according to other observers, it is alkaline; in all cases it becomes so, when we administer bicarbonate of soda to the animal. When left in the air for some time, the milk invariably becomes acid; this acidity is due to the spontaneous formation of a little lactic acid.

The density of milk is variable: that of cow's milk most frequently ranges between 1·030 and 1·032. The following is the density of various milks, as calculated by Brisson:—

Woman	1·0203
Mare	1·0346
Ass	1·0355
Goat	1·0341
Ewe	1·0409
Cow	1·0321

It is a very difficult matter to give the mean of density for a liquid, which may be modified by so many circumstances; in fact, we have merely to call to mind that the fatty substances are lighter than water, while the solutions of salts and of saccharine or caseous matters are heavier, to understand that the density of the milk may vary according as its richness in butter, in caseine, or in salts, augments or diminishes, and that it may remain stationary in spite of considerable changes, if the soluble products diminish at the same time as the butter, or *vice versâ*.

When subjected to ebullition, milk does not coagulate; it becomes covered over with membraneous pellicles, which may be readily removed, and which constitute the cream.

We shall shortly see under what circumstances it is that fresh milk becomes coagulated. In a chemical point of view, milk presents an admixture of all the properties which belong to the organic matters which enter into its constitution; it would therefore be useless to dwell any longer upon this point. All the acids coagulate milk, by precipitating the caseine, which draws with it the fatty matter; such is the mode of action of acetic, lactic, hydrochloric, and sulphuric acids, &c.; we have merely to heat the milk to about 75° C., to effect this change. A few drops of acid are often sufficient to coagulate a considerable quantity of milk.

The milk of the human female, which, as we have already stated, is distinguished by a very marked alkalinity, presents to us in this regard a peculiarity which is offered by none of the other milks hitherto examined. In fact, when we wish to coagulate the milk of woman, we must commence by mixing it with half of its volume of alcohol, and afterwards add to it a few drops of sulphuric acid; without these precautions, it simply acquires a peculiar viscous condition, different to what it previously possessed.

When left to itself in a suitable cool place, milk, after the lapse of about twenty-four hours, separates into two distinct layers: the first, which we denominate *cream*, floats on the surface; the second has received the name of skimmed milk. The fatty globules, being specifically lighter than the liquid on which they float, are collected together at the upper part of the milk, and these constitute the layer of cream, which has a beautiful yellow colour, and which is principally composed of the fatty matter; this layer eventually becomes more and more homogeneous, in proportion as the greater part of the serum separates from it. This latter, however, still retains a considerable quantity of butyrous matter.

If preserved for a still longer time, milk finally becomes strongly acid, and coagulates. This phenomenon is due to the spontaneous production of a certain quantity of lactic acid, which reacts on the caseine and precipitates it entirely. Lactic acid is invariably produced as the result of a special fermentation, which MM. Boutron and E. Frémy have recently studied with great care.

This property of milk is then referrible to the varied phenomena of fermentation. M. Gay-Lussac has, in fact, shown that, as in the fermentation of the juice of the grape the air intervenes by exciting the formation of the alcoholic ferment, so, also, does it aid in the formation of the ferment which produces lactic acid. We may, in fact, preserve milk for several months, if it be boiled every day; in this manner we drive away the air which it may have absorbed and so prevent its coagulation.

D'Arcet has endeavoured to retard the coagulation of milk, which is consumed so largely in Paris, and which is especially liable to this change in summer; he advises the addition should it have to be transported any distance, of 1-2000th part of its weight of bicarbonate of soda the harmlessness of this salt permits its being employed to great advantage.

The spontaneous coagulation of the milk is owing to the lactic fermentation; but this quickly becomes in itself an obstacle to its continuance and, should we wish this fermentation to persist, we must neutralize by bicarbonate of soda the acid which is produced. This salt, by rendering the caseum soluble, disposes it to act as a lactic ferment. But, if we allow the acid reaction to continue, the fermentation assumes another character: we observe a disengagement of gas, and alcohol is produced.

We have long known that the Tartars convert mare's milk into a spirituous liquor, from which they extract alcohol by distillation. The following is the way in which they proceed:—The vessel in which the operation is effected is made of the untanned hide of the horse, but which has been thoroughly hardened by smoking. Its form is conical and somewhat triangular. It appears to be composed of three pieces attached to a circular base. It is into this species of bag that they introduce the milk which is to be acted on; the vessel is about three parts filled, and its orifice closed with a flat piece of leather. It is to be shaken several times in the day, and uncovered from time to time. After the lapse of a few days, the milk will have acquired a vinous odour and taste. The agitation is continued until the acidity has become very marked; before long, however, this sourness will be found to diminish; the liquor is then decanted to separate it from the pasty matter which is deposited, after which it is poured into other bags and used as wine.

This mode of proceeding is not the only one adopted by the inhabitants of the various countries of Tartary. Sometimes, they merely add a little sour milk to that in which they wish to excite the fermentative action; or else they pour fresh milk upon the *magma* which constitutes the residue of a previous fermentation; others, again, add to the milk some sour paste formed from the meal of barley or of oats.

Parmentier and Deyeux have examined the products of the spontaneous fermentation of the milk of the cow, and they have proved the alcoholic nature of this fermentation by collecting the carbonic acid and isolating the alcohol. Scheele had previously observed the disengagement of carbonic acid. Latterly, M. Hesse has been engaged in similar observations.

If we leave the alcoholic liquor in contact with the air, the fermentation again changes in nature: an absorption of oxygen takes place and we have formed acetic acid. Scheele had proposed to apply this property of milk to the manufacture of vinegar. By adding a spoonful of spirits of wine, containing fifty per cent. of alcohol, to the *litre* of fresh milk, we obtain, according to the above author, in the space of about a month, a liquor charged with acetic acid and free from lactic acid.

ORIGINAL CONTRIBUTIONS.

ON THE PHYSIOLOGICAL AND PATHOLOGICAL CAUSES OF SUDDEN DEATH IN CONNECTION WITH THE VASCULAR OR CIRCULATORY SYSTEM.

By M. W. HILLES, Esq.

(Continued from p. 194.)

It is not a little remarkable that rupture of the heart is an extremely rare occurrence. Although the term *broken* or *ruptured* heart is frequently to be met with in common conversation or in writing, there is no part of the vascular system less liable to be broken or ruptured than the heart. This term must be regarded, therefore, as without much foundation; and as a figurative expression, used by society to indicate disappointed feelings, the seat of which is supposed to be the heart, although it is quite unnecessary to state that few of the passions, &c.—referred to this origin—such as love, grief, hope, &c., have any relation to it whatever.

That the more acute passions or feelings of man do produce uneasy sensations referrible to the region of the heart cannot be questioned; but this arises from this organ being the centre of the circulation, and, therefore, most liable to be implicated in all derangements which may affect the regular flow of the vital fluid, disturbed through the sympathy which exists between the nervous and vascular systems—two of the great *vital centres*—in the former of which only the various passions can be supposed to reside.

Instances, however, of ruptured heart are not wanting; some very remarkable public characters have died from this disease: Philip V., of Spain, amongst others; George II., of King of England, and the Princess of Bruswick, one of his relatives. Talma, the celebrated French tragedian, also laboured under a disease of the heart, which would in all probability have ended in a very short time in death from rupture, had not another disease induced a more rapidly fatal termination.

The *sudden death* of George II., of England, is thus related:—(a)

'Smollett, in his 'History of England,' vol. v., p. 418 *et seq.*, thus writes:—

On the 25th day of October, 1760, George, King of Great Britain, without any previous disorder, was, in the morning early, seized with the agony of death at the Palace of Kensington.

"'He had risen at his usual hour, drank his chocolate, and inquired about the wind, as anxious for the arrival of the foreign mails; then he opened a window of his apartment, and, perceiving the weather was serene, declared he would walk in the garden. In a few minutes after this declaration, while he remained alone in his chamber, he fell down upon the floor; the noise of his fall brought his attendants into the room, who lifted him on his bed, when he desired, in a faint voice, that the Princess Amelia might be called; but, before she could reach the apartment, he had expired. An attempt was made to bleed him, but without effect, and, indeed, his malady was far beyond the reach of art: for, when the cavity of the thorax was opened, and inspected by the sergeant-surgeons, they found the right ventricle of the heart actually ruptured, and a great quantity of blood discharged into the pericardium, so that he must have died instantaneously, in conse-

(a) Elliotson's "Lectures on the Heart," p.

quence of this effusion. The case, however, was so extraordinary that we question whether there is such another instance on record. A rupture of this nature appears the more remarkable as it happened to a prince of healthy constitution, unaddicted to excess, and far advanced beyond that period of life when the blood might be supposed to flow with a dangerous impetuosity.' "

Dr. Smollett's remarks, as to there being no **similar case on record**, is the more remarkable, **as the Princess of Brunswick**, a near relative of **George II., died** of the same affection in the **year 1730; (a)** and several similar instances **are on record.**

Dr. Nicholls's account of the *post-mortem* **appearances** of George II. may not be uninteresting:—"The pericardium was found distended with a quantity of coagulated blood, **nearly sufficient** to fill a pint cup; and, upon removing this blood, a round orifice appeared in **the middle** of the upper side of the right ventricle of the heart, large enough to admit the extremity of the little finger. The ventricles were found devoid of blood, either in a fluid or coagulated state."

We may be allowed to remark on the great liability to disease of the heart which appears to have existed in most of the branches of the present Royal Family of England, transmitted to them from their ancestors of the House of Brunswick. Two instances of this have been just related, to which may be added the more recent cases of their Majesties George IV. and William IV., who both laboured under heart affections; his late Royal Highness the Duke of York, and some other members of the same family.

The hereditary predispostion to one particular disease is, doubtless, influenced by the intermarriages which have taken place between the different branches of the same family: a practice which, however justifiable on other grounds, is not sustained by the result of medical experience on the influence of such marriages, or the moral and physical character of individuals.

Of the various cavities of the heart, the *ventricles* are most obnoxious to rupture. This we are prepared to expect from the greater effort necessarily exerted by the ventricles in propelling the blood—the one, over the body; the other, through the pulmonic circulation. Although the thinness of the coats of the auricles might induce us to suppose that rupture should frequently occur in them, a reflection of their uses will at once lead to a different opinion: these being nearly limited to propelling the blood through the auriculo-ventricular openings into the respective ventricles. And, indeed, it may be well questioned, whether they are very active in this office, as the power of dilatation, which resides in the muscular parietes of the ventricles, is sufficient to cause the influx of blood into the interior, without any aid from the auricles.

The great delicacy, too, of the muscular fibres of the auricles points out that they can exert but little influence on the blood in filling the ventricles.

How it could be supposed by an intelligent being, that these fibres should produce the active pulsation, or stroke of the heart, felt beneath the nipple of the left breast, is, to say the least of it, most extraordinary; it is only to be regarded as one of the numerous visionary theories so constantly brought forward by the speculative geniuses of the continental schools.

Of the ventricles, the left is most frequently ruptured.

According to the celebrated Corvisart, rupture of the heart rarely occurs, except when this organ has been in a diseased state, "the affections which dispose to rupture being aneurisms, ulcerations, softening of the muscular fibres, and violent contusions of the organ."(b) To these may be added, fatty degeneration and calcareous deposits.

(a) "Morgagni de Causis et Sedibus Morborum," ep. xxviii. 7.

(b) "Dictionnaire des Sciences Medicales," p. 480.

The same authority(a) states, on the subject of the rapidity with which death ensues in cases of inflamed heart, "It is to be supposed that death is always the result of the effusion of blood which follows this accident; I must remark, however, that death, which is sudden in the greater number of cases, does not follow with equal promptitude in others. Many observations prove that it sometimes does not take place till the third or fourth day, because, no doubt, the blood escapes in such cases by a small or an oblique orifice, so that it flows slowly and in small quantity."

"Morgagni (lett. xliv., art. 15) relates a case of an old invalid who was seized with a violent pain, which seemed to ascend from his abdomen to the chest, accompanied with great difficulty of breathing, and convulsions. He died on the third day. On a *post-mortem* examination, three openings were found in the left ventricle."

The left auricle also appears more disposed to rupture than the right. Dr. Francis(b) relates a case of rupture of this auricle.

When rupture of the heart takes place, *sudden death* is almost invariably the result; in some cases immediately, in others, after the lapse of a few moments: the interval between the rupture and the decease of the individual depending on the size and shape of the ruptured opening. I use the words *almost invariably*, as, although there is no well authenticated case on record of a rupture of the heart not being followed by rapid death, I consider it quite possible for many days, or even weeks, to elapse from the date of the rupture to the period of the decease, where the opening is of small size; nay, that a recovery may take place.

This theory is supported by the fact of wounds of the heart not being so universally fatal, as was formerly imagined, being recently established by the celebrated Dupuytren, who relates (c) several cases of this description in which death was postponed for a considerable time, and some where the wound had healed without death ensuing from that cause.

In what manner is death induced in cases of ruptured heart?

It is generally supposed that death is caused in these cases by the sudden loss of blood, first inducing fainting, and subsequently death. But this opinion is not correct, as death must rather be ascribed to *an arrest of the heart's action, caused by the pressure of the blood poured out into the bag of the pericardium on this organ.*

That such was the cause of death in the case of George the Second, is apparent from the recovery of his senses after his fall, his gradual though rapid death, and lastly from the small quantity of blood found in the pericardium, "nearly sufficient to fill a pint cup."

From the resisting nature of the pericardium, it is impossible that a large quantity of blood should become extravasated into its interior, so as to induce death purely from the loss of so much fluid; much larger quantities are frequently lost without any serious results.

In the case of George the Second, the rupture was the right ventricle, which supplies the lungs and not the sensorium, so that the sudden loss of blood could not have affected this, except indirectly, though the general sympathy which exists between all parts of the body, or by the mode just stated.

The quantity of blood extravasated into the pericardium can rarely exceed the capacity of the cavities of the heart, as this organ when distended fills closely the pericardium, which, from its resisting structure, is incapable of much dilatation under the circumstances. Such was the fact in George the Second's case, the quantity of blood extravasated being "nearly a pint," or almost exactly the full quantity containable by the four cavities of the heart, estimating each of

(a) "Corvisart sur les Maladies du Cœur," p. 390.

(b) "Guy's Hospital Reports," April, 1845. "London Medical Gazette," 1845, p. 594.

(c) Second Ovales.

these to hold four ounces; but which is, I consider, rather more than they contain in the normal state.

How absurd the practice in his case! His medical attendant attempted to bleed him! How completely does his conduct support the observations made in a former paper as to the inutility and charlatanry of resorting to this practice in all cases of sudden death, so generally had recourse to, in obedience to vulgar prejudice, and justified on the grounds that "if it does no good, it can do no harm."

Rupture of the coronary arteries or veins is followed by similar symptoms and consequences; as the blood necessarily flows into the bag or cavity of the pericardium, life will be prolonged, most probably, until this is so distended as to interfere with and arrest the action of the heart.

As this diminution of the heart's action will have the effect of lessening the quantity of blood flowing from the ruptured vessel, the disease or accident has a tendency to work out a remedy for itself; but the *antagonism*, as it may be called, thus necessary to the production of the reparative processes, is too violent, and engages too important a part of the vital system, to permit of its continuance for a sufficient length of time. Death, therefore, ensues before Nature can make any serious attempt towards recovery.

Rupture of the arteries, especially the larger, is of much more frequent occurrence than that of the heart although death from rupture of the artery and subsequent loss of blood takes place in only a very small proportion of aneurismal cases. This is owing to the conservative powers of Nature, which, by engaging the various tissues in the immediate neighbourhood of the tumour, in the formation of the aneurismal sac, as this progresses to the surface, prevents the death of the individual for a considerable time. It more frequently occurs that the patient is exhausted by his sufferings before the aneurismal tumour is likely to burst, and dies rather from debility than from loss of blood, particularly where the aneurismal tumour forms in one or other of the cavities of the body in the neighbourhood of organs important to life.

Sudden death from loss of blood in such cases is by no means rare; numerous instances are on record of aneurismal tumours bursting into the œsophagus, stomach, intestines, &c., thereby inducing an immediately fatal termination.

Aneurisms of the first portions of the aorta may burst into the pericardium; aneurisms of the remaining portions of the arch and of the thoracic aorta burst into the œsophagus, trachea, bronchial tubes, lungs, cavities of the pleura, &c.; aneurisms of the large abdominal arteries frequently burst into the hollow viscera. In all these cases death is induced by the sudden loss of blood, which may be poured out externally or not, according to circumstances.

Aneurismal tumours formed on the cerebral cavity prove fatal by inducing pressure on the nervous structure, either by means of the tumour itself or in consequence of the bursting of this, and the subsequent effusion of blood.

The quantity of blood effused in such cases rarely exceeds a few ounces, as the escape of a larger quantity is evidently incompatible with the continuance of life—this being necessarily suspended by the undue pressure of this fluid on the sensorium.

In few situations can even so much blood be poured out without causing death. In the lateral ventricles—into the substance or on the surface of the lateral hemispheres—a considerable quantity of blood may be effused without compromising the life of the individual, but in no other situation. A small quantity of blood effused into the cerebellum, the base of the brain about the pons Varolii, or medulla oblongata, proves rapidly, and in most cases immediately, fatal. Effusions from rupture of the basilar artery in the immediate neighbourhood of the pons Varolii are especially fatal, as the effused blood presses directly on the ascending and descending fibres of the cerebral mass, so as to at once cut off the currents of nervous in-

fluence in their course to or from the great cavities of nervous energy. So also in cases of effusion about the medulla oblongata, as some of the principal nerves destined to the support of organic life, and the respiratory function, proceed from this situation, namely, the par vagum and glosso-pharyngeal, and a little more inferiorly the spinal accessory, the phrenic and inferior external respiratory, all of which become paralysed from the pressure induced by the effused blood in the cerebral or spinal osseous cavities.

In these situations Nature is unable to adopt any of those conservative measures so frequently resorted to elsewhere, in consequence of the absence of cellular father-tissues, so favourable to such processes, and the presence of the resisting bony structures which immediately surround the organs affected. The cerebral mass itself, being but little disposed to the adhesive inflammation, cannot aid in such reparative processes, and is further prevented from doing so by the peculiar nature of its functions, which would cease to continue under the change of structure necessary to establish a cure. In ruptures, therefore, in these situations, death is induced, not by loss of blood, but by the destruction of the functions of one of the great centres of life, namely, *the nervous system*.

Aneurismal tumours of the extremities rarely prove *suddenly* fatal, and do not therefore belong to our present subject.

Rupture of any portion of the venous system rarely occurs; instances, however, are on record of rupture of the vena cava, vena azygos, vena portæ, and other large veins, inducing sudden cessation of life. A much larger quantity of blood may be lost from the venous than from the arterial system without inducing death.

We shall next consider the causes of sudden death in connection with the nervous system.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of June 7; M. BRONGNIART in the Chair.

INFLUENCE OF ATMOSPHERIC ELECTRICITY ON THE SYSTEM. BY M. PALLAS.—M. Pallas, chief physician of the army in Africa, asserts that the greater number of diseases, particularly "neuroses," are due to the influence of diffused electricity, the principal sources of which are thunder-clouds and marshy soils. By their geographical constitution, and their effects upon the human organism, marshes (says M. Pallas) present the closest analogy with the galvanic battery. Their deleterious effects are formidable in exact proportion with the quantity of saline or organic matter contained in the waters; and observation proves that diseases developed by the influence of marshy emanations are at first of a nervous nature: hence one of the methods which will be most efficient in preventing intermittent fever and neurosis must be electrical isolation of chairs, beds, and tables from the soil by glass supporters.

RESPIRATION DURING INSENSIBILITY PRODUCED BY ETHER.—M. Ville and M. Blandin forwarded to the institute the results of their researches on the effects of ethereal inhalations. During complete insensibility, these gentlemen have observed that *more* carbonic acid is evolved from the lungs than in the natural state.

A NEW METHOD OF DRESSING WOUNDS AFTER OPERATION. BY M. BAUDENS.—This method consists in the application of a circular band above the wound, which is united by the agency of a long and thick cotton thread fixed in front, and at the back by a pin attached to the circular band. The pressure of the cotton is soft and equal, the intervals, intercepted by the loops, permit an easy escape of suppuration, and, by the continued straining on the circular bandage, the muscular structures are forced downwards towards the stump, the conicity of which is thus prevented.

Meeting adjourned at five.

ACADEMY OF MEDICINE.

Meeting of June 8; M. BEGIN in the Chair.

ALBUMINOUS URINE.

M. Bouillaud stated, as a fact hitherto unobserved, that when a blister was placed on a surface which had been cupped a short time before, the urine became albuminous during twenty-four hours.

M. Moreau observed that albuminous urine was met with in very numerous circumstances. It was frequent during pregnancy, and constant in the convulsions which sometimes attend parturition.

M. Roger reminded the academy that the fact noticed by M. Bouillaud had been two years ago pointed out in a memoir on cantharidian cystitis, read to the institute by M. Morel.

M. Martin Solon had very often found accidentally albumen in the urine; but it was only in Bright's kidney that it was intimately combined with the renal secretion.

M. Orfila read the first part of a paper on "Some Points connected with Poisoning by Preparations of Lead, Copper, Arsenic, and Mercury."

In this first part M. Orfila endeavoured to solve the three following problems:—1. Do copper and lead constantly exist in the healthy human body? 2. If they do—is it possible to distinguish the natural or physiological copper and lead from those substances when they have been introduced into the system as toxic agents? 3. Is the presence of lead demonstrated beyond a doubt in the organs of persons affected with saturnine intoxication?

In answer to the first question, M. Orfila remarked that the existence of copper and lead in the healthy organs was admitted by M. Serzeau, by M. Hervy, and by M. Devargie, but denied by MM. Flaudin and Danger. Since eight years M. Orfila had instituted researches on this point, and had constantly succeeded in demonstrating the presence of copper in the liver of man. The mode of extraction was very simple: the liver should first be carbonized in a china capsule with the lamp of Berzélius; the charcoal should then be incinerated in closed tubes, receiving a draught of atmospheric air; the ashes, washed in boiling water for the purpose of removing some saline compounds, should then be submitted to the action of boiling diluted nitro-muriatic acid, which would dissolve the physiological copper. The produce of the evaporated fluid might then be readily dissolved in water acidulated with muriatic acid, and a piece of metallic iron would cause immediate deposition of the copper. As to the possibility of distinguishing the natural copper or lead from the same substances introduced into the system as toxic agents, the learned professor stated, that in the latter case the metals might always be extracted readily by the action of boiling water, or of boiling water acidulated with acetic acid—a method which always proved insufficient for the extraction of the copper or lead which enters naturally into the composition of the healthy organs. M. Orfila had examined chemically two livers, and the cerebrum of persons who had died from the results of saturnine intoxication, and had demonstrated the existence of the lead by the method which leads him to the detection of the presence of these metals in the bodies of poisoned persons

HEREDITARY TRANSMISSION OF INSANITY.

A report by M. Royer Collard was read on a paper of M. Baillarger, entitled "Statistics on Hereditary Insanity." The conclusions which M. Baillarger had come to were the following:—Mental derangement is more easily transmitted from the female than from the male parent; it is more frequent, and is propagated to a greater number of children. The madness of a mother is more to be feared for her daughters than for her sons; madness of a father, on the contrary, is more readily handed down to the sons. Maternal insanity is not transmissible to sons in a greater degree than madness of a father; it is, on the contrary, more to be feared for daughters.

The reporter expressed the approval of these doctrines by the commission, and moved the thanks of the academy to the author. The report was adopted.

Meeting adjourned at half-past four P.M.

ETHEREAL INHALATION IN CEREBRO-SPINAL MENINGITIS.—At the beginning of the present year an epidemic prevailed amongst the troops of the division of Algiers, and its characters were those of cerebro-spinal meningitis: rigidity of the spinal cord, headache, intense pain in the spinal region, tetanic muscular convulsions, delirium, and coma were observed in all cases, the greater part of which proved fatal. M. Besseron, physician of the Hospital of Mustapha, had recourse to ethereal inhalations, repeated every hour—and even oftener in severe cases. The first effect of the inhalation was to increase the frequency of circulation and of respiration—but only for a few moments; a marked sedation of both these functions being the ultimate result of this method. In the space of twenty-five days nine men were submitted to this treatment: two died, five recovered completely, one was still in a doubtful state, and the ninth was passing from the acute into the chronic form of the malady.

EXCISION OF DISEASED BONE.—M. Larghi, surgeon of the Hospital of Verceil, founding his practice on the acknowledged functions of the periosteum, deprecates generally the excision of bones as it is at the present day performed, and recommends the preservation of the periosteum for the purpose of reproduction of that part which disease has rendered it necessary to remove. The periostic envelope of necrosis is generally thickened, and attached by weak adhesions to the affected parts, from which it can readily be separated. In most cases, therefore, it is sufficient, according to Dr. Larghi, to make an incision of the soft parts down to the bone, to open the periosteum, to separate the latter from the bone by passing a piece of tape between them, and then to divide the denuded osseous structure, which will afterwards be replaced by nature. M. Larghi illustrates his views by referring to resection of the ribs. This operation was for the first time performed in 1813, by Cittadini, of Arezzo. That distinguished surgeon operated on four occasions, in three of which the pleura was perforated, and in the fourth frightful hemorrhage occurred, and was arrested only by the application of the actual cautery. These dangers, which M. Larghi attributes to the method employed, are certainly not to be despised, and are most probably the cause of the resection of ribs being so seldom performed. The operative process recommended by M. Larghi consists of simple incision of the skin down to the diseased rib, division of the periosteum, and extraction of the necrosis; the intercostal space is not opened, hence no danger of hæmorrhage, and certainly less danger of penetrating into the pleura. Also, and this advantage should not be lost sight of: the musular attachments to the periosteum are not sacrificed, and the space occupied by the bone preserves its natural shape. The operation, thus modified, appears to us both more simple and less perilous than when performed according to the ancient rules. M. Larghi has applied this method to a case of diseased ribs with the greatest success; in another case the greater part of the os humeri was removed, and the periosteum secreted a new bone; a portion of cubitus and part of the os ilii were also excised, and in the latter case lameness ceased after the operation.—*Gazette Médicale*.

THE NEW MEDICAL BILL IN FRANCE.—The debates in the Chamber of Peers on the new bill fill the columns of medical journals; all seem unanimous in applauding the decision of the House, by which a second class of medical practitioners, viz., *officiers de santé*, licentiates, &c., are abolished. M. Cousin supported the institution of *officiers de santé* with considerable but unsuccessful vigour. On this point the decision of the House is received with unqualified satisfaction by all, except, perhaps, the public executioner at Lyons, who is an *officier de santé*, in extensive practice. This fact speaks volumes

in itself against the institution, and would, no doubt, long since in England have raised an in surrection amongst those squeamish gentlemen who feel offended at the introduction of a pastry-cook into the profession. The principle of the *concours* for the nomination of professors will in all probability be adopted; advertisements of medical consultations, and of peculiar methods of treatment, are the object of a special clause in the bill: they are prohibited under a fine of £8 to £40. When sanctioned by the Chamber of Peers, the bill will have to undergo revision before another legislature, and will in all probability suffer considerable modifications before it comes finally into operation.

D. M'Carthy, D.M.P.

Nutritive Value of Food.—Dr. Christison remarks that the proportion of digestible principles in each article having been ascertained first, the whole of these may be arranged in two divisions, according as they are derived from vegetable or animal substances. And for the most part the nutritive power of dietaries may be valued by their relative abundance in animal proximate principles; because animal food abounds more than vegetable food in those which are nitrogenous. This method, however, is capable only of limited application to practice, for certain articles of animal food contain no nitrogen, such as fat, butter, and sugar of milk. But when duly limited it may be practicably applied with convenience to simple dietaries, such as those of the working classes of this country. The other method, which is theoretically more exact, arranges the whole digestible proximate principles, animal and vegetable indiscriminately, in two divisions, according as they contain nitrogen or not. An account is then taken of the quantity and proportion of all the leading constituents, nitrogenous and carboniferous, but especially the former.

The Importance of Milk as an Article of Diet.—It is common for practical men, says the same author, in enumerating the articles in a dietary, or in estimating the nutriment in the food of the labouring classes, to omit or undervalue the milk consumed by them, and to regard that fluid as little else than mere drink. But this is an error. Milk is really an article of solid food, being coagulated soon after reaching the stomach. As new milk contains on an average thirteen per cent. of digestible solids, and skimmed milk ten per cent., the former actually presents fully one half, and the latter above a third, of the nutriment contained in the lean part of beef and mutton; and of the nutritive solids more than a third in new milk, and above a half in skimmed milk, consisting of nitrogenous aliment. Hence, on scientific principles, milk must be a valuable article of food, especially when the food is composed otherwise of little else than farinaceous substances.

Causes of Scurvy.—Almost all observers ascribe this disease to some error in diet. At first it was ascribed solely to salted and ill preserved provisions. Subsequently it was found that other errors are equally effectual. Great importance has been attached by some to the mere want of sufficient fresh vegetables, whatever else the food may consist of. Others have seen the disease arise seemingly from a deficiency of salt. Others have traced it to mere scantiness of food. A very liquid diet has been thought another source. A diet too purely animal has been known apparently to act with great intensity. On the contrary, a diet too purely vegetable has been suspected to have had the same tendency. And it is now ascertained, from the history of the epidemic in the prison at Perth, that a diet too purely saccharo-farinaceous tends to engender scurvy; that it requires the aid, however, of some co-operating cause or causes, hitherto unascertained; that other causes, also not yet ascertained, may counteract its tendency; and that the use of milk will counteract it even when co-operating causes concur to develop its morbid influence.

Imperfect Vision from Irregular Refraction, with Night Blindness, remedied.—Dr. Hamilton, in "The Monthly Journal of Medical Science," relates the case of a coach-painter who had incomplete night-blindness, and in the day symptoms which were referable to some *irregular refraction* of the dioptric apparatus of the eye. On looking at a clock, if the hands pointed perpendicularly, he could not distinguish the hour, but if horizontally he experienced no difficulty. So with all lines, if horizontal, they were perceived correctly; if perpendicular, they were indistinguishable. From his earliest years the state of his vision has always been the same. A careful examination of the eye detected nothing abnormal. There was no pain in the eye, and no tendency to headache. The right eye was the more defective of the two. The case was seen by Dr. Allen Thompson, who repeatedly endeavoured to ascertain the comparative focal distance of the eyes in a vertical and horizontal direction with the head of a pin, and double hole in a card, and found in the left eye—the holes being horizontal—the image became single on one occasion at six inches, and another at from five and a half to six inches; and when the holes were placed vertically, on one occasion, at eight and a half inches, and on another at nine or nine and a half inches. Upon the right eye it was more difficult to make observations, owing to the degree of myopia: the relation, however, of the horizontal to the vertical focus appeared to be as $5\frac{1}{2}$ to $6\frac{1}{2}$ inches. Mr. John Adie, having had some experience in a somewhat similar case, was requested to try lenses of different foci, and, having by him some from two feet to eight inches in length, tried their effect, and found that they operated beneficially, and the weakest the most so, the cylindrical surface being made to act horizontally, or from side to side. The effect of this lens was to lessen the refractory power of the eye transversely, and probably to equalize the transverse curvature with the perpendicular one. Similar glasses for both eyes were fitted into a pair of spectacles, and the result was most beneficial results, the patient being able to see without impediment. the patient being able to see without impediment, and to follow his avocations with complete comfort and entire satisfaction.

The Contents of Encysted Growths.—These (says Dr. J. Bennett) are various, and give a peculiar character to them. They may be a perfectly colourless fluid, resembling water, or the limpid serum so frequently secreted in the lateral ventricles of the brain. It is structureless, and chemically contains a minute portion of salt, and a certain amount of albumen. The contained fluid may have an amber colour, and resemble the serum formed after the coagulation of the blood. It may be more or less gelatinous, sometimes slightly, and like weak gelatine; at others firm, capable of being cut with a knife, like calf's-foot jelly. Sometimes this matter is structureless, at others it may be seen to contain very delicate filaments, combined with pale oval bodies, the outlines of which become stronger on the addition of acetic acid. This kind is common in the ovary, and is sometimes found in the kidney and other organs. The cyst may be distended with epithelial scales, evidently thrown off from its internal surface, becoming compressed together and partially broken down. Hence, on examination, clusters of such scales may be found mixed with numerous debris, fat granules and globules, sometimes with crystals of cholesterine. The contents are usually of a white or slightly yellow colour, which is sometimes fluid, at others semi-solid. The *molluscum contagiosum* of dermatologists is thus constituted. Another kind consists principally of fat, either amorphous, crystallized, or organized—that is cellular. If amorphous, they resemble honey, constituting the *meliceroua* growths of morbid anatomists. Many encysted growths contain hair and teeth. The hair is occasionally inserted into the walls of the cyst, at other times it exists loose, mixed with the fatty or other contents. The teeth belong sometimes to the first and sometimes to the second dentition. Occasionally the cysts contain lymph, softened fibrine, and purulent matter, composed of plastic, pus, and compound granular cells, the result of exudation into their cavities. Sometimes the contents of the cystic growth are formed of a solid exudation which has undergone the sarcomatous transformation, and wholly consists of fusiform cells. This exudation may pass into the cancerous formation. Some cysts contain the peculiar secretion of the organ in which they are found: thus, cysts in the liver are full of bile, and those in the kidney of urine.

Vomiting in Phthisis.—Dr. Seymour affirms that vomiting, occurring almost always after cough in phthisis at an early period, marks a severe and rapid form of it; and at a late period that large collections of matter are locked up in the lungs. Against vomiting in this disease he recommends four grains of the extract of conium, to be taken twice or three times a day, followed by this draught:—Lime-water, one ounce; cinnamon-water, half an ounce; syrup, a drachm.

Ectropion.—Subcutaneous Incision.—A young man was admitted into the Hôtel Dieu, under the care of M. Blandin, with ectropion of the lower eyelid, caused by former abscess and exfoliation of the edge of the orbit. An attempt had been made to remedy the deformity by a blepharo-plastic operation, but had failed. M. Blandin operated a second time, by introducing a tenotomy knife, and dividing freely the adhesions which bound down the eyelid, passing the knife all round between the superficial parts and the periosteum. A small incision in the external angle of the eyelids was added, to render the eyelid more free. The whole eyelid was then drawn upwards, and fixed in its new position by a compress and strips of adhesive plaster. It was stated that great improvement was obtained by this proceeding, but that afterwards ectropion still existed to a slight extent.

Prosopalgia subsequent to Inflammation and Suppuration of the Lining Membrane of the Antrum of Highmore.—Willyk, of Toplitz, relates the case of a patient, when sixty-six years old, attacked, for the first time, with violent pain in the left superciliary arch, and less severely in the corresponding eyeball. The pain lasted for two years, commencing every day at 9 A.M., and ceasing at 2 P.M. Quinine afforded only transient relief. In the spring of 1844 the recurring pain extended to the right side of the face, on which side the alveolar process appeared to be its chief seat, the pain being at this time burning and lancinating. Antiphlogistics, locally applied, mitigated the pain; but now the right nostril became obstructed, and simultaneously there arose unusual lachrymation, increased sensibility to light, and a feeling as if the right superior maxillary bone were about to be torn asunder. A tooth, supposed to be the cause, was extracted, but without relief. At last, however, an offensive smell in the right nostril, a nauseous taste whenever the tongue touched the alveolar pit, and a fluctuating tumour on the hard palate, near the site of the extracted tooth, suggested the suspicion of suppuration in the antrum of Highmore. The diagnosis was rendered certain by the penetration of a probe, through the socket of the tooth, into the antrum. Appropriate injections were employed for several months, with the effect of rendering the fluid discharged from the nose completely odourless, when the pains altogether ceased.

New Instrument for Applying Pressure to the Femoral Artery in Popliteal Aneurism.—Dr. M'Crae, surgeon to the Sydney Infirmary, gives an account in "The Australian Medical Journal" of an apparatus which he has used with success for the cure of aneurism by compression. In all cases treated by compression, great pain and swelling from pressure, and obstructed circulation, had been a principal feature. This determined Dr. M'Crae to have an apparatus so constructed that pressure should be made on the superficial femoral artery alone, and in no degree to compress the limb, or to prevent the circulation being carried on by the profunda and its branches. The apparatus consists of a long straight splint,

similar to that used for fractures of the thigh, only strongly made of iron instead of wood, covered with leather, and having a joint opposite to the knee, so as to admit of its adaptation to those cases in which that articulation cannot be extended, on account of the size of the aneurismal tumour in the popliteal space. Firmly attached to the splint is a circle of iron, also covered with leather, but having several holes in it so as to admit of a screw, at the extremity of which a flat pad is placed. The ring of iron is very strong, and so large as in no degree to press upon the limb; but, for convenience of application, is made to open by a joint. When pressure has been made on the artery, by means of the screw and pad, the patient is prevented from interfering with these, owing to the screw being secured by a small bolt and padlock. Attached to the apparatus is a strap which secures it round the body, and there is also a perineum bandage similar to that used in cases of fracture of the thigh. After the afflicted limb has been bandaged from the toes up to the knee, the apparatus is prepared and applied exactly as in cases of fracture of the thigh: the roller, pad, &c., being similar, and attached in the same way. The bandaging, however, should not extend higher than the knee; and, in order as much as possible to prevent the splint from moving, it should be firmly secured to the body by a roller, in addition to the strap or girdle. This apparatus has been employed with success by Dr. M'Crae, and Dr. Henry Hadley, surgeon, 99th Regiment.

Successful Extirpation of an Ovarian Tumour—Birth of two Children subsequently.—Dr. Woycikowski, of Quingay, was called to deliver Mme. Replunard, forty-five years of age. He was informed that, after some pains, a small quantity of fluid had been discharged, and at the same time there protruded from the genitals a tolerably large fleshy tumour. The menses had ceased for fifteen months, during which time she had experienced all the symptoms which had been present in former pregnancies. On examining the tumour it was found to be the uterus, three times its natural size, and allowing the index finger to pass into the orifice. As it could not be returned easily, the abdomen was examined, and found to be distended with fluid; pressure, however, produced such tenderness that the form of the internal organs could not be ascertained. Paracentesis was immediately performed, and thirty-five litres of yellowish transparent fluid, without odour, were removed. A tumour was now discovered in the abdomen, the size of a man's head, round, modulated, floating in the pelvis above the brim, and quite indolent. The uterus was now replaced without difficulty, and the patient ordered to remain in bed, and have low diet. Ovariotomy was performed the next day in the usual manner, in eight minutes. The tumour removed weighed six pounds and a half. The tissue was lardaceous, yellow, and very resistent, and contained internally several purulent collections. The treatment consisted in low diet, and lemonade for drink. Twenty-five days after the operation the patient was well. In four months after, the woman became pregnant, and at the usual time gave birth to a boy. She was delivered in December, 1846, of a second boy. Both children are living.

Composition of the Blood in Puerperal Fever.—M. Hersent divides puerperal fever into three kinds: first, the bilious; second, the pure inflammatory; and third, the typhoid. He has studied the blood in three cases of the first class, eight of the second, and four of the third. Of the first class, one was taken ill immediately, and one twenty-four hours after delivery; and the third, at the commencement of the fourth day. Of the second class, there were taken ill after delivery, four, one day; one, thirty-six hours; one, three days; one, four days; and one, five days. Of the third class, one was taken ill during labour; one, fifteen hours; one, eighteen hours; and one twenty-four hours after delivery. The following table will show the ratio between the quantity of fibrine in the blood of a healthy pregnant female at the ninth month, and that of patients labouring under different forms of puerperal fever:—

	Maximum of fibrine.	Average of fibrine.	
In a healthy pregnant female, at ninth month ..	4 8	4·3	Andral and Gavarret.
One case only of the bilious form of fever	5·7	4·4	Hersent.
One case only of the inflammatory	6 7	4·1	
One case only of the typhoid	7·1	4·3	

With regard to the quantity of albumen, the average has been ascertained to be, in the normal state, 70; pregnancy, 66; the bilious variety of puerperal fever, 55·1; inflammatory, 35·9; and in typhoid, 42·7. The quanity of water in the blood is in general in the inverse ratio of its solid contents. The average quantity of globules, according to Andral and Gavarret, to be in the healhy pregnant female, 110; according to Becquerel and Rodier, 111·8; bilious puerperal fever, 141·5; inflammatory, 111·0; and in the typhoid, 82·3.

The Forceps in Delivery.—Dr. West, in his "Report on Midwifery," remarks that Dr. Hoffman applied the forceps twenty times in 637 labours, or about one in 30 cases. Dr. Ramsbotham, once in 729 cases. The deaths after application of the forceps in Dr. Hoffman's practice were 35 per cent.; in Dr. Ramsbotham's, 6·12 per cent. Dr. Hoffman on one occasion, having applied the forceps while the head was at the brim of the pelvis, succeeded in extracting the child, but, in so doing, tore asunder all the joints of the pelvis, and lacerated the urethra and vagina, of which injuries the mother died on the eighteenth day. Such is the dangerous force that may be exerted by this instrument.

REVIEWS.

Practical Observations on some of the Diseases of the Stomach and Alimentary Canal. By JAMES ALDERSON, M.D., F.R.S., &c. 8vo. London, 1847; pp. 215.

This work is, simply, as it modestly professes to be, a collection of cases, and of reasonings upon them, which have constituted the valuable opportunity of an active professional lifetime. Amongst the many ailments which it occurred to Dr. Alderson to treat, in his extensive career as physician to the Hull General Infirmary, stomach diseases formed not an insignificant part: his more important cases he faithfully narrated and annotated, and, when requisite, had drawings taken; and these things, in their collected form, compose the volume before us: a volume of which any author might justly be proud, and in whose favour it gives us the greatest pleasure to speak.

Throughout the work, our author treats the different divisions of his difficult subject with a masterly hand: just in the style, in fact, of a man who has seen all that he says, and is satisfied to discourse only from the results of experience well reflected upon. In the pages which compose this volume are many scattered facts and comments, concerning the more serious diseases of the stomach, which will repay attentive perusal. The varieties of carcinoma of the cardiac extremity of the stomach, of the œsophagus, of the pharynx, and of the pylorus, are treated of in a most practical manner. A curious nervous affection of the œsophagus is thus narrated:—

"Mrs. ——, aged forty, married, was seen by me in conjunction with Mr. Hardey. She complained of great pain in attempting to swallow even liquids, and expressed her conviction that her throat was growing up: she had been ill only a fortnight, at the commencement of which time she had inadvertently swallowed an angular peppermint drop. It stuck in the throat, and caused considerable pain, since which time she had been unable to swallow anything; even liquids gave her excessive pain.

"After much persuasion, she allowed a bougie to be carefully passed down the œsophagus, and from that momemt all difficulty in swallowing ceased. Can we suppose, in this case, that the lining membrane of the œsophagus was cut or lacerated by the angular *bon-bon*, and thus a spasm of the muscular coat of the tube induced, which, until artificially overcome by the introduction of the bougie, the patient had not power to relax? or are we to believe that the difficulty of swallowing was of a purely nervous character altogether, akin to what, for want of a better or more expressive term, is called hysteria?" (Pp. 46, 47.)

The latter we should say, decidedly. If rupture of the lining membrane of the œsophagus had caused the sense of constriction, the passing of a bougie would not have cured it. There are few parts of the body that are more apt to convey false notions of their condition than the œsophagus. Nervous and fanciful people have always got "something sticking in their throats." Hysterical women are thus perpetually being choked with what they have an objection to swallow. We are acquainted with a gentleman, whose gullet, to judge by his eating, is of ordinary capacity, yet he cannot swallow a pill for fear of being choked. Once or twice, in attempting, or rather performing, this feat, he has been kept up half the night with a suspicion that he should be suffocated. So strong was the fear upon him the last pill he swallowed, that he resolved for the future to *eat his pills*, and he has done so ever since.

The chapter on the comparative symptoms in "structural and functional disease" of the stomach is excellent. Its leading points are thus treated:—

"*Pain.*—In the early period of structural disease, pain is not in all cases present: the absence of pain, accompanied with other well-known symptoms, leads to the presumption that a disorganizing process is being carried forward insidiously; when pain is present, it is at the pit of the stomach, of a lancinating, grinding kind, and usually confined to a particular spot. In the strictured form, pain is more acute and more defined than in the areolar or colloid.

"The functional disease is peculiarly marked by pain, which is more diffused, and intermits, coming on at intervals according to the stage of digestion. The suffering is never of the acute, lancinating character, and yields in a temporary way to the use of alkalis.

"*Fluid vomited.*—The dark-coloured fluid, approaching nearly to the character of venous blood, is a peculiar mark to distinguish structural disease from mere funtional derangement of the digestive organs. In the latter complaints it is never present.

"*Progress and Development of the Disease.*—The structural disease comes on so gradually and insidiously, that the patient is often unable to give a history of the very commencement of his illness; and cases have occurred in which a considerable state of disorganization has taken place before the attention of the patient has been directed to his condition by any train of tangible symptoms.

"In functional disease, symptoms of the derangement of the digestive organs force themselves very early on the feelings and attention of the patient, and the magnitude of the suffering seems to exceed the actual amount of disease; and the patient presses his symptoms earnestly, and dwells minutely on the circumstances of his case." (Pp. 196—201.)

Appended to the volume are some coloured plates that well illustrate different forms of stomach disease. The whole reflects great credit on the industry, acuteness, and judgment of the author, and cannot fail to be most acceptable to the profession.

Cold and Consumption; or Consumption—its Prevention and Cure by Cold as a Constitutional, or Inhalation as a Local, Agent; involving the Causes, Symptoms, Medicinal Treatment, &c.; with a Sketch of the Anatomy and Physiology of the Respiratory Organs. By HENRY C. DESHON,

Member of the Royal Colleges of Physicians and Surgeons, London. London: Henry Renshaw. Exeter: W. Balle. 1847; pp. 155.

It is a very great pity that members of the profession, who wish to occupy an exalted place in society, should consider it necessary for the attainment of their object to write a book. A physician is in general considered a learned man; and it would be very wise in many to let the public enjoy that opinion without an attempt to prove it through the medium of the press. Numbers there are who have cut but a sorry figure in the literary world, and we greatly fear that Dr. Deshon will be added to the list. To write well upon any subject which is considered comparatively easy to handle, requires not only the possession of intellect, but the judicious exercise of the mind; how much more are these required in taking up such a subject as "consumption"—to investigate the causes, describe the symptoms, and point out the mode of treatment to effect a cure! The most illustrious minds have here felt their weakness, and lamented it; while, however, they have done much in this department of pathology, much more remains to be accomplished; and our author has stepped forwards courageously, if not discreetly, to remove all the difficulties.

Dr. Deshon has chosen as a motto for his book two lines from Horace, "Si quid novisti," &c., a passage which has been hacked about by quacks and "silent friends," to teach the public that they are clever scholars as well as famous doctors. Our author could certainly not have been acquainted with this circumstance, or he would have left the aforesaid gentlemen in undisputed possession of this part of the Roman bard. The object of the monograph is stated to be "to detect the reasons of the sad mortality from phthisis; to determine accurately the nature, character, and causes of this disease; and to develop the treatment, preventive and curative, based as conceived upon sounder views of human physiology. It has been long the opinion of the author that a principal cause of failure in the treatment of this disease has resulted from regarding it as *necessarily fatal*, and consequently that the only resources consisted in the adoption of mere palliative, or *placebo* treatment." Budleigh Satterton, in Devonshire, must be a very outlandish place for medical literature does not reach it; and we do not wonder that the doctor there should think as he does, and then write as he does, for the benefit of the profession and the public.

The first chapter of the book contains a "Sketch of the Anatomy of the Organs of Respiration," and it is certainly one of the curiosities of medical literature. There we are told "that portion of the body denominated the chest, but in anatomical language the thorax, is situated, most appropriately, at the upper and fore part of the trunk, and is divided from the abdomen by a fleshy muscular septum, situated horizontally, and called the diaphragm, or midriff." The doctor then favours his reader with a pretty little diagram to show the three spaces which exist within the chest, and which he informs us are "termed, from their locality, mediastina." He then employs the following illustration:—"Place any two round or oval bodies, two bladders filled with air for instance, side by side; if a tape were tied round them, two triangular spaces would be formed. Insinuate any other rounded body, such as an orange, between their approximated sides; call the tape the thoracic parieties; the bladders, the lungs; the orange, the heart; and name the spaces thus formed severally anterior, middle, and posterior mediastinum, and you have not an incorrect idea of a transverse section of the chest." This is a capital simile, but he uses one shortly after which beats this hollow. After informing us that the principal vessel of the heart traverses the posterior mediastinum in company with other important parts, he goes on to say, "The simile of the bladders may serve to elucidate this: if these oval bodies, still bound together by a broad tape, were so arranged as to have their long axes from above to below, a space would exist between their sides, through which it would be possible for the vessel in question to pass with facility, and which would then very much resemble a common walking-stick (which I shall now call aorta, from αορτη, to suspend), being suspended from the heart; the crook itself, or arch of the aorta, winding in its course over the right pulmonary artery and left division of the trachea; while the body of the stick, or thoracic aorta, descends to the left of the vertebræ in the posterior mediastinum."

Only imagine the physicians, surgeons, and general practitioners of the United Kingdom sitting with all meekness and humility as pupils at the feet of Dr. Deshon, and learning from him that the chest is near the head, and not the tail—that the heart is a muscular bag—that the aorta resembles a walking stick; a most striking metaphor, certainly—that the pleuræ line the interior of the ribs and the upper part of the diaphragm, and are reflected over the lungs, bearing the same relation to them as does the *head to the old double nightcap!* Well done, doctor! the profession after this must neither want instruction nor metaphors. We cannot help supposing our author must have seen some fat, gouty, old gentleman, with nightcap on head and stick in hand, pacing up and down the street of Budleigh Satterton, Devon, which helped him to the sublime metaphors cited above. At page 19 we are informed, "that owing to this affinity (a disposition to mechanical admixture) the atmospheric composition of azote and oxygen is found by weight invariably the same, whether examined on the surface of the broad Atlantic or in the arid plains of Arabia, on the icy shores of Greenland or in the burning climes of the equator"!!

We are really surprised that such a book—written, we suppose, for the instruction of the medical profession, and dedicated to G. J. Guthrie, Esq., "for his unceasing efforts to raise the character and tone of medical education"—should have issued from the press in the nineteenth century. We would advise the doctor, for his own credit, to buy up, forthwith, every copy: for in the book there is neither good writing nor valuable information.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d*

Cantuar.—*There can be no legal claim; the parties who gave the advice must have done it with an intention to deceive.*

A Surgeon.—1. *Right appreciation of the signs of complete insensibility is of the utmost importance unless these signs are carefully observed, it will be impossible to ascertain the right moment for the commencement of an operation; a patient might thus endure a great amount of pain, when a few more respirations would have freed him from suffering.* 2. *Startin's Inhaler.*

C. E. L., Luton.—*If the request were granted it would confer no benefit, and therefore the offer must be declined.*

A Lover of Science.—*By applying to the secretary of the college, personally or by letter, an admission ticket will be obtained.*

Sigma.—*The "University Calendar" will give the required information. The degree is certainly a respectable one.*

Mr. Wheatstone.—*Mr. Churchill is the publisher, and the price is moderate.*

M. D., Maidstone.—*Injections of a solution of nitrate of silver have been found extremely useful. It is worth a trial in the case mentioned.*

A Candidate.—1 *The diploma of a German university confers no privileges in England, and, obtained simply for money, is only a proof of individual vanity and corporate avarice.* 2. *No.*

Invalide.—*The custom is as dangerous as it is ridiculous, and it has not even novelty to recommend it. Consult a respectable practitioner.*

Mr. E. Smith.—*The communication has been received, and is now under consideration.*

Medicus, Sheffield.—*It is not within our province to undertake the inquiry suggested.*

A Bartholomew Student.—*Interesting cases should have a place in the note-book. A good knowledge of anatomy is indispensable.*

An Obstetrician.—*The treatment must be determined by the stage and severity of the affection. An examination is necessary, though the patient strongly objects, as it is the only means of ascertaining whether ulceration has taken place.*

Rusticus.—*The letter had better be addressed to Dr. Streeten, who perhaps may give our correspondent the required information. The parties to whom reference is made have petitioned against the Registration Bill. The committee was certainly a secret one.*

An Injured General Practitioner.—*There is no redress. It is a successful evasion of the Apothecaries' Act, and the evil would be greatly increased under the Registration Act. Patience and watchfulness are necessary.*

F. C., Glasgow.—*The fee cannot be recovered. The testimonials will entitle the possessor to become a candidate for the diploma of the London College of Physicians.*

An Assistant.—1. *The reward is not in proportion to the labour.* 2. *The Medical School affords good instruction at a moderate price.*

An Old Subscriber, Brixham, Devon.—*We have for some time declined opening our pages for the controversy. Neither party intends to be converted, and the medical world is not sufficiently interested in the matter.*

Mr. James.—*It rests with the Lord Chancellor, who also fixes the scale of fees.*

Dr. Channing *is thanked for his communication.*

A Surgeon-Apothecary *will find the information he requires in the last week's number of the* Pharmaceutical Times. *The Conspectus of the Five Pharmacopœias is still in course of publication.*

An Old Friend.—*If the case is not a fabrication, our correspondent will at once furnish us with his name and address. Internal evidence is not in its favour as a truthful statement.*

An Admirer of the National Institute.—*Very few have withdrawn, though the most strenuous efforts have been employed to shake the confidence of the members.*

An Admirer of Truth.—*The publication has altogether changed its character, and is in a hopeless condition.*

Mr. W. Edgar.—*The communication is an advertisement.*

A Member of the College of Surgeons, England.—*The society will not exercise its authority in the matter. The greater part of the profession has unhesitatingly declared that the certificate of the company is more respectable than the diploma of the College.*

Mr. J. W. Roll, Cupar, Fife.—*Question 1. We think not. 2. If a graduate of the university. The fees are very low. 3. From the foreign booksellers in London.*

Mr. P. C. Richardson, Hartlepool.—*It is likely the Company will not prosecute, though they have the power. The five years' apprenticeship cannot be dispensed with. It is likely the rules of the society says who is to certify; if not, any medical certificate will do.*

Chirurgus, Kilkee.—*No.*

A Subscriber.—*The evidence before the select committee will be soon brought to light.*

N. G.—*Noad's Lectures.*

H. S.—*The entire quantity of blood in the system is supposed to pass through in that time. To the second question we answer, No.*

Mr. J. B. Abercromby, Kensal New Town.—*The letter shall appear next week.*

O. P. *has been received.*

A Practitioner with Two Tails.—*Under consideration.*

Mr. Davis.—*We make a rule not to recommend any assurance company; but our correspondent cannot fail to make a good selection after a careful perusal of our advertising columns.*

Achates *has handled the subject of the parliamentary committee, and the equivocal obscurity with which it is enshrouded, with a severity well merited, but at too great a length for our pages*

[illegible] Ward *should send up his petition at once.*

[illegible] *remarks of* H. D. *on a contemporary are inadmissible.*

A Constant Reader.—*The respectable publisher named will send a catalogue if our correspondent state his reasons for requiring one.*

An Admirer *is thanked for his good opinion, but we never prescribe.*

P. H. *suggests that a copy of the "Secret Companion," bound in calf, should be sent to every member of "the quack committee," inclusively of the medical M.P. for Finsbury.*

An Old Bird, *deceived on the single occasion of his crediting a contemporary, should write, withdrawing his name.*

Mr. F. B. H. *labours under a mistake. The work is defunct—as far as our knowledge extends.*

Dr. Poupart's *second paper on the* Materia Medica *in our next.*

The complaint of B. (Manchester) *about the abandoned lectures of Liebig, Lane, Schonbein, Müller, Liston, Baillarger, &c., is not suited to our notice.*

Several correspondents have requested us to send out the numbers of the Medical Times *stitched. There is one sufficient reply to these requests. that from the extent of our circulation we should be unable to comply with them without a delay of days.*

Letters and communications have also been received from Dr. Shirley Palmer, Birmingham; Mr. Yearsley, Saville-row, Cantuar; A Subscriber; Chirurgus, Kelkee; Mr. W. Edger, Mr. P. C. Richardson, Hartlepool; Mr. J. W. Boll, Cupar, Fife; A Member of the College of Surgeons, England; An Admirer of the National Institute; An Admirer of the National Institute; A Surgeon-Apothecary; Dr. Channing; Mr. James; An Old Subscriber, Brixham, Devon; An Assistant; F. C., Glasgow; A Surgeon; C. E. L., Luton; A Lover of Science; Mr. Wheatstone; R. N., Maidstone; Sigma; A Candidate, Mr. E. Smith; Medicus, Sheffield; A Student of St. Bartholomew's Hospital; Obstetrician; Rusticus; An Injured General Practitioner; Dr. J. C. Cox, Naples; [illegible]; Mr. J. B. Abercromby, Kensal New Town; A Practitioner with Two Tails; Mr. Davis; Mr. A. Markwick; A General Practitioner; An Old Friend.

THE MEDICAL TIMES.

SATURDAY, JUNE 19, 1847.

THE REGISTRATION BILL AND THE CHEMISTS AND DRUGGISTS.

We are quite content that the value of the "Shabby Bill"—this thing of shreds and patches barefacedly pilfered from the abused project of Sir James Graham—shall be tested by its vaunted tendency to suppress all medical practice, save of qualified persons.

1. It neither directly nor indirectly touches the Holloways, the Gosses, the Curtises, or any other of the mischief-making and mutilating "professors," "herbalists," or "surgical consultants," who infest the metropolis and our other large towns. They are left as they were before—as free chartered as the wind to blow deception and death on whomsoever wealth and ignorance can offer as a victim.

2. Beyond such empirics, the great cry of the medical profession has been directed against the increased and increasing encroachments of the body of CHEMISTS AND DRUGGISTS. Does the bill suppress this evil? No. Does it tend to diminish it? No. Will it increase it? *Vastly.*

This is our emphatic proposition: *the Registration Bill leaves the field of medical practice wholly open to the chemists and druggists.* We proceed to place this truth beyond the admission of a doubt.

By clause 9 every legal restriction, whether imposed by statute or charter, on illegitimate practice, is repealed. Here are the words:—

"Be it, therefore, enacted, that so much of any act or charter granted before the passing of this act, as prohibits any person from practising medicine, physic, or surgery, in any place, without such license as is mentioned in any such act or charter respectively, or that imposes any restriction or penalty on the practice of medicine, physic, or surgery, further than is contained in this act, shall be, and the same is hereby, repealed."

With regard, then, to the chemists and druggists, as indeed in regard even to the worst kind of empirics, we are left, for all our defence and protection, to this single, untried, unsifted measure. We are condemned to abandon, for this untested and crude novelty, all those bulwarks—of whatever kind we may have against quackery—which have withstood the ordeal of the law; and some of which, in recent days at least, have proved of such active and exemplary efficacy. Now, what is the amount of the new provision for our safety? Here is the clause (the fourteenth):—

"And be it further enacted, that if any person shall, after the 1st day of January, 1848, act or *practise as a physician, surgeon, or apothecary,* in any part of Great Britain and Ireland, without being duly registered according to the provisions of this act, and without having a certificate as aforesaid in force at the time of his so practising or acting as a physician, surgeon, or apothecary, he shall, on conviction before any magistrate having jurisdiction in the county, city, or place where the offence was committed, forfeit and pay a sum not exceeding £5, nor less than 10s., for every such offence, to be recoverable within three months next after the commission of the said offence, as is hereinafter described."

Now, we might make at least twenty objections to this *sole means of repressing quackery the new bill would leave us. It is untested,* and there are few untested provisions through which an acute lawyer would not drive his "coach and six." It is certainly not more effective, in any sense, than the "Society's" recently-developed procedure of indicting the offender for misdemeanour. Then there is no party like the Apothecaries' Society to assume the invidious task of informing, or to bear the trouble and expense of prosecuting. Again, the clause is so vague and indefinite, there remains so much obscurity as to the fact, or series of facts, that will constitute an acting as physician, surgeon, or apothecary, and the words would lead to such absurd consequences, if rigidly interpreted, that there are at least ninety chances in the hundred that prohibition could not be enforced. But, if all these considerations are strong in reference to quackery of all kinds, they gain an immensity of force when we add to them this plain fact, that

THE BILL WHOLLY EXEMPTS THE CHEMISTS AND DRUGGISTS FROM THIS VERY PROHIBITORY CLAUSE.

We subjoin clause 28:—

"Provided always, and be it enacted, that *nothing* in this act contained *shall extend,* or be CONSTRUED to extend, *to prejudice or in any way to affect the trade or business of a chemist and druggist* in the buying, *preparing, compounding, dispensing,* and *vending* drugs, medicines, *and medicinable compounds,* wholesale or retail; but *all persons using or exercising* the said trade or business, *or who shall or may hereafter use or exercise the same,* shall and may use, *exercise, and carry* on the same trade or business *in such manner* and *as fully* and *amply,* to *all intents and purposes, as the same trade or business was used, exercised, or carried on by chemists and druggists before the passing of this act.*"

We shall not amplify on the words here given, further than to say that they in so many words *legalize* the *present* "use, exercise, and carrying on of the chemist and druggist"—*whatever* may be the kind or character of such *present* "use, exercise, and carrying on." The bill repeals all former restrictions in respect to the chemists and druggists: it repeals also its own restrictions, and this in favour of the chemists and druggists; and then finally it gives the chemists and druggists the *legal* right to carry on their business and practice just in the same way as they may have happened to have carried it on in this year, 1847!

But it may be said that the bill restricts them from practising medicine, at least as physicians, surgeons, or apothecaries. It does no such thing, but exactly the contrary. It would have done it, perhaps, *if* there had been no *exception* made in favour of the druggists and chemists—but, to show clearly that the bill has no intention to stop any such practice *in them,* a clause is inserted specially for their exception.

The bill, of course, without any such exception, never intended to stop their practice *as chemists* and *druggists:* it only dealt with a perfectly different thing—the practice of apothecaries, surgeons, and physicians: but because it did deal with the latter practice, prohibiting it to the unqualified, and therefore to the chemist and druggist, it became necessary to introduce a new exceptional clause, which now distinctly exempts the chemists and druggists from the penal provisions of the measure. If they now, as chemists and druggists, act as apothecaries and surgeons, so may they after the passing of this measure: the only difference will be, that if this bill pass they will so act in complete and glorious impunity.

But then the *falsehood* is protruded, that this clause is only a repetition of the clause in the Bill of 1815. The answer is easy. The Apothecaries' Bill had reference not more to the practice of physic than the *sale of drugs,* and it was obviously right to reserve to grocers and druggists that power of selling drugs which they previously possessed and exercised. But the trading habits of the chemists and druggists before 1815 were not precisely the same as those existing through the years before 1847, and, while the judges have decided that before the Act of 1815 the druggists possessed not the *usage* of playing the part of apothecaries or surgeons, it is very certain that the judges can make no such decision in reference to the present day; especially when they have before them an act regulating *medical* practice alone, and yet distinctly exempting the chemists from the only restriction it imposes—the only restriction, indeed! it will leave for us on unqualified and empirical pretenders.

That this is the legal effect of the proposed bill, we have no more doubt than of our own existence; and, were a dubitation left in the

minds of the judges having to decide on the subject, it must inevitably produce, *in favorem libertatis*, a judgment favourable to the druggist, and his now legalized pretensions.

We might well look on this legalization of druggist-practice with alarm; but we are far from certain that, if the bill pass, we should have here its whole pharmaceutical mischief. Often has it been propounded that the chemists and druggists should have a partial medical education, with certain subordinate diplomas: the physicians, or some of them, are fond of the scheme: the *Gazette*, before its decease, more than once announced the project as desirable: with Ministers and poor-law guardians there would not be wanting to it some recommendation: let us then connect with this judicial recognition of the druggists the 23rd clause in the same bill, which gives the Secretary of State the absolute power of fixing the *curricula, fees*, and examinations that are to precede letters testimonial, "*according to the nature thereof*"! and which testimonials may therefore be nearly as cheaply got in England for the "apothecary" as they are, or have been, in Ireland--nay, far lower, if such be the Minister's predilection! We would earnestly advise the general practitioners to attend to the varying diplomas which, "according to the nature thereof," are to be had as cheaply or dearly for the future as it may suit the convenience of the Home Secretary to fix!

Is there a settled design in all this? Is there a subtle attempt in the wounded castaway to exact a severe retribution on those general practitioners who have repudiated all connection with him as worse than calamitous? We will not say; but our suspicions are certainly not quieted by finding the drowsy organ of the Pharmaceutical Society yawning out its satisfaction in terms like these:—"We have heard *no* one expressing objection to the principle of medical registration." "The objections are ably answered by the author of the bill." "We hope some mutual concessions will be made for the purpose of effecting, if possible, an arrangement satisfactory to all parties"! What a quiet way has this Mr. Jacob Bell of expressing his raptures!

MEDICAL REFORM IN FRANCE.

For some time past the medical profession in England has been agitated to its very centre upon the subject of reform, and, while there has been but one feeling in reference to its necessity, there has been a great diversity of opinion as to the best means to be employed in order that it may be accomplished. This has arisen from the constitution of the profession itself, the members being arranged in different classes according to the system of education adopted to render a candidate eligible for examination at one or other of the chartered medical institutions. The result has been that one section of the medical profession has looked with jealousy on another, and attempts have been made to establish the interests of a few to the irreparable injury of the welfare of the greatest numbers. Self-elected corporations have endeavoured to perpetuate their abuses—universities, venerable on account of their age, but possessed of slender means to impart an efficient medical education, to retain their privileges—and ambitious men to accomplish their designs amid the perplexity which has resulted from the present order of things. Medical Reform has, therefore, to the present moment been postponed, and there is not that effective organization in the profession which is necessary for its members to obtain a permanent and advantageous settlement of the question.

While, however, we have been so much occupied with our own differences, as to prevent a legislative enactment in our favour, Medical Reform has been making rapid progress in France, and there is a fair prospect of its being speedily brought to a satisfactory conclusion. Last November, 5000 delegates from all the medical practitioners of the kingdom met in Paris. In the Hôtel de Ville they held their sittings for fifteen days, and the Minister of Public Instruction, having heard their suggestions, consented to bring in a bill which should effectually annihilate everything which was calculated to injure the honour and usefulness of the profession.

This body in France is composed of two orders —doctors of medicine, and *officiers de santé*: the former are graduates of one of the three universities—Paris, Montpellier, or Strasburgh, the latter are an inferior grade, merely received by medical juries. A certain number, also, of foreign graduates are practising in France by virtue of royal ordonnances. All candidates for the degree of M.D. must have graduated as bachelors of letters and sciences in the Sorbonne of Paris, or the faculties of Strasburgh or Montpellier. The period of their studies is four years, and they have to undergo five examinations; of these two are practical, the candidate being required to dissect in the presence of the examiners, and to inspect scientifically two patients selected in the hospitals. The thesis is in French or Latin, and the examinations are public.

The *officiers de santé* are examined by three persons, called a *jury medical*, which sits in Paris, and visits the departments twice a year. This order of medical men are not allowed to use the title of "doctor," though they do that of "*médecin*," an appellation common to each; and they are permitted to practise only in the department in which they have been examined. The present penalty for illegal practice is fine or imprisonment.

The principal points of reform in the new bill relate—1. To the two classes of medical practitioners. The *officiers de santé* are to be suppressed, this having been demanded by a great majority in the Congress. 2. To the suppression of illegal practice, an offender being liable for the first offence to imprisonment for not less than six months, or more than two years; for the second offence, not less than two years, or more than five. 3. To foreign physicians who desire to practise in France. By the new law it is proposed that no foreign medical man shall be allowed to exercise his profession in France, unless it shall have been previously decided by the Royal Council of Public Instruction that his diploma or degree is equivalent, as an attestation of length of studies, and respectability of the university which conferred it, to that granted by the French faculties. The authorization may be restricted to a certain locality, or confined to a limited period, and is revocable at pleasure.

The authorities who have the superintendence of medical education are twenty-four in number, and are appointed by *concours*, the Minister having the privilege of appointing the first professor to a newly-created chair. The judges of the *concours* are chosen partly from the professors of the faculty, partly from the Academy of Medicine; and the election is subject to the approval of the King. At present all M.D.'s have a right to contend for a vacant professorship; but the new law proposes to exclude all but *agreges* from this privilege. The professor's salary is 10,000 francs, while that of the *agrege* is only 2000 francs. In several provincial towns secondary schools are established, each of which has its professors, whose certificates are recognised by the faculties. The new law provides for the formation of laboratories in the faculties; and secondary schools, where the students will be forced, by frequent *post-mortem* examinations, to acquire a knowledge of the organic lesions accompanying the various diseases to which the human frame is liable. The foundation of *bourses*, or gratuitous exhibitions, to be enjoyed by *laureats* of the universities and secondary schools, is in contemplation. It is proposed, still further, to establish a class of medical men, under the denomination of *Medecins Cantonaux*, who must have graduated as M.D.'s, and who are to afford gratuitous attendance on the poor, in consideration of a fixed salary. It is supposed that the *Conseils de Medicaux* will devote their exertions almost exclusively to the compilation of statistical documents and to public *hygiène*.

We have thought it our duty thus to give a brief outline of those changes which are about to take place in the medical profession in France, in order that our readers may contrast them with Mr. Thomas Wakley's panacea for all the evils which afflict the medical community in our own country. The one is demanded with united heart and voice, and is tolerably adapted to accomplish the most beneficial results; the other is a mere piece of patchwork which nine-tenths of the surgeons of England repudiate, because it gives but few benefits that it may hide numerous evils. We admit that it has been lauded by some as a gift which the profession ought to receive with many thanks. Amongst the number, however, but few English general practitioners are to be found, though the most unscrupulous means have been used to urge them to become parties to their own degradation.

Reform in this country, it is true, is beset with many difficulties, from the number of chartered bodies which possess the authority of granting licenses to practise; this is not the case with our Gallic neighbours: there the university is the *alma mater* of the profession, and, after a sound education, grants a degree to the candidate which is respected throughout the civilized world. France will allow of no half-instructed practitioners, and she has resolved that the *officiers de sante* shall be speedily suppressed. Pride has not prompted her to this, but a supreme regard for the interests of medical science; and, influenced by the same illustrious motive, she is about to establish gratuitous exhibitions, that intellect may not be excluded from the profession because an individual may have no gold to pay for its cultivation. The example thus set cannot be entirely lost upon the nations of Europe; let it teach us to advocate such a change as shall abolish unjust distinctions, foster rising intellect, and make the medical profession in Great Britain universally renowned for its learning and liberality.

MOVEMENTS IN THE PROVINCES.

We have received information of active movements in the provinces against the Medical Registration Bill. Petitions, numerously signed, are in progress in Nottinghamshire, Yorkshire, Lincolnshire, Bedfordshire, Lancashire, Surrey, and various other counties. We congratulate the profession on this renewal of activity in a cause where the interests of science are as much

concerned as the individual welfare of the members. It is highly desirable that public reprobation should be strongly expressed against this measure—the very worst that was ever foisted upon the attention of the profession. Our exertions to defend its meditated evil must not flag. If good men were as zealous in a good cause as bad men are in an evil one, we should have no fear about the utter discomfiture of this wicked attempt. We must be up and stirring.

Individuals should forward petitions to the representatives of their boroughs and counties, for *immediate* presentation to Parliament. Two or three sentences, in condemnation of the bill, are sufficient for the purpose. We are sorry that we have not space to publish the numerous letters and copies of petitions that we have received, commenting for the most part in terms of great indignation on this mischievous bill. This is a fine healthy spirit, which should be energetically exercised, so that it might be made *practically useful* to the cause. Let each gentleman, convinced of the great danger of this measure, induce his neighbour to *petition against* it. This is the way to make public feeling *tell* upon the special committee.

IRISH APOTHECARIES AND ENGLISH CHEMISTS.

TO THE GENERAL PRACTITIONERS OF MEDICINE, &c.

GENTLEMEN,—The efforts of the Editor of a certain obsolete medical journal to counteract the legitimate influence of my addresses to you are so extravagantly inconsistent and whimsical, that it requires more asceticism than I am possessed of to resist the cachinnatory impulses which such melodramatic exhibitions are accustomed to excite. A fortnight since I was traduced and vilified by the same individual, who last week, strange to relate, condescended to become my humble imitator. The writer whom Thomas Wakley professed to despise, he now honours with the most slavish adulation.

Whatever may be my merits or my demerits, I may be permitted to inform Mr. Wakley, that, however closely he may affect my manner and sentiments, there will still be a chasm between us over which his small faculties will never carry him. We are birds of a different feather. My merits are not his, and, thank God! his vices are not mine. He may continue his mimicry, blow my trumpet, dress himself in my garments, and imitate my gait, but the most unpractised eye will, despite all his arts, be able to distinguish between the man and the monkey.

A single specimen, gentlemen, extracted from the article in question, will exemplify the justice of this condemnation. The writer, ambitious of a heroic flight, commences a paragraph with a ludicrous imitation of St. Paul, thus.—"*Men and brethren*, are not these things so?" "Men and brethren"! Faugh! It is clear that Thomas Wakley has mistaken his mission: he should have been a preacher in a conventicle, or the tragic hero of a band of strolling players; the part of *Pistol* or of *Mawworm* would eminently suit his genius. This tender mode of entreaty irresistibly reminds us of the black slave's appeal to his white master—"*Am I not a man and a brother?*" However, adopting the phraseology of the champions of the tournament, which he revives with amusing grandiloquence, he goes on to say:—"Pick up the *glove* of opposition which is lying on the ground, and bring your *unfelt strength* into this *bloodless contest*." And for what glorious purpose do you imagine, gentle reader, that the heroes of medical agitation are exhorted to buckle on their armour? The next words inform us:—"*Turn the tables on the foe*, as undoubtedly you can; and then the words will read—We at last the conquerors, they at last the conquered"!!! So, all this hard fighting is to end in putting your foe under the table! This imagery reeks strongly of the Freemasons' Tavern. There is but one step from the sublime to the ridiculous. Mr. Wakley has taken it, and no one will envy him the success of his enterprise. Imagine the successful combatant shouting in triumph over the body of his enemy lying prostrate under the table! Alas! Thomas Wakley, this is sad drivel; *Lear's* madness is rationality in comparison. Perhaps, after all, it is a mere joke, since the writer has taken care to inform us that he means no harm, for he distinctly avers that he wishes it to be a *bloodless contest*—a fight with the gloves on—a mere mimicry of greatness—a scenic farce got up for the amusement of the public. The article should have been headed—KILLING NO MURDER!

Such trash as this can never be imposed on the profession as fine writing; or as common sense. This is a part of the puppyism of literature—of that desire to be brilliant and distinguished in the display of qualities with which we are not naturally endowed. Stays and a shirt may make a fop, but they cannot make a gentleman. The arguments are as false and hollow as the style is stilted and absurd. Neither is worth further notice.

There are two other points, gentlemen, embraced in the Medical Registration Bill, to which I am desirous of directing your attention. I have already condemned so many clauses of the measure, that you may be scarcely able to imagine the possibility of another point of assault. A little further consideration, however, will unfold other evils inherent in the scheme, and demonstrate the utter worthlessness, or worse—the great peril of its various provisions. It is amazing to see how so small a measure can be stuffed so full of injustice.

By the clause it is provided that any individual in Great Britain or Ireland, who possesses a license to practise as an apothecary, shall be enabled to register; and, by virtue of such registration, it is subsequently provided that such individual shall be empowered to practise medicine in all its branches in all parts of her Majesty's dominions.

The point that I now desire to urge upon you is the position of the Irish apothecary in reference to this bill. The licentiate of the Apothecaries' Society of Ireland is, at present, the chemist and druggist of that country; and, although trenching upon the duties of the surgeon, and gradually shouldering him out from general practice, he is not recognised as a regular general practitioner. He is, in fact, an interloper, and practises on the mere civil right of the English chemist and druggist to do as he pleases. For many years these practitioners underwent no kind of examination, but were merely, what the great majority of them are now, mere traders in drugs and groceries. Latterly the governing body of the society, finding that their members were creeping surreptitiously into practice, have required a course of study and examination in the sciences pertaining chiefly to their own particular business: for example, pharmacy, chemistry, botany, &c., as the Council of the Pharmaceutical Society in London exact now from their members. The Irish apothecaries gradually increased in number, and practised more extensively as medical men: the council of the society, somewhat ashamed, perhaps, of the presumption of their members, still were not unwilling to make good the ground that they had invaded, and, in the year 1841, added a year's course of study in medicine to their *curriculum*, and thus accomplished their members to a certain extent to act as medical practitioners. A veil, at all events, was thrown over the impropriety of the acts of the members. It was no more just than if the council of the Pharmaceutical Society should examine in medicine, and declare their members qualified to practise medicine.

Still, gentlemen, I must confess that I am not in a situation to judge whether, in reference to the social condition of Ireland, it is desirable that these infringers of the rights and duties of Irish surgeons should be admitted under a new law, as the qualified medical practitioners of that country. It is, to this extent, a matter of expediency, and must be settled by the Irish authorities themselves. It cannot, however, be overlooked that these gentlemen are comparatively *ignorant of medicine*: for, even by their most extended *curriculum*, not more than *one third* of the medical knowledge required from the Irish surgeon is required from the Irish apothecary.

Whatever, then, may be the expediency or the wrong of this clause of the bill as respects Ireland, there can be no doubt, gentlemen, that it would affect most injuriously the English practitioner, inasmuch as it would permit some thousands of uneducated men, tempted by the opportunities which London and the large towns of England present for making money, to practise medicine in this country. The gross iniquity of this proceeding is obvious, and I apprehend that the whole profession, both in England and Ireland, will resent the attempt to perpetrate so foul an injustice.

Yet, gentlemen, Mr. Wakley endeavoured *silently* to push a bill containing such a clause through the House of Commons, and medical men have been found sensible enough to give it their support! This clause of the bill is so important to the interests of the profession that an inquiry into its justice or necessity was imperatively demanded before an attempt was made to constitute it a law. Can the profession consider themselves safe in the hands of such an unscrupulous person?

The other point, gentlemen, for your consideration is the probable result of an entire abolition of apprenticeships as a portion of the educational course. No man can deny that shameful abuses have corrupted the present system, which is now turned to the profit of the master rather than to the advantage of the student. The end of this institution is to instruct the young man in the preliminary knowledge and duties of his profession, and not to constitute him merely the drudge of his master. Yet the master generally conceives that he has a just moral claim upon the entire services of his pupil; is affronted at neglect, and not unfrequently exacts duties which neither good taste nor gentlemanly feeling can approve. He forgets his own obligations as a teacher, and remembers only the obligations of his pupil as a servant. This has been, and is, the great evil of the system—an evil which has corroded and undermined it, and made it repulsive to every man of enlarged views and fervid zeal for the honour of his profession.

The system of apprenticeships is a part also

of our connection with *trade*, and is in this respect degrading to our professional character; the very name is offensive, and, with some other titles, should be cast off as the remnants, the crust, and the *exuviæ* of the past.

I am not, however, gentlemen, an advocate for the *entire abolition* of the system. The period of *five* years is undoubtedly too long; but a shorter period of *two* years, or at the most *three*, would, I apprehend, be useful to the student, and acceptable to parents and teachers. Restraint during the first years of adolescence, when the pulse beats riotously, and the passions yearn for gratification, is absolutely necessary to the formation of sound moral habits, and to the preparation of the mind for submission to a severer discipline. It would be highly improper, as a general practice, to send a young man forth from his father's roof and at once to launch him, inexperienced in the arts of the world, and unprepared by habits of self-reliance, into the giddy vortex, the tumultuous agitation, and treacherous currents of metropolitan life.

Setting aside, however, these moral considerations which are obvious to all, and which I have no time to dwell upon, it is not probable that the majority of young men would spend two or three years of their life in acquiring a knowledge of the *materia medica*, pharmacy, and dispensing, &c., unless there were some imperative regulations in operation to that end. If a knowledge of this branch of professional art is necessary for the general practitioner, as I maintain that it is, then it cannot be properly acquired under two or three years, and certificates showing that the pupil has spent this period in the acquisition of such knowledge should be *required by law*.

Consider, gentlemen, what would be the *immediate* result of such a sweeping abolition of apprenticeships as this bill proposes. Any *chemist and druggist* would be enabled in two years, nay, *in one year*, as in the case of the pastrycook Blake, to obtain the diploma of the Royal College of Surgeons, and act as a legal practitioner of medicine! The profession would be overrun by a bastard breed of general practitioners got by the Council of the Royal College of Surgeons out of the body of the chemists and druggists! The chemist and druggist, who now illegally plucks the bread from your hand, will, in about a year or two, be enabled to legitimatize the robbery, and snap his fingers in your face. He, as well as yourself, will be able to exhibit his diploma, and laugh at your vexation and your ruin.

It is the vaunted *friend* of the profession, gentlemen, that has prepared so admirable a scheme for your degradation: it is the self-styled man of liberal views, of generous desires for your welfare, of elevated patriotism, of pure and earnest love of his profession; of experience, knowledge, sagacity, forethought, incessant activity, and splendid promise: the man who has denounced all other schemes as infamous, frustated the self-denying exertions of other labourers in the same cause, and stigmatized their conduct as deceitful and atrocious; the man who is at once the conscience, the oracle, the prophet of the profession:—no less a man than he has devised a scheme which, of all others, would, if a law, be most destructive to your interests and subversive of your professional character—a scheme which is as faulty in conception as it would be injurious in operation; which is as pitiful in design and end, as the pretensions of the author are huge, hollow, and ridiculous.

Gentlemen, a great career is opening for the general practitioners of medicine in this country—a new era has arrived, new powers are in activity, immortal achievements are already foreseen, and prophetically animate us to their accomplishment. The future is pregnant with *our* labours. Her rewards, her honours, her medallions, and olive crowns are *ours*: let us persevere and hasten to possess them. There are fine, ardent, struggling potentialities in the general practitioners that require only freedom from corporate bondage, and a fair field to attempt the highest, to accomplish the greatest, labours that ever have or that ever will adorn or dignify our profession. We must not only *have* knowledge, but also the liberty to use it, and the opportunity to cultivate it. Not only the *tree* of knowledge, but the *fruits* also must be ours. Science must be encouraged among us, and its objects promoted by us. Knowledge has rights, and not the least of these is self-government in all its comprehensive liberty, to act, teach, adjudicate, and reward. Knowledge demands independence, and she will have it; her claims may be for a time disregarded, but they must be heard and conceded: she "is power."

Do we not know and feel these things? Then let us set about accomplishing them. I know but of one mode: an institution in which the general practitioners can regulate their own affairs, foster the emulous love of knowledge that now distinguishes them, and establish their independence and their respectability on a broad and honourable basis. To this end we must come.

I have the honour to be, Gentlemen,

Yours, very faithfully,

VOX VERITATIS.

LETTERS TO THE MEDICAL PROFESSION OF THE UNITED KINGDOM.

LETTER III.

GENTLEMEN,—On Tuesday, the 1st of June, I had the melancholy pleasure of being present at a meeting of the friends of "The General Medical Annuity Fund," held at the George Hotel, Northampton. Unfortunately, the greater part of the business of the day had been transacted ere I reached my destination; I, however, arrived quite in time to hear my own project of provision for the superannuated and disabled members, and the widows and orphans, of our neglected profession denounced as visionary and utopian; to see it torn piecemeal, and scattered to the winds of heaven.

Yet had I happily been gifted with the fluency of speech, and the fervid eloquence, which distinguish the Secretary of the Newport Institution, I might, peradventure, have succeeded in unfolding this project of my brain in fairer proportions than it obviously exhibited to the eyes of the *fourteen* assembled gentlemen, imparted to it a less startling and extravagant character, and, with a calm and deeply cherished confidence in its ultimate achievement which neither the arguments of the mere arithmetician nor the rigid calculations of the actuary can weaken or extinguish, fearlessly confronted it with its more favoured and finished rival. This, however, is not the first time a good and noble cause has suffered damage from a sorry advovate. I was, in fact, too ill and, in some respects, too much taken by surprise, either to speak boldly in defence of my own project, or need an address in explanation of the necessary details, which had been expressly written for the occasion. Like the prudent general, I retreated from untenable ground to occupy a position in which I may, at least, hope to sustain a less unequal conflict.

My second "Letter to the Medical Profession" was written under circumstances of peculiar disadvantage; my energies depressed by illness; my mind distracted by many and deep anxieties. I had calculated that there would be a large gathering of the profession at Northampton, and naturally felt anxious that such an opportunity of introducing my project to such an assemblage should not pass unimproved. I had, consequently, little time allowed for the composition of my letter, and was denied the ordinary privilege of revision previously to its publication. All these circumstances were most expertly, I will not say unfairly, turned against me by the advocates of the Newport plan.

To imagine, for instance, that I should propose to commence the distribution of pecuniary aid to the unfortunate of our profession, on the liberal scale which I have specified, before a fund, amply sufficient to justify such distribution and to ensure its continuance, had been accumulated, were to question the soundness of my judgment, the integrity of my reasoning faculties. Had I proceeded to explain views on the means of accumulating such a fund, I should have requested the gentlemen present to recollect divers passages in my first letter, of which no copy was at hand, and the few who had read it seemed to remember little or nothing. I should have called to mind the anticipated contributions or bequests from the opulent and childless of our own profession, and the soul-offerings of the wealthy and benevolent of other classes, in testimony of their respect for the high character and bearing which we sustain in the social system, for our unwearied and frequently gratuitous devotion to the cause of suffering humanity; or of gratitude for the inestimable services conferred upon themselves, or their families, in the trying hour of pain or peril. "These, gentlemen," I should have observed, "are the sources upon which we must principally rely. The great bulk of the profession will do little for itself; we can no more depend upon it than on the 'rope of sand,' to which my lamented friend the late Dr. James Johnson, a few weeks before his death, most aptly compared it." And how strikingly might this argument have been illustrated by adversion to the fact that, of some three dozens of medical gentlemen practising at Northampton, four only had honoured us with their presence on that day!

Lampooned and ridiculed though he be by the thoughtless and the vulgar in their heyday of health and vigour, and, on all occasions, shamelessly spurned and neglected by the rulers of his country,(a) yet is there no human being looked up to, in the dark season of individual or national calamity or danger, with deeper

(a) In my way to Northampton on Tuesday, the 1st instant, I read, in the *Morning Herald* of that day, a statement which, if it be true, reflects the deepest disgrace upon the Viceregal Government of Ireland, and will call down upon it the scorn and execration of every just and generous mind. In a communication from the Dublin correspondent of that journal, it was there distinctly stated that, while the house-painters and carpenters were regularly receiving five-and-sixpence, the stipend of the medical officers of the fever hospitals, in Ireland, had, by an express Government order, been reduced to the paltry allowance of *five shillings a day*; and that, in consequence of the perils from infection to which these courageous men are incessantly exposed, it is utterly impossible for them to effect an insurance on their lives. However this be, should the paragraph in question, or these indignant comments on it, chance to meet the eye of Lord John Russell, or any gentleman interested in the honour and stability of his lordship's Government, I do hope that a searching inquiry will be immediately set on foot; that the crying wrong, if it have really been perpetrated, will be forthwith remedied; and that ample justice will be rendered to the outraged feelings, and the claims, of our zealous and devoted brethren in the fever hospital of Ireland.

anxiety, respect, and confidence, than the humane and accomplished professor of our noble art. The powerful influence and control which, by the exercise of his talents and his virtues, the conscientious and enlightened practitioner may acquire over the minds of those around him, and the beneficent account to which this moral ascendancy may be most honourably converted, it is superfluous to explain. Twice, in the course of my professional life, have valuable estates been tendered, importunately tendered, to my acceptance by grateful and confiding patients. From feelings which those most intimately acquainted with my character will best appreciate, the generous offer was, on both occasions, pertinaciously rejected. But had I, when those offers were made to me, contemplated the formation of a Medical Benevolent Fund, what course should I have felt myself justified in pursuing? Most unquestionably, I should have qualified my lofty rejection of the splendid boon by a supplication in behalf of my less fortunate professional brethren. "Bequeath your possessions," I should have said, "to those who are better entitled than myself to enjoy them; but leave, at your death, fifteen hundred or two thousand pounds to my Benevolent Institution: and the prayer of the widow and the fatherless shall daily ascend, in your behalf to the throne of mercy; and the blessing of the destitute shall be with you in your dying hour." At the auspicious close of severe or perilous illness, the human heart, when overflowing with gratitude to God and man, for mercies unexpectedly vouchsafed, and attentions successfully conferred, may, also, be often appealed to, in the sacred cause of misfortune, with resistless eloquence and admirable effect. These, gentlemen, I repeat are the springs of bounty, these the sources of supply, upon which we must mainly depend for the full and triumphant achievement of our great project.

There is one principle in the human mind to the existence and operation of which I may, in concluding the present letter, very properly advert: mankind invariably exhibits a willingness, and even an anxiety, most powerfully to assist those who most strenuously and successfully exert their energies to ameliorate their own condition; and succour those who have been the most earnest and fortunate in the effort to help themselves. Small attempts, however laudable, as they promise no great or striking results, are too commonly despised and neglected. On this principle, alone, I regard the *Tamworth* project: it was first conceived, twenty years ago, in the ancient capital of the Mercian kings, as preferable to, and ultimately more certain of success than, its Newport rival.

Be it not, however, for one moment, imagined that I underrate the value and importance of Mr. Daniell's most useful and benevolent plan, or am insensible to the eloquence, the talent, and the labour which have been displayed in, and expended upon, its development. It is a plan which alike reflects honour on the moral and intellectual character and attainments of its estimable projector. And, should my exertions in the cause of the distressed be productive of no other result, it will afford me some consolation, under the disappointment, to reflect that they have at least procured me the enviable privilege of introduction to the little band of enlightened and philanthropic men by whom I found Mr. Daniell surrounded at the Northampton meeting.

In my next "letter" I shall definitively mark out the somewhat modified course which I have decided on, at present, pursuing; and conclude with the most powerful appeal which my head and hand are capable of inditing, to your pride, your honour, and beneficence—to the deepest and the holiest sympathies of our common nature.

I am, gentlemen, truly and devotedly yours,

SHIRLEY PALMER.

Birmingham, June 10.

MEDICAL REFORM.

[To the Editor of the Medical Times.]

DEAR SIR,—The state of anxiety and uncertainty by which the medical mind of England is at present agitated must naturally affect, more or less, every individual connected with that profession, whether at home or abroad.

Allow me, then, to solicit of your kindness space for a few observations relative to Medical Reform, which have principally arisen from the perusal of Mr. Wakley's highly objectionable measure.

Of all subjects that come within the sphere of legislation I verily believe that not one pregnant with more difficulties, beset by more embarrassments, or cursed by more confusion, can present itself to the mind. How many interests to be reconciled, prejudices to be overcome, and established customs to be modified or uprooted; and I may add, what apprehensions to be cast aside, when we contemplate the defeat of every one, whether within the profession or without, who had the courage to approach this monster of administration—Medical Reform! Sangrado's description of the state of medicine to Gil Blas is peculiarly applicable at the present day:—"Ya todo no es mas que un caos en que uno se toma la libertad de hacer lo que se le Antoja, y traspasa los limites del'orden y de la sabiduria que nuestros primitivas maestros Senaleron."

Mr. Carmichael, of Dublin, attempted reform. His principles were simple and comprehensive. He for years concentrated all the faculties of his powerful mind upon the subject, backed his exertions liberally by his purse, and was sustained by a host of active reformers. Yet he effected nothing. The Apothecaries' Hall of Dublin took affright, and grasped closer the balance of life and death, and, instead of making a united effort against common abuses, professors in the College of Surgeons thundered against the apothecaries, even in detail; the angry fire was returned by the Hall, by members of the same College engaged there as teachers. Mutual animosities were thus excited, a civil war declared, and the sound philosophical views of Mr. Carmichael were completely thwarted.

Every body knows what an abortion Sir James Graham's reform bill proved. The profession and the public were simultaneously arrayed in hostility against it. Then the French Congress in Paris awakened a new spirit of medical agitation in England, and the National Institute sprung up, and, with a zeal and ability worthy of so mighty an undertaking, endeavoured to collect together the scattered fragments of the profession for the purpose of constructing a general organization. In the midst of the proceedings of the Institute, Mr. Wakley brings forward his reform bill, or rather system of registration, differing very little from Sir James Graham's, and equally certain of a *fausse couche*.

There is the same scope given to quackery in both, for, provided that anybody do not assume the title of a medical practitioner, he is permitted unrestrained to trifle with the lives of her Majesty's subjects, and to poach upon the province of medicine. Any amateur who pleases may take up medicine for his amusement as he would music or painting. There are thousands of female quacks, and, provided they do not falsely pretend to be medical practitioners, they may dose *ad libitum*. This measure affords neither security to the public, nor protection to the profession. A registration is already kept in all the institutions, which renders a general one quite unnecessary. It is no more required than another general registration of deaths, marriages, and baptisms of the United Kingdom. The article of inspection and supervision of examinations simply says that the Secretary of State *may* depute a person to be present at them. In the next, examiners *may* take candidates to hospital or workhouses for practical examination. Here plainly practical examinations are left to the discretion of the Secretary of State, and examining bodies who possess already the same discretionary power. They may conduct their examinations practically or otherwise as they please. Now, this is treating in a vague and indecisive manner a point of vital importance to public safety and the interests of the profession. Practical examinations are the best, the only efficient, check against idleness on the part of students, and, if carried into active operation, would completely shield society from the horde of incompetent individuals daily let loose upon the world. Why is not a practical examination made imperative, a *sine qua non*, as in France? If the student had to pass a practical examination, it would impose upon him the necessity of attending regularly the hospitals and dissecting-room, and he would not dare present himself, were the examination also public as here, unless well prepared. I contend that a theoretical examination is no proof of that knowledge required for the responsible duties of a medical practitioner, and that granting a license to practise upon such grounds is legalizing murder. A student of the present day, however stupid or idle he may be, is taught to go through his examination as a bear is taught to dance, or a parrot to speak. The replies of a candidate are as mechanically arranged before as the wires of a puppet; and it does not matter in what institution the performance takes place, it is no less a farce, no less a disgraceful mockery of the most solemn of all human laws—*salus populi*. Thus the most complicated parts of anatomy are described, though never seen in the human subject, and the physical and symptomatic characters of disease as faithfully delineated as if pronounced by the lips of Hippocrates or Galen. May we not as reasonably expect a man to be able to make or repair a watch because he could describe the different parts of its structure. I know a practitioner who some time ago took out a surgical degree, though he did not once cut the human integuments during the whole period of his studentship. He succeeded by grinding alone, and, writing to me immediately after, said, "I'm passed." God bless the mark!

Mr. Wakley's bill says, "The qualifications to be uniform, according to the nature thereof." This does not imply that great desideratum, a standard system of medical education. "According to the nature thereof" signifies uniformity only in the different departments of medicine: thus sealing those distinctions which have nowadays no practical existence, and calculated to serve no other purpose but that of causing disunion amongst members of the same profession and injury to the whole community: for, just as a nation is protected by a combination of physical numbers, that Science which presides over, and is identified with the happiness of, the millions, becomes enlarged and increases the sphere of its utility by a union of intellectual labours. I regret that such a distinction which daily experience disproves is sustained by the College of Surgeons. There are few surgeons whose practice is not almost entirely medical, particularly in the country. Pure surgical cases are the exceptions to general practice, and even in the army and navy in time of peace the rule holds good. Yet the examination of the College of Surgeons is purely theoretical surgery and anatomy. There is no subject on the table, as in France, to test the candidate's real knowledge of either; and upon medical practice he is not asked a question, upon which he ought to be examined in hospital. Yet that very department upon which he is not taken to task at all will constitute more than three-fourths of his practice during his life. Another most essential topic is not touched by Mr. Wakley's bill. It is embraced by Mr. Carmichael's plan of reform—the establishment of a well-defined Institution of Pharmacy, which I must own would be difficult to reconcile with the interests and views of the apothecaries of England and Ireland. This is a problem, yet how can that second state be disregarded? Second, for we are obliged to consider physic and surgery as one. We investigate disease, not from idle curiosity, but in order to relieve our fellow-man; and, if the means of relief be not cultivated *pari passu* with

the progress made in discovering the nature of the numberless maladies by which mankind is afflicted, we labour in vain; and that noble sentiment which draws us near the bed of suffering will in many cases be disappointed. Pharmacy and the practice of the healing art are sister sciences, still possessing an independent existence; and, whilst it is the duty of the latter to investigate the causes, that of the former becomes the not less useful and honourable part of supplying the instruments of relief. Now, is the science of pharmacy (which necessarilly embraces, chemistry) sufficiently comprehensive and important to require a distinct institution? I will answer by saying, that such is the opinion of the profession and the public in France; and be it borne in mind, that in scientific philosophical analysis, no country is superior to France. The science of pharmacy is scrupulously separated, on the Continent, from the practice of medicine and surgery. So far back as the reign of Louis XIII. an edict of 1638 would punish an apothecary for giving medicine without the ordonnance of a legal practitioner. Even in the reign of Terror—when the wild excesses of anarchy threw the whole social system into confusion, and when town and country became infected by charlatans, in consequence of the decree of the 18th of August, 1792, which suppressed the universities—the College of Pharmacy in Paris was the only scientific society which escaped the ravages of the time, and maintained its position.

I feel, dear Sir, that I have already trespassed upon your valuable space too much, and beg to conclude for the present, confident, from all I know of your enlightened and powerful journal, that you will allow the subject of medical policy to be frankly and freely discussed in all its bearings.

I have the honour to remain, dear Sir, your obedient subscriber,

S. S. Moriarty.

Dieppe, 132, Grande Rue, May 6.

DR. RYOTT AND "THE MEDICAL DIRECTORY."

The charges in the letter we inserted last week, in reference to Dr. Ryott, are, we are happy to announce, wholly without foundation. We published the letter, because its statements were made on the avowed responsibility of three medical men; and we the less regret the publication, although, no doubt, temporarily painful to Dr. Ryott, inasmuch as it has enabled him to set himself right in the good opinion of his professional brethren, and has relieved them from suspicions which must have been anything but agreeable. We have ourselves seen Dr. Ryott's diploma as Fellow of the College of Physicians of Edinburgh.—Ed.

[To the Editor of the Medical Times.]

Sir,—Immediately upon the perusal of the communication which appears in the current number of your journal, we deemed it our duty to address the following letters to your correspondents and to Dr. Ryott:—

TO J. HORNER, THOMAS HAYMES, AND JOHN HUTTON, ESQRS., &c. &c.

46, Princes-street, Soho, June 12.

Gentlemen,—We have read your communication to the Editor of the *Medical Times* in the current number of that journal.

We beg to reply that Mr. Churchill is the publisher only of "The London and Provincial Medical Directory," and cannot justly be held responsible for its contents or editorial management; that we published Dr. Ryott's qualification upon the same authority as we published yours, namely, the information he, or it may be some trickster, forwarded to us in reply to our circular of inquiry, a portion of which reply we enclose, in order that you may be able to identify the handwriting.

It is quite possible to deceive us in regard to the Edinburgh University, for, unlike the London licensing bodies, there is no published list of its members, and we have consequently no means of reference, unless it be to the registrar of that university himself. We beg to assure you, it has not been from any want of courtesy or appreciation of the point in question, affecting as it does the interests of the Directory, that we have hitherto omitted to reply to your letters. Every moment of our time has been employed in an important section of our next year's Directory, and on its completion you would have heard from us.

We are, Gentlemen, your obedient servants,

The Editors

of "The London and Provincial Medical Directory."

P.S.—Your earliest possible reply in respect to the handwriting will be esteemed a favour.

TO WM. HALL RYOTT, ESQ., M.D., &c.

46, Princes-street, Soho, June 12.

Sir,—We have received three several letters from medical practitioners at Thirsk, desiring to know upon whose and what authority we have inserted your name in our Directory as a qualified medical practitioner.

For reasons of our own we have not as yet replied to those communications, and this week, in the *Medical Times*, our publisher, Mr. Churchill, has been attacked upon the subject. It will now be necessary to reply, and it will give us great pleasure to be able to show that the information you gave us was correct, and that it is not "an error."

Your reply, by return of post, will much oblige, Sir, your very obedient servants,

The Editors.

To the former of these letters we have received no reply, but from Dr. Ryott we have been favoured with a polite and temperate communication, enclosing diploma and official letters, proving that he is in every respect that which he has represented himself to be—a graduate of a university after residence and examination, and a fellow of the Royal College of Physicians of Edinburgh—facts upon which we ourselves had never the slightest doubt.

From another source we have the satisfaction of finding that Dr. Ryott is not only duly qualified, but highly esteemed in his locality, and in considerable practice—too successful, as it would appear, to be agreeable to his competitors; to this, we fear, may be traced the unworthy *animus* which has been exhibited against him.

Error in the entry there undoubtedly is, but it is *ours* and not *his*. In the first attempt to compile the provincial portion of our Directory, it would have been strange indeed if errors, clerical and typographical, had not occasionally occurred; but, for the honour of the profession be it said, only in one instance have we been made aware of a wilful misrepresentation of facts such as has been most unjustly imputed to Dr. Ryott. Bold, indeed, must that man be who would deceive us, for ultimate exposure is inevitable.

After this plain statement of facts, we hope to see a suitable *amende* made to Dr. Ryott by his calumniators. As to the imputations they have thought proper to cast upon ourselves, we now leave it to your readers to judge whose conduct is most open to suspicion?

We are, Sir, your obedient servants,

The Editors

of "The London and Provincial Medical Directory."

[To the Editor of the Medical Times.]

Sir,—A letter has appeared in the *Medical Times* of Saturday last which I beg to notice.

I am not a graduate of the University of Edinburgh, nor have ever stated myself to be so, nor designated myself otherwise than the terms of my diploma warrant.

After fulfilling the whole of the conditions required by the Royal College of Physicians of Edinburgh, and passing the usual examinations, (a) I had the honour of being unanimously elected a fellow of that body in May, 1848. On reference, my name will be found in the published list of the fellows of the college.

I am, Sir, your most obliged servant,

William Hall Ryott, M.D.,
and Fellow of the Royal College of
Physicians, Edinburgh.

Thirsk, June 14.

CORONERS AND MEDICAL WITNESSES.

[To the Editor of the Medical Times.]

Sir,—Permit me, through the medium of popular periodical, to call the attention of numerous readers to what I believe may be called abuses of the Coroner's Court, with view of rectifying them, and also for informing the medical world of the powers vested in the coroner, especially in reference to the treatment of the medical profession by some of those functionaries.

To elucidate my position I will suppose a case (by no means rare, and which has occurred to myself more than once). A person is found in the agonies of death: Mr. A., a surgeon, is sent for; he promptly attends; tries all his endeavours to save life, but the person dies; his opinion, gathered from symptoms present during life, is, that death was occasioned by poison. After the lapse of a few days he hears, that a coroner's inquest has been held on the body; no medical evidence has been procured, yet a verdict of "Died from poison" is recorded. A rather summary but not very proper way, in my opinion, of deciding the cause of death.

Another way in which such cases have been disposed of is the following, in which the medical practitioner is treated with the greatest contempt.

Intelligence of the death of an individual having reached the ears of the coroner, he issues his warrant for holding an inquest upon the body of the deceased person. The surgeon, Mr. A., who saw and attended the case, is summoned to attend such inquest at a time and place named; he obeys the command; and, to his surprise, finds Mr. B. (a surgeon also) there, who has received an order to make a *post-mortem* examination of the body, entirely without the knowledge of Mr. A.—neither the coroner nor Mr. B. having courtesy sufficient to inform him (Mr. A.) of such proceeding.

In this case the evidence of Mr. B. is taken first, or attempted to be taken: if it be so taken, the evidence of Mr. A. can, at the option of the coroner, be frequently dispensed with (which has been done); and Mr. A. has had the privilege of quietly wasting an hour or two of his valuable time, whilst Mr. B. has had the advantage of astounding the jury by his learned observations on the anatomical appearances presented, or of demonstrating the chemical effects of every-day tests and reagents upon the poison he removed from the stomach of the deceased.

Now, I would ask, should these things be? I conceive that no one can by possibility be so likely to tell whether the poison has been administered by the hand of a murderer, or by the deceased himself, as the practitioner who first saw and attended the case. I cannot suppose that the mere fact of demonstrating the presence of a poison in the stomach can at all show how it got there. Under such circumstances then, Sir, has not the Mr. A. a positive right to be examined, and cannot he demand such an act of justice from the hands of the coroner? If he does not possess this right, the subpœnaing him to such a tribunal is made the vehicle of an outrageous insult to him personally, and highly derogatory to the profession, of which he may be a retiring member.

(a) *Vide* "Medical Times Almanac" for 1846; p. 12.

Craving your pardon for so long trespassing on your valuable columns,

I beg to subscribe myself, Sir,

Yours obediently,

A General Practitioner.

June 15.

[The coroner acts unfaithfully to his office in both the cases given; in one of them he also acts illegally.—Ed.]

IS THE SOCIETY OF APOTHECARIES IN EXISTENCE?

[To the Editor of the Medical Times.]

Sir,—I have addressed, within the last twelve months, nearly a dozen letters to the Society of Apothecaries, relative to the prosecution of a person named John Frost, practising without a qualification at Hucknall Torkard, in this county, without receiving the slightest notice of their receipt. To me the prosecution of this man is of the utmost importance. I have collected evidence, and forwarded it to the society, which would indubitably lead to conviction, undertaking at my own cost to prosecute, if they will furnish me with such instructions, derived from their past experience, as will put me into a train most conducive to a favourable result,

In the letters sent by me from time to time I have stated the residence of the parties, attended and prescribed for their diseases, and have forwarded bills and receipts given, according to the printed instructions furnished me nine months after my first application to them. Is no notice to be taken of, no prosecution to be commenced against, a man who has got into practice without one day's attendance upon lectures, one single fleshing of a scalpel, one ingress into a hospital porch? Is he to hold the appointments of surgeon to clubs, which he does in my district, and send the public to their long homes, in blind confidence, without a sixpence having been expended on his education, without the necessary test being applied to him as well as ourselves? Whence do we derive advantage from dangerous and long-continued study, if the society will not notice such flagrant cases as this, one of the most gross, unjustifiable infringements of the privileges we are supposed to obtain from the possession of, and payment for, the Apothecaries' license? I wish no expense to be incurred by the society: their pockets are too shallow, their willingness to fight the battle of their licentiates to weak, to undertake all the numerous actions they *should* enter into; but *courtesy, common decent courtesy*, should claim from them at least a reply when they are applied to. I am not singular in the slight thrown upon me: others equally ready to fight this fight in the criminal courts have met the same contempt, the same studied, careless indifference to our oft-repeated addresses on this subject. Why have the society issued manifestoes stating their willingness to prosecute, and withheld even the small gratification we should derive by a communication directing the best means to be employed against individual instances of illegal practice? Am I or others to see year by year roll by, and our means of subsistence taken out of our mouths by such supine indifference as the very men who hold the power of prosecuting, but fail to use it, show? Let them rather positively state that their license is of no value to the owner, than uphold a position before the world detrimental to the adoption of future legislative measures, because Parliament believes in the existence of a check to illegal practice where it exists not, and consequently a work of supererogation to invent new laws. A sword unsheathed is no terror to the riotous; a code unenforced checks not the illegal mountebank. But I am infringing upon your valuable space by this digression; and I therefore, living a long distance from London, conclude by asking whether the Apothecaries' Hall—where I had to register at for three long years, where I paid my money for a diploma after testing my capability to practise—still exists? whether there are clerks and officers in that dingy worn-out home of the apothecary? whether, in fact, there [illegible] who alone [illegible] enough to [illegible] the practitioner whose bread depends upon the effectual trampling under foot all such disreputable mountebanks.

I remain, Sir, your obedient servant,

Arthur Edeworth.

Surgeon to the Basford Union and Bulwell District.

Bulwell, near Nottingham, June 11.

SIR JAMES EYRE ON OXIDE OF SILVER.

[To the Editor of the Medical Times.]

Sir,—It is right that we should be well informed respecting all the properties of the oxide of silver—a comparatively new medicine, which is gradually, but surely, becoming universally received by the profession.

If your correspondent, Mr. Underwood, had read my "Practical Remarks," published two years ago, he would have seen that, in the fifty or sixty cases there concisely stated, I invariably administered the remedy in combination with the compound powder of tragacanth—a powerless vehicle, from which no evil effects could possibly arise.

Two years of additional experience, gained in private practice and at a public charitable institution, enables me to state that the only drawbacks I have heard of have arisen from its employment in cases in which it has been directly contraindicated—namely, during the existence of febrile symptoms, and when the oxide was not *properly prepared*.

The first objection I have fully anticipated elsewhere; and the next is too obvious to require a moment's consideration.

As to its alleged effect of *blackening the skin*, I have not met with it in one single instance, during the interval of five years, since its introduction to public notice; and the two recorded cases (which rest upon isolated testimony) appear to have been produced by a species of unwarrantable perseverance in its employment. I can safely aver, if for the rest of my life I were debarred from using more than a dozen remedies, I would place high in the restricted list the oxide of silver.

If medical practitioners will only accept *reasonable* testimony, and will apply this valuable remedy, judiciously, in cases adapted to its use, and in the manner I have fully indicated, I can unhesitatingly assure them that their expectations will in few instances be uncrowned by success.

I am, Sir, your very obedient servant,

James Eyre.

Lower Brook-street, Grosvenor-square, June 15.

DEATH OF MR. WALKER, SURGEON, MANCHESTER.

[To the Editor of the Medical Times.]

Sir,—

"What shadows we are, and what shadows we pursue!"

said the celebrated Burke. So it is with men and things, when viewed dissociated from the hopes of Christianity and immortality, of which, with the Roman orator, we must say,—"Si in hoc erro, lubenter erro, nec mihi hunc errorem, quo delector, dum vivo, extorqueri volo."

Our friend Walker, surgeon to the Eye Hospital of this town, died on Tuesday, the 1st inst., in the prime of life, at the age of forty-four years. It is supposed that he had taken the fever, of which he died, on the tenth day from its accession, whilst prosecuting his duties as a surgeon to the Manchester union. By his death, society has lost a most amiable and unassuming character, the profession a bright ornament, ophthalmic surgery a clever and rising practitioner, and his family a kind and affectionate husband and father. Unfortunately, like many of our profession, he put off till too late the insurance of his life for the benefit of his family. His widow and numerous family are left, I believe, without any provision. The board of guardians have intimated their wish to meet the family to some extent, and a committee formed, presided over by the mayor, for the same purpose.

The late Mr. Walker was known by his writings, particularly by his "Oculist's Vade Mecum," far beyond the precincts of this town; and, if any benevolent professional friend wishes to contribute his mite, it will be gladly received and acknowledged, if sent to Elkanah Armitage, Esq., mayor of Manchester; or to Mr. Windsor, Piccadilly, Manchester, senior surgeon to the Eye Hospital; or to Mr. Noble, surgeon, Piccadilly, Manchester: or to myself,

Your humble servant,

A. W. Close.

Grosvenor-street, Manchester, June 14.

COPY OF A PETITION FROM REIGATE, SURREY.

TO THE HONOURABLE THE COMMONS OF THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND IN PARLIAMENT ASSEMBLED:

The humble Petition of the undersigned Medical Practitioners at Reigate in Surrey

Showeth—

That your petitioners have attentively read a bill now before your Honourable House, entitled "A Bill for the Registration of Qualified Medical Practitioners, and for amending the Law relating to the Practice of Medicine in Great Britain and Ireland."

That while your petitioners most anxiously desire an improved regulation of the medical profession, and in particular a registration of all authorized medical practitioners, they are of opinion that the present bill is objectionable in many points, especially in the clauses which relate to the education of future medical practitioners.

That your petitioners believe that no system of medical polity can be useful to the public and to the medical profession which does not place the education of future general practitioners under the direction of their own class, whose interest as well as duty it will be to maintain a high standard of education.

That the bill now before your Honourable House fails in this most important point, and, being altogether subversive of the present state of medical legislation, will not substitute an improved system, but the contrary.

Your petitioners, therefore, humbly pray that your Honourable House will not pass the bill into a law in its present form.

John Steele. Peter Martin.
George Hampton. Thomas Martin.
Joseph Sargant.

COPY OF PETITION FROM EAST RETFORD.

TO THE HONOURABLE THE COMMONS OF GREAT BRITAIN AND IRELAND IN PARLIAMENT ASSEMBLED,

The Petition of the undersigned legally-qualified General Practitioners

Humbly showeth—

That your petitioners consider "The Medical Registration Bill," now before your Honourable House, calculated to retard that advancement in the education of medical men, and in the sciences of physic, surgery, and midwifery, which the public require; and

That they beg the aforesaid bill may *not* be enacted into a law.

And your petitioners will ever pray, &c.

(Signed) Horatio Nelson,
S. F. Flower,
Wm. Gylby,
T. P. Davies,
T. R. Aston, } East Retford.
Samuel Marshall,
John Charles Hall,
William Mee,

June, 1847.

GOSSIP OF THE WEEK.

ROYAL COLLEGE OF SURGEONS.—The following gentlemen, having undergone the necessary examinations for the diploma of this college, were admitted members at the meeting of the Court of Examiners, on the 4th inst., viz.:—Messrs. Richard Denny Lake, Stow in the-Wold, Gloucestershire; Henry Fisher Hatherleigh, Devon; Thomas Thompson, Upper Hamilton-terrace, St. John's-wood; John Pierce Bowling, Hammersmith; Edward Davies, Dean-forest, Gloucestershire; John Holmes Perry, Worthing, Sussex; Frederick Horace Ransom, Sudbury, Suffolk; Charles Olley, Stapleton, Shrewsbury; William Ellerby, Bank Sands, Lancashire; and Christopher Irving, West Burton, Yorkshire. At the same meeting Messrs. James Henry and Henry Richardson passed their examination for naval surgeons. The former gentleman is a member of the London College, his diploma bearing date May 17, 1841; the latter gentleman is a member of the Edinburgh College. The following gentlemen, having undergone the necessary examinations for the diploma of this college, were admitted members at the last meeting of the Court of Examiners on the 11th inst., viz.: Mr. Edward Alsop Alton, near Cheadle, Staffordshire; Mr. John Penberthy Berryman, Penzance, Cornwall; John Henry Cook, Minories; Mr. Samuel Osborne Habershon, Rotherham, Yorkshire; Mr. John Lane, Oldham, Manchester; Mr. Charles Pite, Exeter, Devon; Mr. Thomas Christopher Weeden Cooke, Bristol; Mr. Peter Eade, Blofield, Norfolk; Mr. Victor de Merie, Strasbourg, France; Mr. John Wilson, Montego-bay, Jamaica; and Mr. Brady, Pimlico.

APOTHECARIES' HALL.—Gentlemen admitted members June 10:—Ernest Powell Wilkins, William Pollard Roberts, Joseph Morgan, Edwin Bunbury Passmore, William Pearson Ward, John Parker, and John Maund.

WAR-OFFICE, June 11.—98th Foot: Assist.-Surg. John Clay Purves, M.D., from the Staff, to be Assist.-Surg., vice Grant, dismissed the service by sentence of a general court-martial.—Rifle Brigade: James Edward Scott, M.B., to be Assist.-Surg., vice Howell, killed in action.—Hospital Staff: Thomas Washington Benjamin Buckler, gent., to be Assist.-Surg. to the Forces, vice Purves, appointed to the 98th Foot.

NAVAL PROMOTIONS.—Assistant Surgeons Frederick James Whipple (1837), Dr. David H. Wright (1845), and Dr. George Duncan (1845), to the rank of surgeon.

NAVAL APPOINTMENTS.—Surgeons Mitchell Thompson, to the Odin; William L. Methven, M.D., to the Vixen; Dr. J. J. Lancaster, superintendent in charge, to the Maria Somes convict ship. Assistant-Surgeon James Holt, to the Odin.

The following gentlemen have been elected officers of the Royal College of Surgeons of Ireland for the ensuing year:—President, J. W. Cusack, Esq.; Vice-President, Robert Harrison, Esq.; Secretary, Alex. Read, Esq. Council—Sir P. Crampton, Messrs. R. Carmichael, Wilmot, Read, Auchinleck, Kerin, Jacob, Tagert, Beatty, Hargrave, Ellis, Williams, Armstrong, Trant, Rynd, Adams, Butler, W. Colles, and Power.

COLLEGE STUDENT.—Mr. John Thomas Arlidge, one of the lecturers at the Aldersgate street School of Medicine, has just received the appointment of Student in Human and Comparative Anatomy at this College, in the place of Mr. John Williams, of Swansea, who has received the appointment of Assistant Surgeon in the H. E. I. C. service.

EDINBURGH ROYAL INFIRMARY.—HOSPITAL GANGRENE.—We learn that a form of sore resembling, if not very formidable disease, has appeared in the wards of this institution. It has already declared itself in some of the wards. A malignant form of erysipelas had done this on many former occasions in the wards of the old hospital, now reserved, we believe, solely for medical cases. The surgical hospital is distinct rooms, well aired, well conducted, yet it does not appear to be on a healthy site. We have not as yet learned that the disease, if it really be hospital gangrene such as it occurs in military hospitals, has yet been seen this summer in any London hospital.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—A list containing the names of eminent foreigners, members of the association, who have signified their intention of being present at the meeting, is placed in the Ashmolean Museum at Oxford. Prince Albert is expected on Monday, 28th inst. The committee express their regret that the present state of the local fund does not allow them to make preparations for giving tea and coffee at the evening meetings.

IMPORTANT TO THE MEDICAL PROFESSION.—There has been some commotion at Banbury amongst the guardians, the poor-law commissioners, and the medical men, as to which of these latter shall be appointed to the different districts. The guardians insist that, as those appointed last year did not do their duty satisfactorily, they may appoint others, whose qualifications may not, according to law, be quite in order.

MEDICAL INTREPIDITY.—We understand that Dr. King, the medical officer, and for a considerable period the commanding officer, of the overland expedition in search of Sir John Ross, in 1833-4-5, has addressed a letter to Earl Grey, as the Principal Secretary of State for the Colonies, volunteering his services in search of Sir John Franklin, who sailed, in the spring of 1845, in search of a north-west passage, and has not since been heard of. Dr. King maintains that to save Sir John Franklin's party, comprising one hundred and twenty-six men, it would be futile to attempt to convey provision overland to him, and he adduces in support of his opinion that the expedition upon which he was engaged for the relief of Sir John Ross failed in their attempt from the poverty of the country over which they travelled, although in that case they only contemplated to relieve twenty-three men. Over this inhospitable country an overland party in search of Sir John Franklin must necessarily pass. Dr. King proposes to the Government to send out one or more vessels laden with provisions next spring to the western land of North Somerset, where he maintains, for several reasons, Sir John Franklin will be found, and at the same time to call upon the Hudson's Bay Fur Company to store up provisions in their trading houses on the Great Slave Lake and the Mackenzie River. He then proposes, in company with any officer the Government may appoint, to be the messenger of such news to Sir John Franklin, and at the same time to take with him Indian guides for the conveyance of that veteran officer and his party, either to the provision stores on the Mackenzie River or the Great Slave Lake, or to the provision vessels, as may appear most desirable. He maintains that he is the only person who has all the requisites for such a journey,—youth, health, great physical strength, and an intimate acquaintance with the country and the Indians. Dr. King proclaims aloud against the Government for using secrecy in their scientific pursuits, for it is a fact, that beyond the walls of the Admiralty, not only the route that Sir John Franklin has taken is unknown, but also the means that board are adopting to relieve him. Such a course, he observes, is scarcely worthy the honourable service in which the explorers are engaged.

CAUTION.—There is a person calling himself Dr. Curtis advertising in the *Times*, "a medical practice for disposal upon very advantageous terms." A gentleman, anxious to settle himself comfortably, wrote to Dr. Curtis, at Yarmouth, and afterwards went down, when he found the *doctor's* shop window filled with loathsome specimens of the human frame in a state of disease, and his *modus operandi* was precisely the one adopted by the quack fraternity.

Baron Pasquier has been appointed surgeon to the King of the French, in the room of his father, the late Baron Pasquier, and M. Alphonse Pasquier succeeds as surgeon in ordinary.

ROYAL MUNIFICENCE FOR PROFESSIONAL ATTENTION.—The King of Prussia caused to be purchased, a few days ago, the villa of Thiergarten, occupied by Dr. Schoenbein, physician to the Queen, and then sent the doctor the purchase-deeds which bore his name as proprietor, in order to recompense the care and attention which he bestowed on her Majesty during her recent illness.

PRESENT MARKET PRICE OF THE "LANCET."—The extensive library of the late Dr. Lubbock, of Norwich, was sold by auction on the 17th ult. The attendance of medical men and of others was very large, and the competition among buyers more intense than was ever remembered by the oldest booksellers. One remarkable exception, however, was in the case of the *Lancet*, forty volumes of which, being nearly a complete set to the present time, were sold for the respectable sum of 20 shillings, viz., sixpence per volume. Twenty volumes of Longman's 'Green Journal' were sold for the more decent sum of two pounds.

OBITUARY.—On the 20th ult., at Gatewen, near Wrexham, T. Hayes, Esq., surgeon, son of the late T. Hayes, Esq., of Gatewen.—On the 16th of April last, at Kandy, Ceylon, of dysentery, Mr. Henry Simple Howlet, surgeon, aged 36.—At Glasgow, 2nd instant, William Laing, Esq., M.D., of typhus fever, caught in the discharge of his professional duties as a district surgeon.—At Ham common, Surrey, on Saturday, the 12th inst., John V. Bridgman, Esq., surgeon.—On the 6th inst., at Hammersmith, near London, Dr. Ludwig Calmann, aged ...—On the 10th inst., at 32, Doughty-street, in the forty-sixth year of his age, John James Wilson, Esq., surgeon, deeply and deservedly lamented.—On May 31st, at Ballinrobe, of typhus fever, John Roycroft, M.D.—June 11th, at Liverpool, of typhus fever, John Whittley, Esq., surgeon to one of the union districts.

MORTALITY TABLE.

For the Week ending Saturday, June 12, 1847.

Causes of Death.	Total.	Average of 5 Winters.
ALL CAUSES.... ...	840	914
SPECIFIED CAUSES	839	908
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	157	166
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	87	90
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	137	150
Diseases of the Lungs, and of the other Organs of Respiration . ..	262	275
Diseases of the Heart and Blood vessels ...	37	27
Diseases of the Stomach, Liver, and other organs of Digestion	61	70
Diseases of the Kidneys, &c	12	8
Childbirth, Diseases of the Uterus, &c.	8	10
Rheumatism, Diseases of the Bones, Joints, &c.	10	8
Diseases of the Skin, Cellular Tissue, &c.	5	2
Old Age............... .	41	57
Violence, Privation, Cold, and Intemperance....	22	26

SUGGESTIONS

FOR A MORE SIMPLE ARRANGEMENT OF THE

MATERIA MEDICA,

BASED ON ITS PHARMACEUTICAL AND THERAPEUTICAL RELATIONS.

By GEORGE LEITH ROUPELL, M.D.

Cantab., F.R.S., Fellow of the Royal College of Physicians, Physician to St. Bartholomew's Hospital, Lecturer on Materia Medica at the College of St. Bartholomew's Hospital.

LECTURE II.

In my last paper I endeavoured to show that some further classification of the materia medica was desirable, the numerous subjects included under that head tending to create embarrassment and confusion. The efficacy of our drugs has now been ascertained, in almost all instances, to be due to certain principles capable of separation in an isolated state and in a pure form. These, when carefully prepared, are found to constitute but a small portion of the whole substance formerly employed and exhibited as medicine. It has always been one great object of pharmacy to discover improved methods of thus preparing our remedial agents, and greater convenience of form has been constantly aimed at by all medical practitioners. This has been achieved by the pharmaceutists of the present day, and to them great credit is due for the vast improvement which has taken place in their especial department of science. We are now furnished with remedies, not only powerful in effect, but definite in composition, a more accurate method of analysis, joined to an enlarged acquaintance with the constituents of organized bodies, enabling the pharmaceutical chemist to accomplish with certainty this object. Modern pharmacy, it was remarked, consists to a great extent in the preparation of these principles, and the use of them in practice is rapidly superseding the employment of what we may almost term the crude and raw material. Proximate principles, then, that combination of elements derived from, and eliminated by, the various kingdoms of organic nature by which morbid actions are controlled, obviously demand our chief consideration in studying this division of the materia medica. An accurate knowledge of their properties is essential in the highest degree to the medical practitioner; it is essential as enabling him to detect impurity and adulteration; it is essential in order that he should exhibit them efficiently and securely; it is essential with the view of investigating the operation of our remedies, and of endeavouring to detect their hidden mode of action. The study of the natural orders of plants shows us, in the vegetable world, how directly structure and function are allied, furnishes us with abundant instances of whole families accurately resembling each other, as well in their products or results of their vital actions as in their outward shape and characters. These facts are in the highest degree curious and interesting; they are, moreover, important; for although we could not in medicine substitute one for another, relying upon the mere relationship, yet the knowledge we thus obtain multiplies largely the sources from which the principles alluded to may be derived. What I am endeavouring, however, to inculcate is, that it behoves us to regard our drugs pharmaceutically and as remedial agents, not botanically, and it was stated as my opinion that we should best advance the study of materia medica by condensing the matter which it embraces, and by simplifying the form in which it is usually presented to the student. The best plan of doing this appears to me that of classifying drugs according to the leading characteristics, chemically speaking, of the active agent which they may contain. It has long been my desire to accomplish this task, and even now it may be thought premature to attempt it, the composition of some substances being still doubtful or unknown. To wait, however, till all questions of the possible constituents of organic bodies were ultimately settled would be to postpone indefinitely this improvement in arrangement, if improvement it be. Nor in other sciences is such completeness thought essential. The enunciation of the law of gravity was made long before its full bearing could be perceived; application tested its soundness, and errors in its use were corrected by experience. The advocates of the natural system of plants are agreed only in the general outlines of the various families, groups, and alliances of plants. Though of one mind with respect to the leading features of their orders, the minuter subdivisions are sufficiently diversified. Whole classes in the animal kingdom are removed from one subregnum to another as improved knowledge discovers more or less perfection in their structure, and points out more strictly their rank in the scale of creation. To delay, then, my proposed arrangement because analysis in certain instances were defective, or because the active ingredient in some drugs had not yet been decided upon, would be an unnecessary scrupulousness. Nor is it incumbent upon us to consider any classification as complete or final: it is enough if it can be shown that by it information can be more readily conveyed to the mind of the student, and more easily retained in his memory. We may, indeed, create in imagination a perfect arrangement, but that must imply a thorough understanding of the functions of the human frame—of nutrition, growth, and decay—with the full insight into all that takes place in the blood for the regeneration of the tissues and the purification of the circulating fluid. When we know all this, and can estimate the influence of all disturbing causes, from whichever of the innumerable sources of disorder they may be produced, we may then look forward to some certainty in our arrangements and finality in our classification. For the present we must be satisfied with the endeavour to approximate, however remotely, to the standard of perfection, and be content if satisfied that we move in the right direction; and this I believe we shall do by the arrangement which is now suggested. The active principles, then, will form the heads under which the various drugs belonging to the organic kingdom will be treated of, and their medical and pharmaceutical relations will be the leading objects for our consideration. Any one who looks at the materia medica will be, perhaps, surprised to find how many of the individuals which compose it have been placed there from their containing analogous principles, not duplicates merely, but multiples often repeated of the same agent. Nearly one fourth of the vegetable materia medica obtains its place in the list of remedies from its containing an essential oil. With this organic product very many of the natural orders abound, as is well known, with respect to the labiatæ, umbelliferæ, the myrtaceæ, and many others. Now, although essential oils undoubtedly differ in some respects, as in flavour, in colour, in strength, and, in some degree, in effect, yet they all possess certain properties in common, are separable from the herbs which produce them by a common process, and they all have certain definite chemical relations; they may, therefore, each be grouped together. About one tenth of vegetable drugs appear to have been introduced from the astringent principle, the tannin and gallic acid, which they contain. Fixed oils, again, and resins, gums, and some other reading principles, furnish us with heads for large and important classes under which, with the nitrogenized products, it might seem that the materia medica might readily be arranged. More readily, indeed, it seemed at first sight than was found afterwards to be the case, for difficulties, in truth, presented themselves which it was necessary in some degree to get over. One drug contained several principles, and a question might fairly be raised to which its medicinal properties were to be referred. The febrifuge and the astringent properties of the cinchonas may be quoted as an

example, each being required in particular cases In this instance repetition, they be necessary The efficacy of other vegetable substances moreover, may again be d[illegible] not to any one particular principle, but to the admixture of many, as some believe with regard to sarsaparilla, so that it may be difficult to assign to it a locality. Another objection may be urged, viz., that the effect as a remedial agent has little to do with the chemical composition of the active portion.

Purgatives may be found amongst the resinous bodies, or oils, or bitters. These are some of the points which may be urged by some as objections to my suggested classification. I shall not stop to refute them, but shall content myself with expressing my idea that, if in reality they are objections, they are much slighter than those which may be urged against other arrangements.

The classification assumes the active portion of a drug as the index of its position pharmaceutically: by this plan the labour of the student will be facilitated, and by it his memory will not only be less taxed, but will be essentially aided. The investigation of the *modus operandi* of our remedies will be aided by directing attention to the active portion of our medicinal agents, and reflecting upon their qualities, their chemical agencies, and their possible catalytic influence. These ideas, let me add, are not sudden thoughts hastily adopted: they have often been stated in my lectures as desirable, and it seems to me important to advance them now, from the addition which is daily made to the list of the materia medica, by the introduction of new, or the restoration of old, remedies. The improved state of physiology and the perfection of organic analysis would also be arguments in favour of this as the appropriate time for such a measure.

In the arrangement, moreover, which it is proposed to submit regard will be had to the fact that the materia medica is usually studied in the first year of the medical pupilage, when accurate chemical knowledge cannot then have been acquired. Minute atomic calculations will be out of place. Practical utility will be more thought of than chemical accuracy of arrangement. Instead, therefore, of beginning with ultimate elements or the laws of affinity, I shall commence with the statement of the fact, th[illegible] by certain modes of proceeding we can procure from vegetables peculiar definite compounds, and I shall at once consider the most important, those which produce the most powerful effects upon the living system. Such are the vegetable alkaloids. I shall next treat of the (neutral) bitter principle of plants, and then of the astringent principle—one sufficiently important to constitute the heading of a class; subsequently in order will follow such principles as are usually found naturally in combination, as resins, essential oils, and gums. Starch, sugar, and the vegetable acids will then come in juxtaposition; and, lastly, will follow the vegetable colouring matters, which, although inert as remedies, are necessary to be studied. It cannot be said that any drug is introduced into the materia medica on account of the albumen which it contains, yet we must not conclude the consideration of organic principles without regarding this, which is so invaluable as an antidote upon particular occasions—useful sometimes as a vehicle for certain remedies—is valuable as a pharmaceutical, and most essential as a dietetic, agent. This comprises the outline of the scheme which I venture to propose as capable of enabling me to condense greatly the subject before me, and into which I shall enter more in detail in my next paper.

A COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the Theatre of Queen's College, Birmingham.
By SAMUEL WRIGHT, M.D.,
[illegible] Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham, Physician to [illegible] Dispensary, Extraordinary Member, and [illegible] Senior President, of the Royal Medical, Royal [illegible] Hunterian Medical, and Cuvierian Natural Societies of Edinburgh, &c.

Secondary syphilis and syphilitic iritis; recapitulation of a previous observation concerning pain in the head; attempt of the patient at deception; suggestions which this part of the subject offers; circumstantial proof against the patient's statement; parallel cases; case of old-standing venereal disease denied; evasions in gonorrhœal cases, case of death from procured abortion, in which the patient denied to the last having made the attempt; details of the case of iritis; treatment, recovery; subsequent occurrence of conjunctivitis in the opposite eye from cold; peculiarities of iritis; dangers of adhesive inflammation, especially when affecting the eye; modes in which its mischief is produced; objects to be fulfilled in the treatment of iritis; bleeding, blistering, alkalis, mercury, belladonna.

GENTLEMEN,—Some time ago we had an instructive case of secondary syphilis and syphilitic iritis, in the hospital. I will make its detail and comment the substance of to-day's lecture.

You will remember my speaking, in my second lecture, of the varieties of headache; and telling you, when a patient complained of shooting pains through his temples and ears, aggravated at night-time, to be suspicious of syphilis. In a few days I was enabled to offer you a good illustration of what I had said on this point.

Edward Knibbs, aged thirty-six, was the subject I allude to. On the day of his admission (late in December), I was not able to visit the hospital until between three and four o'clock in the afternoon: I found him sitting on his bed with his back to the window, and in that situation the light fell so feebly upon his face that I had a very indistinct view of it. After having put a few questions, I learned that he suffered from severe pains darting through his temples and ears, particularly when he became warm in bed. I inquired whether he had any soreness of his nose, and found that it was tender at the root, on pressure: I learned, also, that his throat had occasionally been sore for some months past. Suspecting what was the foundation of his ailment, I turned him towards the window, and then saw that his face, and his forehead especially, was covered with roundish copper-coloured patches. These, he said, had existed for about three months.

At this moment of questioning, a circumstance occurred which not only confirmed my opinion as to the nature of the patient's malady, but showed also how prone is human nature to the weakness of withholding a confession of its infirmities, from those whom it much concerns to be made acquainted with them. An old adage says,—"There are three persons whom you should never think of deceiving—your lawyer, your minister, and your doctor." The business with which it is the province of these to deal should always have the truth told of it; and yet, important as this truth is, it is rarely uttered without some attempt at qualification or concealment. At least so say legal and clerical functionaries; and our own profession can furnish ample testimony to the fact. The case of this patient is a good illustration. Directly that we obtained a fair view of his face, Mr. Bird, our intelligent resident medical officer, remarked to me, in an under tone—"a case of *lues*, is it not, Dr. Wright?" The question was asked in so low a voice, that I should have hardly recognised it, had not the train of thought which was passing in my mind aided its comprehension. It was quite impossible at the distance the patient stood, that he could have heard the precise query, yet suspecting its nature, and knowing himself guilty, he instantly rejoined—"No; nothing of the sort; never had such a disease in my life." This at once satisfied me how correct was my first suspicion. Had other evidence been wanting, the very fact of his being so ready to anticipate our opinion, and so apt and earnest in concealment, would have made me condemn him in my own mind—just as I always suspect a man to be a coward who is constantly vaunting his courage, or doubt the good principle of another who is incessantly boasting of his honesty. Pharisees and Falstaffs generally reveal their true character by the very efforts they make to conceal it.

I subsequently told this man, without any reserve, what was amiss with him, but could not get him to confess that he had ever had venereal disease in his life. He boasted how continent he had been before his marriage, and how constant since; all of which I little believed; and the less, when, on looking at his throat, I found good evidence of old ulcerations there.

I dwell upon this part of my subject, because it may be of some use to you to [illegible] told how exposed you will be to attempts at deception in the course of your future practice. It is important, not only that you be made acquainted with the liability, but that you be duly cautioned against it. Experience will astonish you with its many evidences how treacherous human nature can be, when a sense of danger or of disgrace becomes suggestive of falsehood. The utter coolness with which people will tell deliberate untruths, under these circumstances, is a pitiful curiosity in the moral history of our species. In the case I have just mentioned the man knew what his disease was, and well knew what was my own opinion concerning it, for I positively told him that it was venereal, *and as such I should treat it*; yet, whilst he denied the nature of his ailment, a sense of personal safety reconciled him to the taking of whatever medicines I might order. Had he been as certain as he said he was that his system was untainted, he would have left the hospital rather than have wallowed physic which he was convinced was unsuited to his case.

I am at this time attending a dispensary patient, who has been under my care, at intervals, for the last two years, with indications, obvious enough, of secondary syphilis. At my first interview I told her what my opinion was of her disease; and I learned that such was the opinion of every medical man whom she had previously consulted; she unceremoniously told me so, but affirmed, nay, was ready to swear, that there was not the remotest foundation for our suspicions. She has suffered horrible disfigurement from her disease, for her nose is completely gone, and her face blotched, which I said might have been spared had she confessed to her early medical advisers the nature of her malady. I hinted further, that, if she were now treated injudiciously, her life might be sacrificed, and urged the possibility of this as an argument why she should tell the truth of herself. But all to no purpose: as obstinately as ever did she persist in declaring that, though she lived in a suspicious situation, her own character was beyond impeachment. To my inquiry how she obtained a livelihood, she declined giving any answer. I then informed her that my opinion of her disease was unchanged, and that I should treat her accordingly; so that, if she thought I was wrong, she had better not come under my care. To the treatment, however, she offered no objection, and, as I said, she has repeatedly been my patient for the last two years.

You sometimes meet with cases of gonorrhœa as palpable as possible, in which the patients disclaim all knowledge whatever of their infection, or the cause of it. A short time ago I was consulted by an individual for this disease, who became somewhat indignant when I told him what it was. He pompously informed me that he was married, and had the best of women for a wife: to this I merely replied with the opinion that, if his better half were to speak the truth of him, she could not return the compliment. Finding that I was neither to be persuaded nor swaggered out of my belief, he confessed that appearances were very much against him, and suddenly recollected that he had been at a strange water-closet a few days previously, where, he had no doubt, the infection had been contracted. This is a very common story with such delinquents.

The specimen which I now show you, is a portion of intestine taken from a girl who died from inflammation of the bowels a few years back. The first piece of whalebone passes through the ileo-cœcal valve; the second, in the cœcum itself, passes through an ulcerous opening,

quarter of an inch in diameter. The suddenness and symptoms of the girl's illness led to a suspicion that she had taken some acrid material to procure abortion. She was questioned on the subject, but denied the imputation most emphatically. As her danger became more apparent, and some corroborative proofs of her criminality had been elicited, she was again charged with the offence, which she again denied as solemnly as ever. When told that she was dying, and that further falsehood was useless, for her body would be examined after death, she still persisted in her statement, and actually died in its maintenance. The *post-mortem*, which was conducted by my colleague, Professor Sands Cox, showed clearly enough that the uterus had been impregnated, and that its contents had been recently expelled. The intestines, throughout, were in a state of inflammation, and in this part, as you see, ulceration had occurred. In places we found a quantity a greenish vegetable matter, which, on examination by Professor Knowles, was discovered to be savine.

I have mentioned these cases to show you, as I before said, how liable you will be to attempts at deception in the course of your practice, and how necessary, in many instances, you will find it to maintain your own opinion against declarations and specious arguments to the contrary.

To return now to the case which suggested these reflections. Satisfied of the nature of the man's disease, he was ordered the following:—

℞. Decoct. sarsaparillæ comp., ℥viij.; liq. potassæ, ʒj.; hydroiod. potassæ, ʒss.; misce, fiat mist. cujus cap. coch. larg. duo ter die.

℞. Pil. colc. comp., ℈ij.; pil. hydrarg., ℈j.; misce in massam dividendam in pilulas xij. quarum capiat ij. omni nocte.

Under this plan of treatment the man in a fortnight began to improve. His appetite became better, and he increased in weight. His nose was less tender on pressure; throat less sore; and the pains in his head did not now prevent him sleeping. The eruption, also, was much lighter in colour. On the 16th day succeeding his admission I found him with strong inflammation in his right eye. He had not been out of the hospital, and was not conscious of having taken cold. The day previously he felt a pricking sensation, and occasional shooting pains in the organ, which increased until bedtime, and kept him awake during the greater part of the night. The eyelids were red and swollen; eye watery, and intolerant of light; conjunctiva injected; a dull reddish colour extended along the lower portion of the pupillary margin of the iris, which was here slightly irregular in shape; the movements of the iris were more sluggish than natural, and during these the irregularity of structure became very evident. The left eye was quite unaffected. The patient complained of thirst and feverishness; skin hot and dry; tongue covered with a thick fur; urine scanty and high-coloured; bowels moderately open; pulse 126, small and hard. He was requested to keep in bed, and have his eye protected by a large perforated shade. He was ordered fever diet and the following:—

℞. Sodæ bicarb., vini ipecac., aa. ʒj.; aquæ, ℥viij.; M. ft. mist. cujus cap. coch. ampla duo tertiis horis cum pilula.

℞. Hydrarg. chloridi, gr. iv.; ext. hyoscy. q.s. ut ft. pil. viij.

Adhr. emp. lyttæ pone aurem dextram.

On the following day the evidences of iritis were more manifest, but the conjunctival inflammation was less, and the general febrile symptoms were diminished. The medicines were ordered to be continued; a saline aperient draught to be taken immediately, and the blister to be dressed with strong mercurial ointment.

During the following days, up to the sixth day succeeding the inflammatory attack, the patient progressed as well as could be wished: at this period there was nothing unnatural in the appearance of the eye, except a little irregularity in that part of the pupillary margin of the iris already alluded to. There was no pain in the organ, and it bore the influence of light tolerably well. In other respects, also, the patient was better. The gums were tender and tumid; and the breath had the mercurial fetor, but there was no salivation. The calomel pills were now stopped; the blister was dressed with spermaceti cerate, and the sarsaparilla mixture given, as at first. Additionally, he took five grains each of compound colocynth pill and extract of henbane, every night.

With this treatment he continued further to progress, and, at the end of another week, the right eye was in all respects natural, both in appearance and function. The general health of the patient was also much improved, and the blotches on his skin were scarcely recognisable. In a day or two from this time he was out one evening until after dark, and got soaked in a drenching rain. The next morning he had strong feverish symptoms, and severe conjunctivitis of the left eye. The iris was quite unaffected, and the right eye continued perfectly sound. He was again confined to bed; had his feet in hot mustard and water at night; took a brisk calomel purge; had a blister behind his left ear; and the following mixture was prescribed:—

℞. Sodæ bicarb., vini ipecac., aa. ʒj.; tinct. hyosciami, sp. eth. nit., aa. ʒij.; misce ft. mist. cujus cap. coch. magna duo tertia quaque hora.

He was directed to bathe his eye three or four times a day, for a quarter of an hour, with warm water. In three days all indications of conjunctivitis were gone; both eyes were healthy-looking, and performed their functions well, and every feverish symptom had disappeared. We then returned to the sarsaparilla mixture, and the patient had, additionally, five grains of compound colocynth pill every night, for his bowels were constantly needing stimulation. From this time we had no drawback, the man rapidly gained health and strength; had an excellent appetite and digestion; slept well, and was quite free from the pains that troubled him on his admission. His skin also became perfectly cleared of the copper-coloured patches that disfigured and characterized it when he first came in. You remember his stripping on the occasion of our last visit, and there was not a suspicious spot to be found on him. On the 10th of February he was discharged cured.

Iritis, whether syphilitic or simple, is a very formidable disease to treat, and should always be met by very determined and sustained measures. The organ seized, and the nature of the seizure, demand that no temporizing or merely palliative means be used. The great feature of iritis, and that which makes it chiefly to be dreaded, is the fact that the inflammation is of the *adhesive* kind. Under any circumstances, this variety of inflammation is to be regarded with anxiety; but the more especially so, when the organ it visits is peculiarly obnoxious to its worst influences. This is the case with the delicate texture of the eye I am alluding to. Adhesions of structures, naturally free, have more or less influence with the due performance of their functions—thus, when there are pleural adhesions, there is some peculiarity or other of respiration; when pericardial, the circulation is often at fault; when intestinal, there is frequently obstinate costiveness. Yet all or any of these may exist, and the subject of them be in tolerable health, and his life be prolonged to an average period of existence. With inflammation of a delicate tissue like the iris, the case is somewhat different. It runs a rapid course, and is either cut short before mischief comes, or commits that mischief very quickly. True, it is not destructive of life, but it is liable to be destructive of the functions of an organ that eminently ministers to the comforts, conveniences, and pleasures of life. To lose our eyesight, is to be debarred of many of the opportunities that make existence a happiness. The peculiar character of iritis renders it probable that, if the disease be not soon checked, an impairment or destruction of vision will soon be its consequence. As I have said, the inflammation is of the adhesive kind; and the effused material is apt to fix parts that ought to be moveable, or to fill others that ought to be open. Thus, the movements of the iris may be prevented by the effusion, partially or wholly, of lymph into its texture; or on to the uvea, attaching it more or less to the crystalline lens; there may be effusion into the anterior or posterior chamber, or both, or the pupillary space may be completely filled with lymph, constituting complete blindness; the crystalline capsule may have an adventitious deposit upon it; the posterior tunics may become altered from an extension of the inflammation; and other various disastrous effects may easily be the issue of this said ailment.

The great object in treating it, is to lessen the violence of the inflammatory action, and change the character of its products. In effecting this, it is of paramount consequence to attack the disease at its commencement: if, on the earliest manifestations of iritis, remedial means be used, it is easily restrained; if it have advanced some length, its restraint and reparation become proportionately difficult. A few weeks ago I attended, in consultation with Mr. Middlemore, a young gentleman, the subject of syphilitic iritis. We had to keep him under the influence of mercury for a month, and confine him to the house for more than double that time. It is probable that much less treatment would have sufficed, had he followed the advice first given him, to keep at home, and submit to medical discipline at once, instead of trifling with the disease, until it became all but intractable.

In treating iritis you ought to remember two things—first, that it is inflammation; and, secondly, that it is attended with the effusion of coagulable lymph. These conditions you have especially to combat. The first you answer by direct depletive means—leeching, cupping, or bleeding from the arm if the inflammation be strong enough to require it. If it be met at the commencement, as in the case you saw in the hospital, blistering behind the ear, or at the back of the neck, is generally sufficient. It is of importance that the blistered surface be kept open; it is a constant check upon congestion and inflammatory action near it. Additionally, low diet, saline aperients, and febrifuge medicines, as we ordered for Knibbs, are valuable auxiliaries. Patients will often solicit unsuitable food or drink; never give it them. It is important to keep the light from the affected eye. This is best done by a shade, which does not keep in the heat at the same time. Fine gauze wire, or green pasteboard, perforated with small holes, such as milliners use for the foundation of bonnets, is the best shade you can use.

To alter the product of inflammation in iritis—that is, to render the lymph less prone to coagulation—is one of the greatest points in the treatment of this severe affection. To this end alkalis and mercurials are invaluable contributors. They lessen the coagulability of the blood, and therefore diminish the plasticity of the effused lymph. In the treatment of iritis, amongst other accessory remedies, push these, and continue the use of them, until you find the disease begin to give way. It is said that mercury will both cause and cure iritis. The former I should very much doubt; and as for the latter, the drug is not *a direct specific*, as some people say, but merely produces its good effects by the means I have mentioned. Belladonna, so much vaunted in this affection, I think is only of use in aiding the action of the iris; and this I think it can only do after the subsidence of inflammation. Whilst this lasts, I feel persuaded that its services are useless. In the case of Knibbs we did not employ it, for the iris recovered its regularity, as I thought it would, without interference. The subsequent conjunctivitis of this man's left eye, the iris being unaffected, is a curious and, I suppose, unaccountable circumstance. I saw him a few days ago, and learned that he has had no return of his ailment.

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.(a)

By Professor MATTEUCCI, of Pisa.

PART I.

INTRODUCTION.

Living bodies are endowed with the general properties of all natural substances. No one, not even the most uncompromising *vitalist*, has ever ventured to dispute that organized living matter occupies space, and is impenetrable, divisible, and porous. How can it possibly be admitted that heat, electricity, light, chemical affinity, should act upon living bodies in a manner totally different from that in which they are found to act upon other natural bodies?

Some highly-esteemed physiological works of the present day contain still, tables pointing out the differences, nay even the positive contrasts, presumed to exist between organic and inorganic bodies. It would be a mere waste of time and argument to attempt to demonstrate that many of these pretended differences and contrasts are of little or no value. Animals and plants increase by *intussusception*; minerals by *juxtaposition*; or, in other words, in the former, growth takes place by *internal*, in the latter, by *external*, juxtaposition: for this reason that organized bodies secrete *within* them the dissolved elements of the new formations; whilst, on the contrary, inorganic substances find these elements placed at their *outside*.

During life an incessant struggle is going on between the physical forces on the one, and the vital forces on the other, hand; death is the triumph of the former over the latter. But is this fact sufficient to prove that the vital and physical powers are essentially distinct from one another, and antagonistic in their mode of action? Would it be correct to assert that the different parts which, united, constitute an arch, are endowed with a force opposed to that of gravity, simply because they do not fall?

Extent, impenetrability, divisibility, and porosity, the general properties of all natural substances, are inherent likewise in organized living bodies. Organic substances, plunged into water or other liquids, exhibit the same faculty of imbibition as sand, pounded glass, porous bodies, and substances formed of capillary tubes do. This property of living bodies is of the very highest importance. In a great number of animals, life (or, more properly speaking, the vital functions—the *manifestation* of life) may be suspended for a long time with impunity; such apparently lifeless animals, when brought into contact with water, which they have the faculty of imbibing, return to life and resume their usual movements. Who knows not the beautiful experiments of the illustrious SPALLANZANI on the rotiferous animalcule? Tendons or membranes, dried into a hard and horny mass, do not much look as if they had formed part of an organized body; yet, plunge them into water, and, in proportion as they get soaked, they will gradually recover the softness, suppleness, and elasticity which originally enabled them to perform the functions assigned to them in the living body.

Elasticity is a property of living bodies as well as of all other natural substances. Thus, for instance, a piece of intestine, or an artery, admits of being more or less stretched or compressed. Let the respiratory organs be removed from a corpse, and a tap fixed to the trachea: the opening of the tap will cause the lungs to collapse; the reintroduction of air, on the other hand, will cause them to swell and dilate again.

It would be very erroneous indeed to suppose these divers organs capable of performing their respective functions in the living body, independent of the elasticity of the intestine, artery, and the parenchyma of the lungs. Let that elasticity be destroyed, and the functions of these organs will be annihilated, or, at all events, altered.

The solid, liquid, and gaseous parts of living bodies are subject to the same laws of gravity as all other natural substances. It would be altogether impossible to explain the functions of respiration and absorption, without reference to the properties of the solids, liquids, and gases of the organic economy, and to their conditions of equilibrium. If we submit any organic substance to the requisite degree of heat, we observe the disengagement of gas, the escape of aqueous vapour; we see the carbon and hydrogen burn in the air, producing carbonic acid and water. We frequently find organic matter to harden and shrink at first upon the application of heat, instead of dilating and liquefying, as happens usually in the case of inorganic bodies; but surely no one will venture to attribute this different comportment with heat to the influence of a vital action, since, when these phenomena are observed, life has been long extinct in the organic matter exhibiting them.

All these effects are owing to a particular structure and the physico-chemical properties of the elements composing the organic tissues. In fact, organic substances submitted to the action of heat lose, in the first place, the water which they contain, and this expulsion of water commences in that part which is the most directly exposed to the influence of the heat; the loss of water causes the substance subsequently to curl up into the shape of a scroll, just like a piece of paper that has been moistened more copiously on one side than on the other, the wettest and, consequently, most expanded and elongated side occupying the convexity of the new shape thus acquired.

Organic substances frequently contain albumen, which the action of a strong heat causes to coagulate; their elements separate in the gaseous state, to form more simple and, consequently, more permanent compounds.

The electricity of tension pervades organized bodies; it spreads through them with greater or less facility according to their respective degree of humidity; the electric spark, passing through them, volatilizes them, burns them, reduces them to ashes. The electric current, transmitted through the fluids of living bodies, operates the decomposition of the salts contained in them; the acids collecting at one, the bases at the other, pole. Albumen coagulates at the positive pole, whither the oxygen and an acid frothy liquid likewise repair; the hydrogen goes to the negative pole, together with an alkaline fluid.

Every one knows that the luminous rays, in traversing the humours of the eye, deviate from the straight line, both divergently and convergently, according to the respective different density of the humours, and to the conformation of the parts which enclose them. The eye presents, in this respect, the same phenomena as are observed in a dioptric instrument.

Finally, the elements which compose living bodies obey invariably the general laws of affinity. Chemists can detect and separate them by the ordinary methods of analysis. Let them be subjected to the action of chlorine, bromine, or iodine, and the first element that separates will be hydrogen, which then combines *in statu nascente* with these metalloids to hydracids. All oxidizing agents of any strength will convert organic matter into acids.

But do all these facts, taken collectively, justify the conclusion that all the phenomena presented by living bodies may be explained solely by the general properties with which living organized matter is endowed, in common with all other natural substances, and by the action of the great physical forces—heat, light, electricity, attraction? Most assuredly not. Such a conclusion would be as far from the truth as the notions of those physiologists who have denied, and continue still to deny, to living bodies the possession of these general properties, and who look upon them as altogether removed from the influence of physical agents.

If we examine even what may, perhaps, not inappropriately be termed *the most physical, the most chemical* phenomena presented by living bodies, we find that the mode of action of the chemical and physical agents upon matter in the living organism differs considerably from that in which the same agents act upon inorganic matter; these differences are altogether inexplicable in the present state of our knowledge regarding the laws that govern these forces. Does not even the phenomenon of vision, which might be called perfectly and entirely physical, present certain peculiarities which have hitherto baffled all attempts at explanation? The most recent discoveries of science enable us, indeed, to explain the distinctness of vision at all and every visual distance, and the absence of coloured fringes; but do the physical laws afford us any explanation how it happens that our vision presents to us objects single, and in their natural position, from a double and reversed image? Again, if we look at the phenomena of hearing and voice, which seem simply effects of particular vibrations of the air, propagated through solids, according to the general laws of acoustics; how many peculiarities do they present, for which these general laws will not enable us to account? Science offers no perfectly satisfactory answer to any of these questions.

The chemical action of light, which decomposes the carbonic acid, carries the carbon, allied in new combinations to other elements, into the internal economy of the plants, disengages from the latter oxygen, and effects thus what the most powerful chemical affinities are unable to operate—is surely different from that chemical action which effects the decomposition of certain oxides, or certain metallic chlorides,—operations for which even the most feeble chemical actions suffice.

The singularity of the phenomena elicited by directing an electric current upon the nerves of any living animal, shows most clearly the immense difference that exists between the effects of the great forces of nature when acting upon living and organized bodies, and when acting upon dead and inorganic matter.

The cause of these great differences in the mode of action of physical agents upon living bodies, and upon other natural substances, is indeed a problem of the highest and most primary importance; but the present state of our knowledge leaves us, unfortunately, without any positive and satisfactory solution of this problem. We must not, however, on that account relinquish the analogies afforded to us by physics: a ray of light passing obliquely through a piece of glass, or a body of water, deviates from the straight line; if, on the contrary, it encounters a crystal of carbonate of lime, we see it separate into two rays, each of which deviates in a different degree. The cause of the difference of these phenomena lies in the diversity of the physical structure presented by the glass and the crystallized carbonate of lime, and, perhaps, likewise in the difference of the chemical nature of the respective molecules of the two substances. But this much is certain, that these modifications of the luminous ray are owing rather to the diversity of structure or to the particular disposition of the molecules, than to any difference of chemical composition. We know, in fact, that greater or less compression, in different directions, modifies and alters the action of glass upon the rays of light: the chemical composition of the glass remains here entirely unchanged, and the modification of the luminous rays must therefore be considered here as altogether independent of this chemical composition.

Who could confound an organized with an inorganic body? Let us look at the lungs, for

(a) TRANSLATOR'S NOTE.—The Italian work of Professor Matteucci (pretty generally known through a faulty French translation), though much decryed for its speculative excesses and extreme wordiness, contains much matter which, properly discriminated, possesses interest for the phy[illegible] and the medical practitioner. Instead, therefore, of following a bad model, and [illegible] "very imperfect" translation of an im-[illegible] translation, it is here proposed to give a [illegible] *abstract* or abridgment of the original work, publishing *at large* those portions only which are of real interest. The series will not comprise more than eight papers.

instance. In the groups of closed vesicles, of different sizes, collected and arranged in an irregular manner, there is surely *something* essentially different from an aggregation of polyhedral particles, united into a crystal. To assert, with certain micrographers, that organization is crystallization proceeding in a liquid which the first crystals formed have the faculty of imbibing, is equivalent to admitting that the structure of a stalactite is the same with that of the parenchyma of the lungs and liver.

Molecules composed of three elements, at the least, and consisting each of a very great number of elementary atoms, must necessarily form chemical systems of which the affinities differ from those presented by molecules composed, in most cases, of only two elements, and consisting of a smaller number of elementary atoms; and although the general chemical law, that compounds become less stable and permanent in proportion as the number of elementary atoms increases, explains sufficiently the tendency of complex organic bodies to resolve themselves into more simple compounds—and chemistry affords us, moreover, many instances of the same tendency in certain inorganic compounds which, in their composition, present great analogies with organic bodies—yet, notwithstanding, the laws of inorganic chemistry are manifestly insufficient to account satisfactorily for the chemical phenomena of life. We must, therefore, conclude that the molecular organization and structure of living bodies exercise a considerable modifying influence upon the action of the divers physical and chemical agents.

Moreover, the ordinary laws of affinity fail to explain those peculiar chemical phenomena which are termed actions by contact, or *catalysis*. In most of such catalytical processes we find that a certain body, usually present in very small quantity, causes, when brought into contact with other compounds, considerable transformations either in the chemical composition or physical properties of the latter, without itself suffering the slightest modification. The various kinds of fermentation belong to this class of phenomena. The number of such catalytical actions in living bodies is immense. We can effect them likewise in our laboratories; they are of the same nature with that exercised by highly divided platinum upon a mixture of hydrogen and oxygen, or of highly divided silver upon oxygenated water.

The *cell* may be looked upon as the elementary organ—the *molecule* of organic bodies. Now, the single phenomenon of endosmose (which belongs entirely to the domain of the physical forces) enables us to explain the mechanism of the life of the cell, and to account for the manner in which those materials which serve for its nutrition are absorbed, whilst other matters are eliminated.

The phenomena of light, heat, and electricity are produced in the organism of living bodies by the play of the same physico-chemical actions which give rise to these phenomena in inorganic substances. But is all this knowledge, are all these facts and analogies, sufficient to lead us to hope that we shall arrive at a complete and satisfactory explanation of all the phenomena presented by living bodies? For the present, at all events, any such expectation would prove illusory.

Will any of the physical forces enable us to account for the secretion of urine in the kidneys, or of bile in the liver? Will the play of chemical affinities, however much modified we may imagine it to be by the particular structure of the organs, and even by the intervention of catalytical action, enable us even so much as to guess the manner in which the divers organs operate the separation and transformation of the constituent parts of the blood, from which they have to draw the necessary supply to repair their continual losses, and in which all the organic elements are intermixed, partly suspended, and partly dissolved? What might not be said in this respect on the functions of the nerves, and on generation!

The whole of the preceding facts, taken collectively, lead to the following general conclusions:—

1. That living bodies possess the general properties of all natural substances; that these properties exercise a certain and positive influence in the production of the peculiar phenomena of living bodies; and that, consequently, we ought not to neglect or overlook them, when endeavouring to explain these phenomena.

2. That the great physical agents—heat, light, electricity, molecular attraction—act upon living bodies as well as upon all other natural substances, and that the action of these physical forces must necessarily exercise a certain influence upon the nature of the functions peculiar to these bodies.

3. That these forces, when acting upon organized matter, sometimes act differently from their general mode of action, and that this difference is owing to the diversity of structure and chemical composition of organic bodies.

4. That living bodies present, moreover, numerous phenomena which are termed vital; that these vital phenomena are of the very highest importance; and that, in the present state of science, we are entirely unable to see how the physical agents, even though modified in their action by the organism, can intervene in their production.

To comprehend the phenomena presented by the living organism, it is as necessary, therefore, to consider the physico-chemical phenomena of living bodies, as it is to attend to the revelations of experimental physiology. The third class of facts, pointed out above, furnishes the requisite link between these two branches of knowledge. The study of the modifications which the organization of living bodies operates in the ordinary action of the physical agents, requires the concurrence of both physics and experimental physiology.

With regard to the fourth class of phenomena, the term *vital phenomena* has here been selected in preference to that of *vital force*. The difference between these two terms is indeed most material.

Had Newton's whole merit simply consisted in his having bestowed the name "attraction" or "attractive force" upon the force which governs the marvellous system of the celestial mechanics, his name would long since have sunk into oblivion. But this illustrious philosopher *demonstrated* that attraction acts in a direct ratio to the masses, and in an inverse ratio to the square of the distance; and revealed thus the eternal laws of that force. It is this brilliant achievement that has rendered his name immortal.

To *talk* of vital forces, to give a definition of them, to interpret phenomena with their assistance, *and to be ignorant all the while of the laws which govern these supposed forces*, is mere unmeaning verbiage, altogether void of practical utility—nay, worse still, it tends to beguile and lull the mind, and to stop the search after truth. To say that the liver separates from the blood the elements of the bile, by means of the vital force, is simply equivalent to saying that the bile is formed in the liver. But a dangerous illusion may be created here by the introduction of the term "vital force," since, although in reality explaining positively nothing, yet it seems fully to explain the whole process of the formation of the bile.

Part II.

MOLECULAR ATTRACTION—CAPILLARY ATTRACTION—IMBIBITION.

Every one knows that living bodies could not continue to exist without a constant supply of new substances from without. These substances, mostly solid, are transformed and reduced to the liquid state by certain processes of the organism; in this form they penetrate into particular cavities, whence they are subsequently expelled, after having undergone further transformations. It has been stated already that the porosity of the tissues of living bodies enables them to imbibe the liquids with which they may come into contact. In order, therefore, to comprehend the phenomena of absorption and exhalation, it is indispensable that we should consider and examine the part which capillary attraction, imbibition, and endosmose perform in these processes.

To begin with capillary attraction: the principal results of the observation of capillary phenomena may be embodied in the following propositions:—

1. When a body is plunged into a fluid, the latter is either raised or depressed around it, and presents thus, at its point of contact with the immersed solid, in the first case a concave, in the latter a convex, surface. Glass immersed in water is a familiar instance of the former, glass immersed in mercury, of the latter case. In the former case the immersed body is said to be *wetted*.

2. The joint immersion of two bodies in a liquid causes the latter either to rise or to sink between them, according as they are wetted or not by it. It suffices for the manifestation of this phenomenon that the immersed solids be placed sufficiently near one another to bring the two curved surfaces formed by the fluid into contact. The elevation of the fluid above, or its depression below, its level is in inverse ratio to the distance between the two solids.

3. If a glass tube, open at both ends, be plunged into a fluid, the latter will (according to its respective nature) either ascend in the tube above, or sink in it below, its own level; and this elevation or depression of the fluid will be the greater, the smaller the diameter of the tube. If we compare the elevation or the depression of the fluid in a cylindrical tube with that observed between two glass plates immersed in the same respective fluid, and placed at a distance from one another equal to the diameter of the tube, we find that the elevation or depression of the fluid in the tube is double that between the plates. Liquids susceptible to wet the glass, such as water, for instance, ascend in the tube and adhere to the glass; whilst liquids that do not possess that faculty sink below their own level in the tube. In a tube of one millimètre (a) diameter, water rises thirty millimètres above, whilst mercury is depressed thirteen millimètres below, their respective level.

If we reflect upon the fact that the vacuities, interstices, and capillary tubes of animal and vegetable tissues are from 1-100th to 1-200th of a millemètre in diameter, we can have no hesitation to admit that capillary action must exercise considerable influence upon the functions of these tissues.

4. The concave surface of the raised, and the convex surface of the depressed, fluid belong respectively to a hemisphere, the diameter of which will be found equal to that of the tube.

5. A drop of water introduced into a conical glass tube resorts to the most narrow part of the tube, whilst a globule of mercury, on the contrary, resorts to the widest part.

6. The preceding phenomena are entirely independent of the volume of the solid body immersed in the liquid, whence it follows that the thickness of the walls of the tube is likewise without influence upon them.

7. These phenomena manifest themselves with equal freedom in the air, whether at the usual, or at a higher, or at a lower pressure, *in vacuo*, and in any gaseous medium whatever.

8. All bodies susceptible to be moistened (whatever their nature in other respects) furnish the same results, provided that, previously to their immersion in a liquid, a layer of the same liquid be made to adhere to them.

9. The elevation or the depression of the liquid column within a tube diminishes (for the same liquid and the same tube) according to the temperature of the liquid.

10. The elevation and depression of liquids are independent of the density of the latter. Thus, taking the elevation of water in a tube = 100, that of alcohol will be = 40, of essence of lavender = 37, of a solution of sea salt = 88.

11. Two bodies floating on a liquid, within a certain short distance only from one another, are attracted towards each other, and unite, provided that either both or neither are susceptible of being

(a) A millimètre is considered equivalent to 1-26th of an inch.

moistened by the liquid. But they seem to repel one another if only one of them is moistened.

12. To whatever height a liquid may rise in a capillary tube, it will never run over at the upper aperture. To comprehend the reason of this, we need simply reflect that the surface of the liquid column raised in the capillary tube is invariably and constantly concave; and if we take a bent tube, and fill the one arm of it with water, sufficiently to render the surface of the column first horizontal, and finally convex, the column in the other arm will continue to present a concave surface, and will stand at a higher level than that in the arm filled to the brim. Thus, the moment that the surface of the liquid column becomes convex, a force of depression develops itself in the capillary phenomena. To suppose that the dripping of water from the pendent end of a perpendicularly-held cotton wick, saturated with that fluid, is caused by capillary attraction, would be a grievous mistake indeed; let the wick be held in a horizontal position, and the dripping will immediately stop.

To guard against wrong application of the capillary phenomena to the processes of the animal economy, it is necessary to bear in mind that a space completely filled with liquid is incapable of exerting any capillary action; that the action of a capillary tube upon liquid is owing less to the material of the tube than to the nature of the liquid that moistens its internal surface, and, finally, that capillary attraction never causes liquid to run over at the upper aperture of capillary tubes.

The phenomena of imbibition, of hygroscopicity, &c., are, in general, of the same nature as the preceding, and depend upon the same force. A piece of sugar, a cotton wick, a heap of sand, ashes, or sawdust, when placed in contact with water, or any other liquid that possesses the faculty of wetting them, draw that liquid speedily through the whole of their mass; or, in other words, *absorb* or *imbibe* it. Certain organic tissues, cartilages, tendons, &c., that have been dried into a hard and horny mass, when immersed in water, absorb the latter and regain their original softness, suppleness, and elasticity. The same effect is observed in the case of the rotiferous animalcule, which is restored to life and motion by being moistened with a drop of water. It is by imbibition that the filtration of fluids is effected; the solid particles which fluids contain in suspension remain in the filter, whilst the fluid itself is imbibed by the substance of the latter. A drop of chocolate or ink falling upon a piece of cloth or filtering-paper produces a dark central spot, surrounded by a less deeply-coloured border; the same phenomenon is observed in effusion of blood under the skin; the colouring matter of the blood occupies the centre of the stain, the serum is found at the margin.

In these phenomena of imbibition we have to consider, in the first place, the force of adhesion between the liquid and the surfaces of the solid particles in contact with it; and, in the second place, the true capillary action—for there certainly exist in the sugar, in the heaps of sand or ashes, &c., and in the organic tissues, extremely minute cavities more or less tortuously ramified in the interior of the mass.

The author has made, in conjunction with Professor Cima, several interesting experiments on the subject of imbibition. Several glass tubes, of about two centimètres diameter, were filled with very white, perfectly dry, and most finely sifted sand; the lower end of the tubes were closed with a piece of linen tied round the tube; the sand was introduced through the upper aperture, without shaking the tube, in order to guard against unequal compression of the mass. Six tubes so prepared were plunged at the same moment into six different liquids of 12° Centigrade (53·6 Fahrenheit). The imbibition of the liquids in the tubes continued for ten hours, proceeding rapidly at first but decreasing gradually more and more in energy, in proportion as the liquid approached the point at which it ultimately stopped. The tubes were immersed in the several liquids to the depth of about half a centimètre, and care was taken to replace the fluid occasionally, so as to maintain a uniform depth of immersion throughout the process.

The subjoined table shows the highest elevation to which the several liquids rose. The saline solutions were all of the same density, viz., 10° of Baumé's areometer:—

	Millimètres.
Solution of carbonate of soda ..	85
Solution of sulphate of copper ..	75
Serum	70
Solution of carbonate of ammonia	62
Distilled water	60
Solution of sea-salt	58
Milk	55
White of an egg mixed with an equal volume of water ..	35

This table will give some notion of the immense difference in the respective power of liquids to be imbibed: thick solutions of gum, boiled starch, oil, resist imbibition nearly altogether; concentrated saline solutions, and all fluids holding in suspension highly-divided solid particles, are likewise but feebly imbibed; in the latter instance the imbibition acts like a kind of filtration. This fact may be of some importance to the physiologist and physician, since it may assist in the appreciation of the different properties of the blood, according to its density. Indeed, in certain diseases the density and viscosity of the blood are greatly diminished; in such cases serous infiltrations take place; the same infiltrations, and arising from the same causes, are observed after great losses of blood.

Experiments made with alcohol at 36° Baumé, and with distilled water, gave the following results:—

	Tube filled with sand.	With pounded glass.	With sawdust
Alcohol rose	85 mil. ..	175 mil. ..	125 mil.
Water ,,	175 ,,	182 ,,	60 ,,

These results show that alcohol rises less high than water, as far as sand and pounded glass are concerned, which is in perfect accordance with what takes place in capillary tubes. Two tubes, the one (1) containing double the quantity of pounded glass as the other (2), were immersed in water. In 1 the liquid rose to 70 millimètres, in 2 to 107 millimètres. It is not easy to explain the proportion between the respective elevation of the fluid in the two tubes; it is natural, however, that the liquid should rise higher in the tube containing the larger amount of matter, since this offers, of course, a larger surface of attraction, and the capillary cavities are of smaller diameter.

The animal and vegetable tissues furnish abundant proofs of this fact: the greater and more extended the surface they offer to liquids, the more readily they imbibe the latter.

The temperature exercises considerable influence upon the degree of imbibition. Two tubes filled with sand were immersed in water; the temperature of the one tube (1) was 55° Centigrade (131 Fahrenheit), that of the other (2) 15° Centigrade (59 Fahrenheit). The results were as follows:—

	Elevation after 70 seconds.	Elevation after 11 minutes.
1.........	10 mil.	175 mil.
2..	6 ,, ...	12 ,,

Now, we know likewise that absorption in animals (no matter whether through the skin or in the internal organs) proceeds the more rapidly the hotter the liquid in contact with these organs.

Imbibition proceeds equally in dry and in moist air. *In vacuo* it seems at first to proceed with greater rapidity than in the air; but this difference ceases and becomes equalized after a few minutes.

One would fancy that, by the action of imbibition, a liquid might be raised to any height: for, considering separately the imbibing action of every individual layer in a column of sand, ashes, &c., immersed at one end in a fluid the level of which is constantly maintained at the same height; one would be led to reason that, after the imbibition of the first layer, the particles immediately above withdraw a portion of the fluid from it for their own imbibition, which loss the first layer supplies again from the liquid mass in immediate contact with it; the third layer acting with respect to the second in the same manner as this acts with respect to the first, and so forth throughout the whole mass of the column, no matter what its height. Experience, however, does not confirm this reasoning: the liquid rises rapidly at first, then the ascensional movement slackens, and ceases finally altogether when arrived at a certain point. That this cannot be attributed to evaporation that might be assumed to take place in the upper layers of the column, is sufficiently clear from the fact that water rises exactly to the same height in a column of sand when the surrounding atmosphere is charged with aqueous vapour, as when it is perfectly dry. There seems to be no other way to account for this limit to imbibition, except to admit the existence of small channels throughout the whole length of the column; and thus it would seem that capillary action intervenes here, besides the adhesion of the liquid to the surface of the grains of sand.

It is impossible not to perceive that imbibition performs an important part in the movement of the juice of plants, and in the phenomena of the capillary circulation of the blood of animals; we shall presently see that living plants and animals, when immersed at any point whatever in a saline solution (the presence of which may be subsequently readily detected by reagents), are speedily penetrated by it throughout the whole of their parts. It will be sufficient here to mention the experiments of Hales, and the more recent ones of Boucherie; the latter experimentalist saw a poplar tree, about ninety feet high, absorb in the space of six days the enormous quantity of near eighty imperial gallons of a solution of pyrolignite of iron.

Hales made certain experiments for the purpose of measuring what he termed the force of aspiration of pulverulent bodies and stems of trees. For this purpose he used a large glass tube, closed at the upper end, filled with ashes or most finely pounded minium; the other end he closed with a perforated cork, to which he fitted a narrow glass tube, about three or four feet high. He filled the latter tube with water, and inverted it rapidly over mercury. He saw the mercury presently begin to rise in the tube, and in one experiment this substance rose seven inches, which is equal to a column of water of eight feet.

In other experiments he substituted the stem of a tree for the ashes used in the first, and he obtained the same results. He considered this phenomenon to be dependent on a particular force, to which he assigned the name of *aspirative force*, or force of aspiration. However, certain experiments made by the author, and in which he had recourse to the creation of a vacuum above the ashes, stem, &c., at one, and above the mercury in the trough at another, time, supply a more simple and satisfactory solution to the problem presented by this phenomenon. The experimentalist found that the creation of a vacuum above the ashes, &c., caused the mercury to rise still higher in the tube, whilst the vacuum over the trough brought the mercury immediately and completely down from the tube. It is indubitable, therefore, that the ashes, &c., form above the column of water, a wall or partition which performs exactly the office of a close tube; in short, Hales' apparatus is a barometer, and the phenomenon of the ascension of mercury resolves itself accordingly into one of atmospheric pressure.

A very curious fact deserves mention here. If a leafy branch of a tree be substituted for the tube filled with ashes, &c., the column of water will continue to rise the same as in the other experiments of Hales. It would appear, then, that the leaves are susceptible to exhale the aqueous vapour without discontinuing to perform the office of a barometrical tube. Magnus seems to have obtained the same result with a tube closed at the upper end with a piece of membrane. It is probable, however, that the phenomenon in these instances has its limits, from

the supervening disorganization of both leaves and membrane.

A few words may be added here regarding certain experiments made with a view to produce, by the simple play of the capillary forces, and of molecular attraction, the effects of chemical affinity. If we reflect that the elevation which a liquid (of whatever nature) reaches in a capillary tube is constant, that imbibition is attended with greater or less evolution of heat, as Pouillet's experiments have proved; that it is attended, moreover, according to Becquerel, with disengagement of electricity; and, finally, that capillary attraction acts only at extremely limited distances, and between the molecules of bodies—we cannot but come to the conclusion that this force combines the principal characteristics of chemical affinity. Doebereiner observed, that from a mixture of water and alcohol, enclosed in a bladder and exposed to the air, the water alone escapes; the cause of this phenomenon is, that the water is more readily imbibed by the membrane than the alcohol, and is thus enabled to escape by evaporation. The fact mentioned by Berzelius, viz., that salt water, filtering through a long tube filled with sand, runs off, freed more or less completely from the salt which it contained originally. The author filtered salt water through a tube about 24 feet long, and filled with sand; the density of the water flowing off from the lower aperture of the tube was to that of the solution originally introduced at the upper aperture = 0 91 : 1. But this proportion is not maintained, and after the lapse of a certain time the saline solution is as dense at its exit from the tube as it was at its introduction. This proves that the decomposition of the saline solution takes place during the first action of contact between it and the particles of sand in the tube.

A solution of carbonate of soda was made to pass through a tube about nine feet long, and filled with sand the result proved the reverse of that in the former case. The density of the liquid at its exit from the tube, as compared to its original density, was = 1 005 : 1.

These phenomena are of great importance, inasmuch as they may assist us to account for certain functions of living bodies, for which capillary and molecular attraction afford no sufficient explanation.

ORIGINAL CONTRIBUTIONS.

OWEN'S OSTEOLOGY OF FISHES.

By Dr. WILLIAM MACDONALD, F.R.S.E., Fellow of the Royal College of Physicians in Edinburgh, and Member of the Linnean, Wernerian, and other Societies.

There are few characteristics which more strikingly exhibit the advance of science of late years than has been afforded by the rapid and somewhat multifarious flow of publications of every name and character—from the bulky *pound* encyclopædia to the voluminous penny magazines and other attractive compilations "for the million." The cheapness and almost endless facility of embellishment which the lithographer and, still more, the wood and steel engraver have enabled the industrious members of the great scissarsian cliques to produce and reproduce the same materials under very Protean aspects, and although in some instances the copies, from ignorance or want of attention, have been engraved without being reversed before the explanatory letters were added, the illustrations are, generally speaking, if not examples of the highest art, yet of considerable use to the student and general reader. The earlier advance of our continental neighbours in the different branches of natural science, especially in zoology and zootomy, has been a fertile source of "information for the people", and the various "manuals," "elements," and systems of zoology which have of late years been published in this country have either been professed translations, or (what is more to be regretted and denounced) have appeared with the pretension of originality without acknowledgment of the source from whence they have been plundered.

Of late, natural history has taken a more scientific turn, and the very beautiful productions which are in course of publication by Van Voorst, while they have proved attractive to the general reader in the boudoir and drawing-room, have, at the same time, been highly useful to the naturalist. The older method, of founding systems of zoology on the scale and feather system, is being replaced very generally by adopting the surer basis of zootomy or comparative anatomy. Of late even professorships of comparative anatomy, as a separate branch, are being established in all the newer collegiate institutions, though the rust of antiquity has prevented their establishment in the older seats of learning and science; but even in these we are not without hope that something may be accomplished from what we have lately witnessed in the University of Edinburgh, where the newly-appointed and enthusiastic professor of anatomy has a large class of attentive students gathered around him without any injunction from the senate, and we recollect well, before lectures upon natural history were introduced into the *curriculum* prescribed by the University, that the excellent professor was attended by hundreds of the best class of students, and that his lecture-room was then crowded to an overflow, and thus he was enabled very early to diffuse very extensively a taste for natural history generally, but more particularly for mineralogy and geology. But what is the state of attendance now? From the blighting effects of the prescribed *curriculum* of the medical faculty, we learn that scarcely more than twenty or thirty attend his lectures. The increasing interest, however, which attends the delivery of lectures has naturally produced the publication of these in a separate form, either without sanction, as in the case of the *Lancet*, where the lectures of Professor Grant first appeared, or by authority, as in the volume lately published by Professor Owen, from notes taken during his oral lectures, but afterwards corrected and extended by himself. This is the second volume of lectures on comparative anatomy which have been delivered before the College of Surgeons of London by the distinguished and highly-gifted professor who is intrusted with the care of the valuable Hunterian Museum, who, from the important position which he holds in science and public estimation, and the devotion with which he applies his energies to the advance of science, must stamp any work emanating from him with a standard importance. We have, therefore, been induced to analyse the second volume, as we think there are views of the analogy of the different organs throughout the animal scale which are at least not quite made out on sound philosophical data, and are not always consistent with his own views as scattered throughout the volume. On the present occasion we restrict ourselves to "*the Osteology of Fishes*," which is adopted as the basis of illustration in the pleasing study of analogy.

It is the natural attendant on the early progress of any branch of natural science dependent on observation and description, that there should be considerable confusion in the nomenclature, from the different views under which the subject may be studied by observers carrying on their investigations independently and at a distance from each other. There is, perhaps, no branch connected with natural history where this has had a worse effect than in comparative anatomy, and especially in pointing out the various *analogies*. We therefore are the more anxious to notice what we consider erroneous in this respect in the work before us, which is likely to become a standard text-book. As the study advances, the necessity of a uniform nomenclature will be more and more felt, as great confusion ar... from different names being too often applied ... the same part. We often find opposing and ... tradictory accounts given by different aut... Perhaps the greatest cause of error arises ... too rigid an adhesion to the analogies long ago ... the early an... ...brity, whose labours ... ...ts for themselves, and for ... entertain the very highest respect; b... we find that the power of their great name acts in retarding the advance of a science which they devoted their life and leisure to promote, we feel ourselves constrained to correct the errors which further observation has pointed out and enabled us to discover, and, as it were purifying the streams at the fountain-head, to secure a purer flow of correct analogy. We naturally look to Professors Grant, Owen, and Jones, from their position and opportunities, for a standard of correct nomenclature which could at once be safely adopted and generally applied; but we are constrained to confess our disappointment in that respect, and more so in the second volume of "Lectures on the Vertebrata," by Professor Owen, now before us, where his ingenuity seems to have been principally directed to the composition of names from the Greek, which gives the whole a very pedantic appearance. But a still greater fault lies in continuing (without due consideration, perhaps) the antiquated analogies adopted by the older anatomists, which the discoveries and researches of modern observers, under more favourable circumstances, have shown to be erroneous; for what can be more confused and contradictory than the different proposed analogies of the osteology of fishes and reptiles, where, from a careless theory, the pelvic arch and limb has, from its anterior position, been mistaken for the femur, the tibia has been thought to be the scapula, and the tarsus has been forced to furnish the whole of the rest of the brachial limb, while the fibula enjoyed promotion to the rank of a caracoid.

In order to find analogues for the posterior or pelvic extremity, the ventral fins have been authorized to act their part; as these evidently belong to the exo-skeleton, they can be no part of the endo-skeleton. But the analogies of the humeral zone, with its brachial limb, have been more ridiculous, if possible, whether we adopt the fantastic proposal of St. Hilaire, or of Cuvier and others. An impartial examination of the class of fishes will corroborate the analogies now noticed, and from a conviction strengthened by the last ten years careful examination, whenever an opportunity occurred, we advisedly denounce as erroneous the whole principle of analogy generally adopted by the best comparative anatomist of the present day. And without entering more minutely at present into all the analogues which may be pointed out, we will proceed to a short review of the work more immediately before us, and shall, from time to time, fill up the sketch of the subject to which we will confine ourselves on the present occasion, namely, that portion of the volume devoted to the osteology of the fish.

Professor Owen has very well described the advantage which professors and scientific students may derive from an extensive study of comparative anatomy, pointing out its application to the investigation and determination of animal existence, both in the present and in former geological epochs. Here he is eminently successful.

Although the whole work has been well got up, as regards its form and illustration, we must still regret that an individual so highly gifted, and so fortunately placed in the rich mine of the Hunterian Museum, and so lately brought within the meridian of royal favour—having been one of the very few who has been in any way substantially rewarded for his devotion to any branch of science in this country, where pigmy monsters and delightful singers seem to be the more favoured nurselings of royal bounty and regard—we repeat our regret that the scientific professor, from a bashful timidity, should have adopted a system of analogy which he found prevalent, lest he should throw the views and labours of the great men who have preceded him in his delightful path into disorder. We pretend to no such mawkish feeling; for, although we will not yield to any one in the respect and

veneration which the names of Hunter, Cuvier, St. Hilaire, &c., are held throughout the whole empire of Science, we hesitate not to point out those errors which further research has shown they had fallen into, and which, we doubt not, they would long ere this have corrected, had the opportunity been afforded them.

At the commencement of the second lecture there is a diagram of a ring, intended to illustrate the analogy or homology of the segments of the exo-skeleton of the articulata and the "vertebra" (as Carus defines it) of the vertebrata, and which St. Hilaire had previously proposed as illustrating the *unity of organization*. ...n examined, in relation to the nervous and vascular central axis, this will be found clear enough; and, if anatomists and naturalists would remember this, we should be relieved of the blunders which place the sternum on the back of insects and crustacea, or of supposing "the position of the brain reversed, and the alimentary canal still intervening in the invertebrate, between the aortic trunk and the neural canal." (Vol. II., p. 22.)

The neural axis or *centre is*, no doubt, reversed as regards the aspects of the body being found on the lower instead of the upper aspect, as in the vertebrata: but the professor is in error when he states that the alimentary canal intervenes in the invertebrate between the aorta and neural canal.

We feel satisfied that a little review of this statement, with the examination of the organisms themselves, in the vast stores of the Hunterian collection, will convince the learned and scientific professor of his mistake. Had he examined the structures he would have found the suggestion of Scoffern completely borne out in this instance, and would have recollected that the vascular centre is not the aorta, but the heart and vena cava, and that the aorta is merely an important but subordinate branch of the circle; and, although we do not mean to subscribe to all the analogies proposed by this distinguished, though often very fanciful, naturalist, we must support him on the present occasion.

We must remind the professor that his objection to the analogy from the mode of forming the neural canal can at once be removed by tracing the development of the laminæ of the perineural arch or canal in the articulate animals, where it is connected with their eso-skeleton; while in the vertebrate it rests on the chorda centralis, formed by the bodies of the vertebral column; and if he were to introduce into the diagram a body at the letter E, fig. 5, he would soon appreciate the view of the eminent French *savan*.

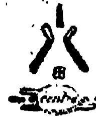
In fact his own fig. 7, strictly studied, would show the true state of the eso-skeleton, enclosing the cartilaginous endo-skeleton:—

dn. }	Exo-skel.	Dorsal.
an. }		Sternum (dorsal of the entomologists.)
dp. }		
	Endo-skel.	{ Body of vertebra.
c.	Body of ver.	{ Chorda centralis.
n.	Neural canal.	*n.* Perineural canal.
pl.	Plurapophysis.	*pl.* Peri splanchnic.

Here, ... we suspect the true analogy has been ... ked by adherence to the adopted syst... the interpretation is completely at variance with the typical vertebra explained in ... third lecture, to which we now call attention. Here we are again indebted to the suggestions of Geoffroy St. Hilaire, who explained a series of segments in the axis of the body ...ceding each other, which he termed vertebra. ... term possesses rather a wider meaning than it usually does in human anatomy, including the ribs in the region of the chest, and the bones of the face in the region of the head.

I.

Neural spine
Zygapapophysis
Neura pophysis
Mapophysis
Pleurapophysis
Harapophysis
Hæmapophysis
Zyupophysis
Hæmal spine



II.
DORSAL.

b.

ΔTrimalΔ — Spine.
χDumal — Lamella. Pedicle.
Primal — Body. Head. Ribs. Angle. Cartlage.

Sternal.
Ventral.
Aspect.

c
Primal. Simplex.
Dumal. Duplex.

Ideal typical vertebra.

Complex.

III.
GRANT.
Epivertebral.
Perivertebral
Cyclo-vertebral.
Para vertebral.
Cata vertebral.

IV.

Tested by his own diagram, Professor Owen's analogies are not borne out, as he has noted the hæmapophysis in figs. 6, 7, as pleurapophysis, and states (page 44), "That the pleurapophysis (in the thorax) are much elongated, and the hæmapophysis removed from the cerebrum, and are articulated to the distant end of the pleurapophysis, and the bony hoof being completed by the intercalation of the hæmial spine between the ends of the hæmeapophysis." A little observation is only required to show that the whole is the well developed laminæ of the perisplanchnic arch or hæmal of Owen. The transverse or pleurapophysis is not indicated. The diagrams of a typical vertebra, agreeing as they do in the general principle, vary somewhat in detail, and we submit II. *a* as preferable to either of those submitted by Professor Owen, or that more early published by Professor Grant. The one proposed is also in accordance with the language of human anatomy as indicated in II. *β*. Very considerable advantage will be found to arise in the analysis of the endless variety of form throughout the animal scale, if we adopt a uniform language and definition of the several portions of the typical vertebra. We have long found a great advantage in determining the peculiar character of a lamina (a name familiar to all anatomists), although often appearing under very different forms: sometimes it is found in its elemental form divided into its three parts:—I. Primal, simplex, and orbicular, and, if prolonged, having two convex articulations. II. Dimal, duplex, with two concave articulations. III. Δ Trimal complex; two convex articulations, but generally subdivided into several ranges. At other times the whole is consolidated into a single bone, and even the laminæ of the opposite sides are consolidated into one; but still in these cases it is easy to trace the separate elements. There are also to be found laminæ which are deficient even in the highest vertebrate animals; it is therefore necessary to form some system for the classification even of a lamina, of which there will be three classes.

I. Vertebral laminæ, *a*, anterior, or superior, or dorsal, *β*, posterior or inferior-ventral, as found in the perineural and perisplanchnic arches.

II. Segmental laminæ, as in the squama-comatii temporal-scapulo clavicular, or hu-eral-ileo-pubic, or Coxal.

III. Membral laminæ, or the articulated limbs connected with the glenoid and cotyloid cavities, the mandibular or inferior maxilla.

Brachial, or arm.

Crural or leg.

With such a system we easily read some of the most complicated organisms we have had the opportunity of examining, and more particularly that of the osseous fishes with which Professor Owen very properly begins. From observing the arrangement and distribution of spinal nerves, it is seen that these correspond with the number of vertebræ in the regions of the back; but, from a misapprehension of the true series of cranial vertebræ, the same law does not seem to apply there; a little further examination will clear away this mistake. The full development of this would lead us too far from the main object we have now taken in hand, and shall, therefore, dismiss it for a future opportunity, and proceed with the osteology. If any progress is to be made in this subject, on sound anatomical data, we fear that the whole interpretation in present use, as well as that more recently proposed and adopted in the work under review must be given up—for we feel confident that it is entirely wrong as regards the osteology of the head of the fish—a conviction forced on us long ago, and confirmed by the experience of a dozen years.

At page 63 there is a diagram with the names of Geoffroy on one side, and those of Owen on the other side, but without indicating the endo-skeleton elements from those of the eso-skeleton. We regret that the osteology of the higher or cartilaginous fishes has been so blended with the descriptive osteology of the osseous, before clear views have been obtained of their simpler inferiors. Professor Owen properly points out the error of the distinguished ichthyologist, Agassiz.

Lecture IV. is occupied with the skull of fishes. Professor Goodsir, of Edinburgh, is the anatomist to whom we are indebted for the only accurate description of the lanceict, which will be found published in "The Transactions of the Royal Society of Edinburgh"—a work most likely little consulted, which may account for Mr. Owen's passing it so completely over. If we refer to his account, we find that the cranium is not indicated, and that it may be looked on as analogous to the vermiform type of invertebrate animals; and that the germ, as it were, of the endo-skeleton appears only in the rudimental form of the *chorda centralis* (not *dorsalis*, as is too generally named)—the dorsal development belonging to the dermoid, or exo-skeleton.

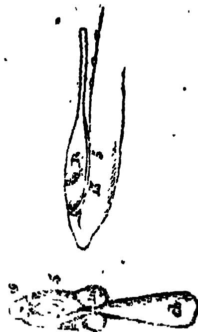
Passing from this vermiform type to the osseous fishes more commonly met with, we find the ossification still modified by the invertebrate type. The entomoid and crustacean type of segmental membral laminæ are readily found connected with the cranium of the fish, but still separable from it, if, in our analysis, we adopt the laminar formula above suggested. Overlooking this has misled Geoffroy and others, and the most absurd and fanciful analogies have been put forth, which have prevented the adoption of the views of philosophic anatomists from becoming at all popular with the practical anatomists of the old school—one of whom we once heard declare that Geoffroy was a fanciful madman, and all his speculations arrant nonsense.

This dark cloud of blind prejudice, we feel, is wearing away with the passing and past generations; it is quite waste of time to mould or bend the gnarled and knotted oak, although it may be done with the sapling, especially when the light of science is approaching the brightness of meridian splendour. It is with the rising generation that the correctness of the views of philosophic anatomists are to be made out and applied to the advancement of knowledge for the use and benefit of mankind.

The data deduced from the observations of Vogt, on the embryo of one of the salmonidæ referred to by Professor Owen, happily illustrate the mode of formation of the cranium ... how that anterior to the pituitary sac it is ...al; this may be easily traced in the embryo of mammals, and throughout the whole length of the chorda centralis, where each vertebra is formed of several pieces.

The pituitary sac (or "hypophysis cerebri," Owen) may be looked on as the centre of the encephaloid region, encircled, as it were, by the ganglionic ring of the asteria, and other types above in the invertebral.

We consider the cartilages developed on each side of the chorda centralis as extending outwards enclosing the internal ear, as forming the petro-parietal lamina, having the sphenoidal part of the basilar process for its body, and not the occipito sphenoidal mass. We are fully convinced that the true analogy will soon point out that, with the exception of the part of the sphenoid first noted, the rest of the bone belongs entirely to the prosencephalon, but that this bone, even in man, is not in a complete state of development, its trimal or spineus process being overtopped by the more expanded development of the frontal and the petroparietal.



ch. Corda centralis.
hy. Hypophysis or pituitary sac.
5. Sphenoidal (arches) —*dentata*.
16. Acoustic capsula petroparietal.



We must here strongly protest against the application of the term arch to any part of the corda centralis, which is the homolayer of the column, formed by the bodies of the vertebræ, as the lamina, when united, enclosing the cerebro-spinal axis in the posterior aspects, and the viscera on the anterior, have long been described as arches. We must also regret that a small diagram should be given which does not contain all the parts specified in the text.

We pass over at present the further analysis of the formation of the cranium in the cartilaginous, that we may complete our review of the osseous fishes, within the compass allotted at present by the subject, and also because we have very strong doubts of the propriety of considering the lepidosiranteous as a fish. At a future date we may resume this point, which we agree with the professor is of importance.

LECTURE V.—THE SKULL OF OSSEOUS FISHES.

The head of the cod has been very prudently selected for description in this lecture, as, from its size and the case and frequency with which we meet with it, affords many grounds of preference. The complexities of this cranium, from the great number of bones, will at once subside as soon as we detach those parts which do not belong strictly and anatomically to the cranium of higher vertebrata, and of course homologically are incorrectly described as portions of the cranium. This has tended to obscure the whole analogy, which may be so beautifully traced here, at the same time avoiding the absurdity of supposing the opercular bones as monstrous bones of the ear instead of the arm, and mistaking the coxal segment with its crural motor appendage for the scapular arch.

We hazard our dissent to the homology proposed by "the comparative anatomists of the highest merit" from our deep-rooted conviction, after careful study and investigation, corroborated by many years' reflection, and also to the opinion, pronounced *ex cathedrâ*, in the work before us.

"The craniology of the head of fishes is more intelligible, more philosophical, and more agreeable with the natural arrangement and true signification of the series of bones of which that complex part of the skeleton is composed, than the craniology of the human skull"—we suppose, for this part of the comparison is not expressed, but it is added,—"In this respect, ichthyotomy, as a true anatomical science, is at present in advance of anthropotomy." We are thus compelled to add to our mere dissent a most unconditional denial, and further to declare that no true homology will be supported by the animal organic kingdom till the whole subject is reviewed beyond the blaze of the halo surrounding the names of Hunter, Cuvier, and a host of others, who have long illumined our horizon with the brilliance of a meridian sun, and also of those minor lights of science of our present race, who, like the moon, have shed a reflected light pleasing for dreamy speculation, but flickering and false as the phospherescent luminaries which often deceive wearied travellers when wandering without compass over dangerous moors and morasses.

We esteem highly the authority of Cuvier and Agassis in many points: in the path of zoogeology they hold the first rank; but it must at once be conceded that neither have a similar position in philosophical anatomy. Cuvier despised analogy as a mere fanciful dream, and sneered at the imaginative theories of his colleague, Geoffory St. Hilaire. Of Agassis, as an ichthylogist and ichthyo-geologist, we know no one to approach him in a path which he still possesses as his own undisturbed domain; while in the field of analogy and of anatomy he is but an indifferent guide.

We suggest to the talented professor to revise the splendid Hunterian treasures, beggared as they have been by the disgraceful destruction of his MSS., for which we know not of terms sufficiently opprobrious to apply to the miscreant who perpetrated the horrid deed: of him we are prevented saying a single word, by the proverb "*de mortuis nil nisi bonum.*" He has gone home.

He must also for a time denude himself of his preconceived theories and prejudices, inculcated by the writings of preceding authors, leave to "the packers and makers up" of the goods of others a task which they execute more cleverly than he can, in despite of much experience and labour in this field, and endeavour to manufacture some fabric of his own, and, with a few questions such as we may venture to suggest, proceed impartially to the investigation. We are sure that a short investigation will at once satisfy him of the errors of the existing explanations of comparative anatomy of the fish, and encourage his progress in the right direction, which, with all humility, we submit for his guidance. We are the more anxious to win him from the error of his ways, as a whole host of followers would at once adopt his altered opinion, as affording the materials for a new scizzarsian system, manual, or fresh article in an encyclopædia, or penny magazine for the million. The very pretty works issuing from the London press, illustrating the different branches of science, with the beautiful woodcuts, are an evidence how much can be done to aid the scizzars by the tool of the woodcutter; and the professor of King's College has greatly contributed, by his very beautiful books, to add an interest to comparative anatomy. As he has adopted, without note or comment, Professor Owen's views, we would at once gain him also; and, if not, it is perhaps of less consequence.

Professor Owen arranges the cranial bones of the fish primarily into—

A. Neuro skeleton.
B. Splanchno skeleton.
C. Dermo skeleton.

Overlooking entirely those of the molo-sustenear or kosomoto-skeleton, which cannot properly be placed under any of these heads.

Perhaps it may be considered as somewhat premature to enumerate the cranial vertebræ from the common centre, which we consider to be the sella turcica, the receptacle of the pituitary sac. We think this will happen at no very distant period, as it would certainly be more in accordance with the principles of analogy; at the same time we state no very strong objection to the arrangement here adopted, nor to the names being derived from the primary segments of the brain as a safe principle, although those now proposed do not quite satisfy us. For the reasons already stated, we entirely depart from the distribution of the separate bones as forming the different arches, and epecially from classing as hæmal arches bones which Spix, Bojanus, and others do not consider as belonging to the head, although they mistake in considering them the arm and shoulder, instead of the illiac and leg. It would detain us too long, and occupy too much space, to notice all the speculations of the system, as we must first get the correction of the principle conceded, and it will be an easy task to work out the detail. There is one part we cannot pass over; the professor is not steady to his own system. He adopts the erroneous analogy of the pectoral fin of the spine and scale zoologists as that of the shoulder and arm, and describes the bones of the tarsus as the radius and ulna, but in (fig. 40) the case of the lophius, he describes these same bones as those of the tarsus. Had he kept the osteology of the human foot in view he might easily have seen an approach to the resemblance there between the oscalcis and navicular as the ulna and radius, which would have prepared him to avoid mistaking the true analogy in the fish's foot, stigmatizing it as curtailed prototypes of the fore limb of other vertebrata.

The speculative portion which occupies the concluding part of this chapter is very pleasing and beautiful, and, in the geological application, deserves our praise; and it is with difficulty we restrain ourselves following out the study; but we must content ourselves with referring on these points to the work itself. There is nothing in the least degree novel in such arrangements, being merely some new change rung on a hackneyed continental peal.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF MEDICINE.

Meeting of June 15; M. BEGIN in the Chair.

CANTHARIDIAN CYSTITIS.

Dr. Morel, in consequence of the communication made to the academy at the last meeting by Professor Bouillaud, on the subject of albuminous urine being found after the application of blisters on the skin, forwarded the principal conclusions of his still unpublished paper.

The action of a blister in the production of cystitis depends neither upon its size, nor upon its neighbourhood to the bladder. The smallest blisters, and those most distant from the vesica, have produced it in many cases, and the absorption of the cantharides into the system is the cause of the vesical inflammation. As to the preserving power of camphor, it is illusory: that drug does not in any instance prevent the passage of the irritating substance into the absorbents, nor the consequent excitement of the urinary reservoir. The symptoms produced consist in the presence of albumen in the urine, and of false membranes in the bladder, according to the intensity of cystitis. Occasionally, albuminuria is the only symptom: in most cases, perineal pain, spasm of the neck of the bladder, a burning sensation in voiding the urine, may also be observed. As practical consequences, M. Morel points out the possibility of the formation of calculi around albuminous deposits in paralyzed bladders; the frequent mistake in which observers have fallen in attributing to diseases the production of albuminuria, due often to the recent application of a blister. As to the special excitement caused in the organs of generation by cantharides, it is due

to the propagation of the irritation from the bladder to the urethra.

COLD APPLICATIONS ON THE FACE IN SMALLPOX.

M. Tanchon communicated a short paper on the application of linen cloths, imbibed in cold water, to the face, for the purpose of preventing the progress of ulceration, and consequent pitting of the eruption. During the first seven days they should be uninterruptedly applied every hour, and may after that period be gradually ceased. When called after the development of the eruption, M. Tanchon recommends the addition of ʒj. of alum or of ʒss. of nitrate of silver to each litre of water.

ELECTION OF A NEW MEMBER.—(Section of Anatomy and Physiology.)—M. Baillarger was elected by a majority of 6. M. Manec and M. Denonvilliers each obtained a respectable number of votes.

FARCY.—M. Renault, director of the Veterinary School at Alfort, presented preparations of morbid anatomy, taken from a horse. The animal had died of farcy. The disease had been inoculated with the lancet, and ten hours afterwards the skin was removed in an extent of fifteen square lines, and deep cauterization had been performed, notwithstanding which, general infection and death had taken place.

Meeting adjourned at five.

SECOND VACCINATION.—We read in "The Revue Médico-Chirurgicale" an interesting statistical paper, by Dr. Béringuier, on the results of 236 cases of renewed vaccinations. The first class of subjects, 102, were inoculated with virus taken from the arms of infants; in 55 cases the vaccine pustule was fully developed; in 42, fever was present; and in 22 instances the glands of the axilla became enlarged. From these patients the virus was communicated to the second class, composed of 24 persons; 10 only presented a legitimate pustule, and 4, febrile reaction. Sixty-nine persons formed the third class, and received the vaccine matter from the second; the inoculations succeeded only in 21. In the fourth class, 34 persons were comprised, the virus having now arrived at its fourth generation: in eight individuals only was the pustule obtained; and from these eight the virus vaccine was passed, but without any effect whatever, to the fifth class, consisting of ten persons. Hence, Dr. Béringuier concludes that, at its fifth generation, vaccine matter seems to lose its power of reproduction.

IODIDE OF SULPHUR IN CUTANEOUS DISEASES.—M. Escolar, physician of the General Hospital at Madrid, has recently studied the physiological and therapeutical effects of this drug; the dose which he recommends for the adult is from two to six grains.—*Clinique de Montpellier.*

ESSENTIAL OIL OF TURPENTINE, EXTERNALLY, IN RHEUMATISM, BY M. HERVIEUX.—When essence of turpentine is poured over a surface, its volatilization is not attended with any pain, or with the production of heat; but, when a compress imbibed in the oil is applied to the skin and covered with a waterproof cloth, the result is far different: violent pain follows in a quarter of an hour, and, doubtless, if the application was prolonged, vesication might ensue. It is this revulsive action of the essence of turpentine that M. Hervieux has endeavoured to produce, and which he has found extremely useful for the purpose of dispelling rheumatic pain. In cases of paralysis due to disease of the spinal cord, muscular weakness and pain were also relieved.

EFFECTS OF ELECTRICITY AND OF STRYCHNIA COMPARED.—The only medical communication of any interest made, at the last meeting of the Academy of Sciences was a paper by Mr. Marshall Hall on this subject. A weak but continuous voltaic current, passing during twenty minutes through the spinal cord or the lumbar nerves of a frog, produces, immediately on removal of the apparatus, a violent tetanoid convulsion of the inferior extremities. If, during an [illegible] space of time, a frog be placed in a very [illegible] of acetate of strychnia, the same [illegible] in the regi[illegible] the face in the re[illegible] state will be induced. Mr. Marshall Hall, having observed these apparently identical conditions, endeavoured to ascertain if the identity was real, and concluded from experiments related in this paper, that the electrogenic condition is analogous to that produced by diseases in which *irritation* of the spinal cord is present, and the tetanoid state induced by strychnia comparable to maladies in which *irritability* of the spinal cord alone exists—such as tetanus, hydrophobia, &c.; in all which reflex action is the principal source of the phenomena observed.

NATURE OF STAPHYLOMA.—Dr. Szokalski, having had several recent opportunities of observing this disease, published in the *Gazette Médicale* the result of his researches. A thin layer from the surface of a staphyloma being examined with the microscope (150 or 200 magnifying power), the texture is found to consist entirely of epithelial cells. The external layer of staphyloma is at first equal in thickness throughout its extent, but, in proportion as the disease becomes more ancient, its thickness increases at the centre, where a sort of nucleus is formed, not the cause, but the result of the transformation. In M. Szokalski's opinion, therefore, staphyloma is not constituted by a disease of the iris, nor by adhesion of that membrane or of the crystalline lens to the posterior aspect of the cornea, but merely by a morbid development of the epithelium of the cornea.

wound, and on the twenty-fifth day the patient was well. Four months afterwards she became pregnant, and was in due time confined of a healthy boy. In December, 1846, she again increased her family, and had another son. 'Thus,' says Dr. Woycikowski, 'disproving the assertion of the Father of Medicine, that male children are generated by the right and female germs by the left ovary.' The right ovary had, in this instance, been removed."

CAUSE OF RAPID DEATH IN CASES OF GANGRENE OF THE SACRUM.—The part which suffers most from dorsal decubitus in fever, says M. Blandin, is that part of the spinal column which corresponds to the union of the sacrum with the os coccygis, and which is protected posteriorly only by a ligament. Gangrene easily, in this region, lays open the canal: hence, air and pus are admitted into the cavity of the arachnoid, and bathe the nerves which constitute the cauda equina: the frequent consequence is, paralysis of the rectum, bladder, and loss of power over the inferior extremities.

D. M'CARTHY, D.M.P.

Sarcina Ventriculi.—Dr. William Basham, in making some clinical observations on the case of a man affected with hypertrophy of the heart, with dilatation, in the latter stage of which there occurred a very irritable state of the stomach, with frequent vomiting, says, that the vomited matter placed under the microscope presented singular cubic and bale-like masses of vegetable development, minutely and regularly marked into sections of quadrupled subdivisions. There were also many tufts of margaric acid, with epithelial cells in abundance. There is much interest in the coincidence of the presence of the sarcina ventriculi in vomited matter of the same physical characters; and it certainly gives force to the opinion of Goodsir, that in special cases the contents of the stomach suffer certain spontaneous or intestine changes, analogous to fermentation, and consequently opposed to the true digestive function, which must for the time be in abeyance; and that, as the consequence of this fermentive process, certain vegetable structures are developed, of which the sarcina ventriculi is an example.

The Relative Values of Microscopical and Chemical Analyses.—Microscopical investigations, says Dr. William Addison, have contributed to the development of a physiological law or order [illegible] which abnormal changes may be rationally and scientifically tested; whereas, chemical philosophers have done nothing in this respect. Microscopical analysis reveals elements and forms as nearly as possible as they exist in the living structure—nay, in the living body itself; whereas, a chemical analysis furnishes only the result of complex manipulations, in which unnatural agents are employed, unnatural changes produced, and unnatural products evolved. The materials for the growth and nutrition of living bodies are prepared or elaborated in the interior of closed vesicles or cells, so that when the cell-wall ruptures, and the interior matter is thereby exposed to new agents, new changes occur; and alterations of form and quality, therefore, anticipate a chemical investigation. Vegetable morphology, as a branch of scientific research, owes everything to the microscope, and nothing to the filtering-paper, the test-tube, or the crucible; it is, therefore, reasonable to expect that the normal oder of animal morphology may be equally as well illustrated by the same means. Not that microscopical and chemical investigations are to be considered as in any way opposed to each other; on the contrary, the question is—which, in the present state of our knowledge, affords the most useful and trustworthy information? Chemical facts, in their relation to the structure and functions of living beings, appear to me at present, as loose and isolated materials, which may hereafter find their useful applications; but to the microscope will, if I mistake not, belong the credit of enabling us to establish physiological and really practical principles.

Morphological Changes in Consumption.—There is, says the same writer, an increased secretion from the air-tubes; a thickening of the interlobular areolar textures; destruction or thickening of the coats of the blood-vessels; and, finally, adventitious membranes and abnormal secretions on the pleura. If ulceration of the mucous texture of the air-tubes occur, the fibrous texture beneath is thickened and consolidated; and when the secreting texture of the alimentary canal softens and ulcerates, pseudo-fibrous membranes glue the convolutions of the bowel to each other—one texture retrograding into a fluid pus, whilst adjacent ones of a higher type and different order are becoming thicker and more consolidated -scrofulous and inflammatory actions running on together, not in the same texture, but in the same organ.

Strangulated Femoral Hernia successfully treated by Opium.—Mr. Charles Mayo relates, in the *Provincial Journal*, the case of an old woman, sixty-seven years of age, who became the subject of femoral hernia on the right side about four years ago, at which time it was strangulated, and after some trouble was reduced by the taxis. On the 24th of April last it became strangulated again from some unusual exertion. The swelling was as large as an egg, painful and tender, from her having used much exertion in endeavouring to reduce it. She was constantly sick. A cathartic enema was given, and the taxis used, without effect. Six pills, with a grain of opium in each, were left her, one to be taken every hour. She began at four o'clock P.M., and at nine had taken four pills. After the first the vomiting subsided, and she felt quite easy; cold cloths were kept applied to the swelling, which remained immovable. The fifth pill was taken at midnight, and the sixth at four A.M.; after this she felt completely relaxed all over; her bowels rumbled about, and the swelling seemed to be enlarged and distended with wind; but soon after, on feeling it with her hand, it had become softer, and presently went entirely up under very slight pressure. At six o'clock A.M., a cathartic draught was taken, which operated satisfactorily; and she was delighted to sleep all the day after.—Another case is reported by Dr. Richard Long, of Arthurstown. The patient was a female, forty-seven years of age, with hernia in the right groin, about the size of a large egg, not very painful to the touch, with the abdomen slightly swollen and very tender. There was severe vomiting of a brown coffee-coloured fluid; insatiable thirst; small pulse, 110; cold extremities; anxious and sunken countenance; constipated bowels. She was bled, placed in a warm bath, [illegible] a tobacco enema administered,

and the taxis applied, without effect. Pounded ice was ordered to the tumour, an anodyne draught given, and a pill containing half a grain of opium and one grain of calomel to be taken every hour, with an occasional effervescing draught. At noon, next day, her situation was most alarming. The pulse was 120, small and hard; countenance still more sunken and of a leaden hue; vomiting incessant and stercoraceous; abdomen more swollen, and tender; hernial tumour unaltered; occasional hiccough. A tobacco enema and warm bath were used, and the taxis again tried without success. As the friends would not allow of an operation, opium in large doses was tried. A pill containing three grains of opium and one of calomel was directed to be given every hour, and an enema of strong chicken broth thrown up every fifteen minutes to support her failing strength. The three first pills were speedily rejected; the fourth and fifth were retained; a cessation of pain and vomiting followed, and, by the time that eight pills were given, an urgent desire to evacuate the bowels followed the administration of one of the broth injections, which led to relief and perfect recovery.

Injurious Effects of the Inhalation of Ether.—Dr. James H. Pickford, of Brighton, says that etherization exerts a baneful influence on the blood and respiratory organs. The blood—robbed by ether of its oxygen; impoverished by the solution by the same agent of myriads of corpuscles, of those especially with which it comes into immediate contact; depreciated as a consequence in the quantity, and deteriorated in the quality, of its fibrine; intensely blackened by the solution of its corpuscles and their contained hæmatoglobulin—is chemically deprived to a considerable extent of its powers of coagulation, and rendered unfit for the purposes of life. A black, vitiated blood circulates through the system, analogous in many particulars to that in putrid and malignant fevers. The impaired condition of the blood is not even partially corrected until respiration of atmospheric air has been permitted for some considerable time, and until lymph corpuscles have found their way into the circulation to replace those of the blood destroyed by the other. In thirty fatal cases, following operations in which ether had been employed in the various hospitals in Dublin, eight were found to be the subjects of recent tubercles of the lungs, the undoubted product, it was believed, of inhalation.

Vulvo-vaginal Gland.—M. Huguier has given a description of a gland situated at each side of the junction of the vulva to the vagina. The gland he describes as about the size and form of an apricot kernel, and is provided with an excretory duct, about seven or eight lines in length, the external aperture of which is situated in the angle between the vulva and the border of the hymen. This gland is small until puberty, when it is developed with the other organs of generation; it becomes turgid during sexual excitement, and secretes a quantity of clear mucus-looking fluid, which it is said to ejaculate with some force. This gland is regarded as closely analogous to Cowper's gland in the male subject, for it is situated in about the same part of the perineum as this latter is; and presents the same anatomical relations and connections. It is an appendage to the vulvo-vaginal cavity, a part which is analogous to the urethra in the male; it receives the materials for its nutrition and its sensation from the same vascular and nervous sources as does Cowper's gland; it presents also many varieties in form, size, and situation; and it may be absent on one or both sides, as is often the case with Cowper's gland.

Testing the Urine for Sugar.—Dr. Rees has pointed out the fact, that the dark colour produced by boiling the suspected urine with caustic potash is not satisfactory, unless the purity of the potash be first ascertained. If there be any lead with it, a dark colour will result in boiling the potash and urine, without the presence of saccharine matter in the latter.

Cure of Nævus.—Dieffenbach says, in flat nævi, up to the size of a crown-piece, lint, steeped in pure liquor plumbi, is to be fastened over the part with a bandage, and wetted by fresh applications of the lead without frequent removal. After days or weeks, the swelling becomes whiter, flatter, and firmer; soon afterwards, little, firm, white spots form on the surface, and the cure is certain. By means of a solution of alum and compression, nævi, so large that extirpation would have been impossible, have also been cured. It may be necessary to keep the remedy constantly applied for six months.

The Binder after Delivery.—Women in France, after good confinements unattended by any complications, are particularly subject to the passing of large clots of blood, accompanied with severe uterine pains. This is to be accounted for by the French not using a binder after delivery, in ordinary cases; and thus affording practical proofs of the ill effects resulting from the non-application of that useful appendage.

Deep Cauterization of the Cervix Uteri.—The application of the actual cautery, for the treatment of cancer of the neck of the uterus, has been proved to be, by M. Jobert de Lamballe, the least painful, and by far the most effectual, means of treating obstinate, or even what were considered incurable, affections of this organ. He recommends the actual cautery in all obstinate cases of engorgement, or hypertrophy of the cervix, especially when accompanied with induration and deep ulcerations, that have resisted all other means of cure; he has also applied it with marked benefit to cancerous and other malignant growths arising from the same situation, by means of its checking the profuse hemorrhages which had hitherto been wearing down the patient; and also destroying by its agency the diseased growths so effectually as to give hopes, if applied sufficiently early, that the entire of such diseased structures might be permanently and safely eradicated.

M. Jobert's Cauteries for the Uterus.—He employs three kinds—first, a conical-shaped one; second, one with a flattened extremity; third, the round. The surface of the cautery must be perfectly smooth, and when used should be heated to whiteness. It is to be kept in contact with the cervix uterus one or two seconds, or longer, if you wish to destroy the diseased structure. This mode of cauterization possesses the advantage of rapidity of action; the power of regulating the amount of influence, according to the effect wanted to be produced; it exercises a more decided influence in melting down an hypertrophied cervix than any other application, except the Vienna paste; and destroys more surely malignant disease.

Compression of the Aorta in Uterine Hemorrhage.—M. Chailly calls this the most precious discovery with which the obstetric art has been enriched. The great nicety in applying the compression is to do so on the aorta alone, without at the same time obliterating the course of the great venous trunk, the difficulty of avoiding which is urged as an insuperable objection against the operation. Chailly does not insist on the pressure being applied higher up than just above the bifurcation of the abdominal aorta into the common iliacs; but Negrier says it must be compressed above the origin of the renal arteries, as high up as the umbilicus, so as to command the spermatics, in order to be of any use. One of the advantages particularly dwelt on is the time gained for the patient to recruit: for, according to its advocates, when properly applied, the hemorrhage formerly going on at once ceases, and does not reappear so long as the pressure is sustained. In proof of the efficacy of this treatment, Chailly states that his father practised it once with perfect success, and that he was fortunate enough himself to preserve the lives of several women, who certainly would have perished from frightful losses, only from this method. In one instance he was obliged to continue the pressure for nearly two hours, of which fact M. P. Dubois was a witness.

Galvanism in Narcotic Poisoning.—A woman was brought to the Middlesex Hospital a few weeks since, having swallowed an ounce of laudanum. The stomach-pump had been used; several pints of water were injected; but during this operation the large quantity of tough, ropy mucus which collected around the pharynx and glottis rendered it doubtful whether she would not die of asphyxia before the stomach was emptied; and the tube of the pump was of necessity withdrawn before the whole of the contents were removed. Pinching, slapping the face, &c., produced but momentary and imperfect consciousness. When put on her legs she immediately fell down like one lifeless. The sponge directors of a galvanic battery were applied, but for the first few minutes no sensible effect was produced; afterwards the muscles of the neck began to quiver, when sensibility gradually returned, and after twenty or thirty minutes the stimulus produced shrugging of the shoulders, and attempts to avoid contact with the sponges, and there was the ejection of a large quantity of fluid from the stomach. In another hour she appeared quite lively, answered questions distinctly, and in a moderately loud tone, though in a peevish manner. When the galvanic current was interrupted for a few moments, she relapsed into insensibility. The pupils remained unaffected for about two hours, when they became somewhat dilated and sensible to a strong light. All the symptoms gradually diminished, but it was absolutely necessary to reapply the galvanic stimulus at longer intervals until half-past five P.M., when she seemed so far recovered as to allow of her removal to the ward. Dipping the sponges of the directors, on this occasion, in moistened salt assisted the passage of the current, and increased the conducting powers to a striking degree.

Precautions to be Employed in Dissections and Post-mortem Examinations.—Dr. Cattell recommends the anointing of the hands with camphorated oil, before handling the viscera; the oil or spirits of turpentine applied to wounds; nitrate of silver; nitric acid; spirits of ammonia; a strong solution of alum; and to old abrasions, adhesive plaster. These are remedies ordinarily adopted, and to these he adds the chloride of antimony; chloride of zinc in a deliquescent or liquid state; creasote; concentrated solution of chloride of soda, or of lime; and, finally, the use of gloves made of vulcanized caoutchouc, which should be kept on finger or hand blocks when not in use.

Muriate of Morphine in Toothache, &c.—M. Ebrard has always found toothache yield, in from half an hour to two hours, after friction of the gum on the affected side with muriate of morphine, in powder. The first friction should be performed in the evening, at least three hours after the last meal, unless the severity of the pain prohibits delay. It should be repeated in two hours if relief is not obtained; and to be repeated the following day if the pain should return. Half or three quarters of a grain may be employed; but if there should be headache, or disposition to sleep, the friction should not be repeated. When neuralgia occupies the forehead, from a quarter of a grain to a grain of muriate of morphine may be snuffed up the nostril, on the affected side, daily. The mucous membrane to be cleansed by some mollient application.

To Separate Cholesterine from the Bile.—The bile must be evaporated to dryness, at a gentle heat; then rubbed into powder, and digested for twenty-four hours in a vessel containing a sufficient quantity of ether, shaking frequently during this period. The liquid is then to be filtered and evaporated, and the cholesterine crystallizes which constitutes the residue to be treated with boiling alcohol. As the alcohol cools, the cholesterine crystallizes in the form of small white scales, which are rendered more apparent by the addition of water.

Transmission of Ringworm from Animals to Man.—To the few cases which have been published on this subject (by no means numerous) Dr. Ritter, of Rottenburgh, adds the following:—A young girl of Wurmlingen, twenty years of age, of strong constitution, engaged in keeping some calves, heifers, and a horse, which in

different places had the skin denuded of hair, caught the ringworm, one specimen of which was four inches long and three and a half wide, of the exact figure of *herpes circinatus*, and the itching was so violent as to prevent her obtaining rest either night or day. The internal exhibition of dulcamara and crude anatomy, with the use of an ointment to the part affected composed of white precipitate and hog's lard, speedily effected a cure.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

J. M. Arnott, Esq., F.R.S., President

Observations on the Coexistence of Variola and Scarlatina, with Remarks on the Co-existence of other Eruptive Fevers

By J. F. Marson,

Surgeon to the Smallpox and Vaccination Hospital, London

During the last eleven years, the author of this paper has seen, at the Smallpox and Vaccination Hospital, seven persons who had variola and scarlatina simultaneously. These patients were apparently suffering from smallpox only on their admission, but, in the course of a few days, scarlet fever also developed itself. In each case, all the leading symptoms of scarlatina were well marked, and the eruption was evidently different from the roseola, which frequently precedes the eruption of smallpox, and also different from the erythema (somewhat resembling it) arising from the miasm of hospitals; in fact, it was the florid red eruption peculiar to scarlatina which no other eruption exactly resembles. Three of the patients were unprotected, and four of them had been vaccinated. All recovered but one, the particulars of whose case were given in full. Three other patients, with variola and scarlatina existing at the same time, have been seen, within the last few years, at the London Fever Hospital. Reference was made to the opinion so strongly expressed by Mr Hunter, that no two fevers could be coexistent. Several cases were then alluded to, that have been published by different observers, in France and England, of the coexistence of variola and scarlatina, variola and rubeola, variola and pertussis, variola and vaccinia, rubeola and scarlatina, rubeola and vaccinia, rubeola and pertussis, varicella and vaccinia, pertussis and vaccinia. The individuality of erysipelas, as a special eruptive fever, was commented on, this disease being shown to arise, almost invariably in hospitals, from the impure air produced by morbid animal effluvia. The French were acquainted with the fact, fifty years ago, of smallpox and scarlatina existing together occasionally, some cases being referred to by the author, published by M. Gr. Vieusseux, at that period, but the subject has nearly escaped attention, or at least, remark, by writers of this country.

Report of Some Cases of Molluscum Contagiosum, with Remarks on its History and Pathology

By Richard Payne Cotton, M.D.,

Member of the Royal College of Physicians, London

The author commenced by a description of the disease, as lately seen by him in a respectable family, in which the mother and three daughters were affected, and the father and two sons exempt. It first attacked the eldest girl, and subsequently all the female members of the family, commencing in the form of prominent, rounded, movable tumours, smaller than a pin's head, which after a few months increased to the size of a large pea, and throughout presented a small central depression resembling that of a smallpox pustule; they were red, soft, and shining, but in the process of growth became hard and warty; their attachment was often pedunculated, but more commonly by a broad base. No inconvenience attended them unless they were exposed to friction, and the surrounding skin was never inflamed; they were usually arranged in groups, but never coalesced. At first, an opaque, creamy looking, inodorous matter escaped from the central depression upon pressure, but as the tumours grew this secretion became indurated.

A drawing of the microscopical appearances of the secretion was exhibited, by which it appeared to be made of two distinct structures, one cellular, the other fibrous—the former composed of elliptical or spherical cells, the latter, of waved fibrils resembling the white fibrous element. From the central depression being formed by the contracted opening of a duct, the absence of the tumours upon the palms of the hands and soles of the feet, where sebaceous glands do not exist, and the lobulated form of the hard secretion, the author concluded that these organs were the seat of the disease. An account of the microscopical appearances of the contents of comedones, or retained sebaceous matter, was then given, and shown to be dissimilar to that of molluscum. The origin of the disease in the cases reported was referred to some peculiarity of organism inherited from the mother, and not to contagion. The rarity of the affection was then spoken of and a reference made to cases already described by Bateman, Cazenave, Erasmus Wilson, and Drs Henderson and Paterson, from which it was inferred that some were really propagated by contagion, whilst others seemed incapable of becoming so; that the secretion in some cases was simply sebaceous matter, but in others a peculiar and independent organism. Hence, it was concluded by the author that the disease is contagious or not according to the nature of the secretion, its seat remaining the same. That Bateman's division into molluscum contagiosum and molluscum non contagiosum would therefore be insufficient, as he had applied the latter term to an affection distinct from the one described in the report, and not spoken of by subsequent authors, but probably some follicular tumour; and it was proposed to limit these terms to the disease hitherto called molluscum contagiosum. The affection terminated either by an escape of the secretion, which was rare, or its induration, and the formation of a permanent warty tumour. The treatment consisted merely in removing the tumours, and checking the tendency to their development by friction of the skin and ablutions, the general health being remarkably good. As soon as the tumour appeared, pressing out the secretion, and the subsequent application of nitrate of silver produced a speedy cure; but, for those more advanced, three methods were adopted: 1, removal by scissors; 2, ligature; 3, the evacuation of the secretion through a small puncture, followed by the application of nitrate of silver. The last treatment was the most successful.

Case of Malformation of the Heart, in which Death Resulted from Obstruction of the Trunk of the Pulmonary Artery

By Thomas B. Peacock, M.D.

The subject of this case was a boy, fifteen years of age, who had from early life exhibited slight appearances of cyanosis. Twelve months before his death he was thrown from a cart, and after that period the lividity of the countenance became much more marked, and he was subject to frequent attacks of chest affection, and to palpitation. His last illness was of eight days duration, and commenced with rheumatic symptoms, followed by difficulty of breathing and pain in the chest. When admitted into the Royal Free Hospital he exhibited very marked cyanosis, and a loud murmur, accompanying the impulse of the heart, was audible in the præcordia and along the sternum. At the situation of the base of the heart the murmur masked all other sounds; but towards the apex, and the lower and right side of the sternum, it was followed by a loud second sound. He died a few hours after his admission. On examination, the aorta was found to arise in part from the right ventricle, and the orifice and trunk of the pulmonary artery were of very small size. The right ventricle was also separated by a supernumerary septum into two cavities, one being the infundibular portion, giving origin, as usual, to the pulmonary artery; the other consisting of the sinus of the ventricle, communicating with the aorta. The abnormal septum was incomplete over a space about equal in size to that by which the aorta communicated with the right ventricle. The orifice of the pulmonary artery was provided with only two valves, and those were so thick and rigid as to occasion a further contraction of the aperture. The trunk of the vessel was entirely obstructed by partially decolorized coagula, which were laminated and adherent to the thickened and diseased valves and coats of the vessels. The author remarked that the case was closely allied to the ordinary form of malformation, in which, with congenital contraction of the pulmonary artery, the septum of the ventricles is defective at the base, so as to allow the aorta to receive its supply of blood from both ventricles. Its great interest, however, lay in the division of the right ventricle into two cavities communicating with the aorta and pulmonary artery respectively, and the free admixture of the venous and arterial currents of blood, which must consequently have taken place throughout the whole of the boy's life. So far however, from this having been productive of marked cyanosis, it was stated that there was but little peculiarity in the boy's appearance till the supervention of secondary disease in the pulmonary artery after the fall, twelve months before his death. The cause of death was also, it was remarked, unusual. Though obstructions in the terminal branches of the pulmonary artery had been shewn by Baron and Paget to be of frequent occurrence, the writer was not aware of any other case in which the trunk of that vessel had become obstructed.

On Ulcerous Rarefaction of the Bone, Consequent upon Gout

By Alexander Ure, Esq.,

Fellow of the Royal College of Surgeons, and Surgeon to the Westminster General Dispensary

The author observed that, upon making a transverse section of a digital phalanx, taken from a gouty subject, a peculiar speckled appearance was perceptible. The medullary canals were seen preternaturally enlarged, and filled with a cretaceous matter, which effervesced with acids. The Haversian canals were, in like manner, irregularly enlarged and choked up with this substance. The osseous lacunæ or corpuscles were, in some places, increased in size, and rounder than ordinary, but, for the most part, less distinctly marked. The canaliculi, more especially in the vicinity of the medullary canals, were replete with the above deposit, thicker than normal, and in obvious communication with the medullary canals. There was thus induced porous rarefaction of the bone. The author stated that the matter in question consisted chiefly of carbonate of lime, while a portion of tophus, detached from the adjunct phalangeal part, was almost wholly composed of urate of soda. In reference to the above peculiar condition of the osseous structure, he remarked, that Dr Gerlach, of Mayence, whose co-operation he had in the above research, subsequently ascertained that precisely the same appearances were present in the section of bone taken from a person who had been afflicted with morbus coxæ senilis. Arthritic osteoporosis is an affection of a very insidious character. It commences almost imperceptibly, creeps on stealthily year by year, and is accompanied by occasional pain and swelling. Although usually occurring in individuals hereditarily predisposed to gout, it is not necessarily preceded by a fit of that malady. While the author believes it to be but little amenable to treatment, he is of opinion its progress may be somewhat retarded by judicious hygienic measures; and the attendant pain and uneasiness relieved by topical steam-baths, in conjunction with the vapour of mineral naphtha, and by various other soothing means.

Office of Ordnance, June 16.—Ordnance Medical Department.—Henry Fisher, gent., to be Assist.-Surg.

REVIEWS.

Observations on the History and Treatment of Dysentery, and its Combinations. By WILLIAM HARTY, M.D. Second Edition. 8vo. Dublin: 1847. (Pp. 303.)

The first edition of this work appeared more than forty years ago, and was favourably received by the professional critics of that day. During the subsequent years of his practice, Dr. Harty has continued to devote much of his time and attention to the subject of dysentery, in its simple and complicated forms; and the issue of this long and ardent labour is the volume before us. The work throughout bears a twofold tribute to the author's judgment as a physician, and capabilities as a scholar. In almost every page is the evidence of the practical man, in the simple, unpretending enunciation of those direct truths which are only to be gained at the bed-side or in the dead-house; whilst giving a variety and richness to all this, is an elegant and copious selection from the best authors, both ancient and modern, on the several subjects where corroborative or contrasted opinions may be desirable.

Concerning the affinity between dysentery and rheumatism—an affinity stoutly denied by some, and by others, ourselves in the number, admitted often to exist—Dr. Harty speaks in the affirmative. He thinks that rheumatic inflammation, contrary to the phlegmonous, is "seated not so much in the arteries as in their exhalent extremities, which, when inflamed, pour out greater quantity of their contents than the absorbents can take up within the same time, thereby inducing both pain and swelling. From this peculiarity in the seat of rheumatism, and the character of the temperaments most subject to the disease, it appears that neither venesection nor other evacuants, that of the skin alone excepted, are equally advantageous or necessary in this as in phlegmonous inflammation. This peculiarity in the seat of rheumatism may suggest some reason why we never find a purulent secretion consequent on the disease, and why the red flush of inflammation is so rarely observed on the parts affected by it." (Pp. 31, 32.)

The cause of dysentery he refers "to an inflammatory action in the innumerable exhalent vessels on the mucous coat of the intestines, similar to that which takes place in serous membranes when affected with rheumatism. Under this state of the vessels, the quantity of their secreted fluid is considerably increased, and its quality, perhaps, somewhat affected: the intestines by this stimulus are excited to spasmodic constriction; and, from both these circumstances united, all the other symptoms may be deduced: hence we have frequent stools, with coexisting constipation; hence we have tormina, with tenesmus." (Pp. 37, 38.)

Concerning the contagiousness of dysentery, which is quite a *questio vexata* with pathologists, Dr. Harty inclines to the belief that the disease is not contagious *per se*, but only when complicated with typhus fever.

"We have seen that the disease is held by the best authorities to be, if not always, at least very often, contagious: and as we have shown that it is devoid of this property, both in its simple state and in combination with intermittent and remittent fever, so we must necessarily infer that the combination with typhus fever alone can constitute the contagious form of the disease." (P. 118.)

"Dysentery, therefore, can no longer be deemed a contagious disease in itself, though capable of acquiring that property under peculiar circumstances. Thus, we see that a contagious disease can so intimately associate itself with another, not possessed of that power, as to communicate both diseases, and not that merely which was in itself contagious." (P. 143.)

Still this does not, in our opinion, prove the con[illegible] dysentery *per se*. There can be no doubt whatever, that in its uncomplicated forms this disease is not communicable. There is only one malady with which it is ever allied, showing proof of contagiousness as a twofold disease: that malady is typhus. But dysentery does not exist with typhus as an ally; when the two go together, the former is generally only a *symptom* of the latter, or a pathological state arising out of it. Genuine typhus is never free from more or less disturbance in the mucous membrane of the bowels. Sometimes it is in the small ones, and we find congestion, inflammation, and ulceration there; sometimes it is in the rectum, and what superiorly would be tormina is here tenesmus. These cases of typhus may propagate themselves, and in some instances the communicated disease will be attended with special suffering in the lesser bowels, and in other instances in the larger. But we should surely not say that the inflammation or ulceration of the jejunum or ileum was contagious; and we see no reason for affirming the same thing of like affections of the rectum. The fact is, it is the *typhus which is communicated*; and the dysentery may or may not come as its consequence.

On the treatment of dysentery our author is very explicit, ample, and essentially practical. His observations and suggestions, derived from experience, are very clear on the use of evacuants, tonics, sedatives, and counter irritants, in this troublesome disease. In these several divisions of treatment, he recommends the judicious use of venesection, emetics, purgatives, diaphoretics, warm bath, swathing, and mercury; bark, wine, and other cordials, opium and tobacco; blisters and turpentine, according as the circumstances of each particular case may call for one or other of these remedial agents.

The work is written in a very lucid style, except that there are occasionally long Latin quotations and epithets, which would have been as well translated or left out. Altogether, the volume does its author the greatest credit, and we gladly add this testimony in its favour.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription,* 13s.; *Quarterly,* 6s. 6d

A Subscriber, Boston.—*Question 1. Christison's, or Guy's. 2. Sir Astley Cooper's.*

L. A. C., Clerkenwell.—*Admission may be obtained by application at Apothecaries' Hall. The gardens afford excellent specimens of some very rare plants, and in the examination for the certificate fresh specimens of plants mentioned in the Pharmacopœia are often brought under the notice of candidates, to test their knowledge of medical botany.*

A Young Surgeon, Cheltenham.—*A library can never be called complete, however extensive the collection of books. It would occupy too much of our space to enumerate all the volumes which ought to be found in the library of a medical practitioner.*

One about to Settle.—*We can offer no opinion, as we have no knowledge of the parties. Consult some respectable medical agent, or advertise in the columns of the* Medical Times.

Mr. James Hinton.—*The certificates are not exactly in accordance with the requirements of the Hall and College. The required information may be obtained by addressing the secretaries.*

B. B.—*The parties are liable to a prosecution; and, "as they are ignorant and impudent quacks," their career ought to be immediately checked.*

A Correspondent, Rochford, Essex, *informs us, "that a man, with whom he was acquainted, [illegible] admitted into the London Hospital about [illegible] months ago, with a compound fracture, and amputation was performed below the knee while the patient was under the influence of ether. He died about a month after, tho[illegible] the accident he had been always [illegible] of good health, and was very temperate. Had the ether anything to do with the fatal result?" It is impossible to say, without further information.*

A Member of the College.—*Professor Owen delivered a course of lectures on Co[illegible] Anatomy at the College of Surgeons, last [illegible]*

A Medical Traveller.—*We have not h[illegible] any medical journal in modern Greek has been published at Athens.*

A Student of the Royal Infirmary, Glasgow.—*The case presents many points of interest, but, as a similar one has been very recently published in our columns, we must, therefore, decline our correspondents' offer. He has our thanks for the communication.*

Medico-Chirurgus, Aspatria.—*Ques. 1. The apprenticeship is indispensable. 2. King's College Hospital. 3. There is no chance of obtaining the appointment without personal application.*

Medicus.—*We did not publish the case, because it was not sufficiently authenticated. The name is not in the Directory.*

A. E. Collyer.—*The lectures will appear nearly every week till they are completed. Our correspondent is thanked for his offer, which is accepted.*

An Assistant, Brompton.—*The fee is one guinea, without a* post-mortem *examination. The medical gentleman who attended ought certainly to have been consulted.*

A. M.—*Special certificates would certainly be necessary. Consult the* Medical Times Almanac.

Mr. Edward Simpson.—*The subject will be taken up by us in an early number. The communication shall appear.*

O. P.—*It is not necessary now to publish the letter, as the rickety bantling has departed this life, after a very brief and chequered existence. Requiescat in pace!*

A Reformer, Westham.—*The communication has been evidently penned under the influence of fear.*

A Firm Friend of the National Institute.—*The number who have withdrawn are very few. Our correspondent informs us "he has heard that some of the principal enemies of the general practitioners have been seized by Giant Despair, and are now locked up in Doubting Castle."*

A Medical Student, Bow.—*The case of Strongylus gigas, occurring in the practice of M. Arland, surgeon to the French navy, was published in one of the March numbers of* 1846.

A Country Accoucheur.—*Galvanism has been applied successfully in uterine hemorrhage both before and after delivery; but it is a remedy which cannot be generally used in country practice. If he will send us the case in which he administered the ergot with such singular results, it shall be published.*

Anti-Humbug.—*The letter is severe, and under present circumstances it would be useless to insert it.*

Dr. Thomas Clissold.—*A private communication has been sent.*

Philo-Chirurgus *is evidently very warm and enthusiastic in his profession. He must remember, however, that in the pursuit of knowledge many difficulties have to be encountered, and that success does not* always *accompany merit.*

J. E. L., Bedford.—*The French Medical Bill has not yet passed into a law.*

Mr. J. E. Lander, Shiffnal.—*It is usual for one medical gentleman to assist another in cases of need without any charge, unless they are not on friendly terms.*

Mr. John Dale's *letter to Sir James Graham and to Vox Veritatis received.*

Chirurgus, London.—*The Apothecaries' Company has the power of prosecuting illegal practitioners. It is both "necessary and advisable to pass the Hall."*

George Ross, Esq., 4, Hanover-square.—*The copy of the constitution and by-laws of the National Institute was received too late for insertion.*

Mr. R. H. Powell, Rock-lodge, Tunbridge-wells.—*The communication has been received.*

Prater.—*Any of the insurance-offices which advertise on the cover of the* Medical Times *will endow the children, under certain regulations.*

Mr. J. P. Heane, 8, Barton-street, Gloucester.—*The lectures of Dr. Knox will be commenced within a short time.*

We shall next week publish the laws and regulations of the National Institute in the form they are to be submitted to a general meeting.

Our friend H.*'s wit on the "dishonoured bill"—the registration measure—is admirable, but we fear we can find no space for it.*

A Pupil.—*Apply to Mr. Belfour, of the College of Surgeons.*

Erratum.—*We are informed that the reference in our columns last week to the* Gazette, *as dead, is not literally true. We are always happy to correct obituary notices, especially of a contemporary.*

Mr. Johnson *is mistaken in his critique. The author is right, and our correspondent wrong.*

A Pupil, *who writes to us on the London Hospital, should have sent his name.*

Mr. W. F. *will oblige us by sending us the order of the coroner. There is no doubt he was at fault.*

Will Beta *authenticate his note? The circumstances of the hospital would appear to require a change, even for its continued existence.*

We have received several more letters about Dr. Ryott's entry in "The Provincial Directory." All the facts are now, however, before the public, and are now of too little public importance to require or justify further commentary on either side.

Letters and communications have been received from Mr. James Hinton; Dr. Thomas Clissold; J. L. E., Bedford; Philo-Chirurgus; Anti-Humbug; A Country Accoucheur; A Medical Student, Borough; A Firm Friend of the National Institute; A Reformer, Westham; O. P.; Mr. Edward Simpson; A. M.; An Assistant, Brompton; A. E. Collyer; Medicus; Medico-Chirurgus, Aspatria; A Student of the Royal Infirmary, Glasgow; A Medical Traveller; A Member of the College; A Subscriber, Boston; L. A. C., Clerkenwell; A Young Surgeon, Cheltenham; One about to Settle; B. B.; Mr. E. Lander, Shiffnal; Mr. J. P. Heane, Barton-street, Gloucester; Prater; Mr. R. H. Powell, Rock-lodge, Tunbridge-wells; G. Ross, Esq., 4, Hanover-square; Chirurgus, London; Mr. John Dale, Yarm, Yorkshire; Mr. T. Haynes, Thirsk.

☞ *Subscribers wishing to complete their sets for binding are recommended to do so at an early period, as it is not intended to repeat any reprint of back numbers.*

THE MEDICAL TIMES.

SATURDAY, JUNE 26, 1847.

THE ILL-FATED MEASURE.

There can be no division of our profession not resigned under the decease of the Medical Registration Bill. The thing was not an honour to us in whatever aspect considered, from that of morals down to that of history. It was, to say as little as possible, not original, nor comprehensive, nor statesmanlike, nor safe. If a measure for which we could be fairly considered responsible, it must have lowered us ninety per cent. in popular and parliamentary estimation. Fortunate for us, the profession very significantly washed its hands of the responsibility; and even the author must, by this time, be glad, as we are, that he has seen the last of it.

Passing by a sad retrospect of defunct or adverse Associations, we cannot forget that this is that gentleman's second year of *bill* discomfitures. The treatment he helped to mete out to Warburton, Haw[illegible] and Graham (to omit others) has at length been meted out, in increase, to him. Will he, then, with this broad hint [illegible]p, oblige *us* and *the profession* by no obtruding on us his, possibly, well-meant but repelled labours? Will he kindly save The Medical Times the necessity of again recurring to the subject of himself and deplorable activity? He could do us no higher favour, and—if that be a poor appeal to his generosity—can do himself no greater service. It is the price—surely not a high one—at which he will secure pleased and grateful silence from *us*, and plenary condonation from the profession. His medical legislatorship has not succeeded with him the last five years—nor will it the next: and we are quite sure the truce we offer him would as much serve his interest as the profession's liking. Will he accept it? He should: for he may be assured that, like Wolsey, there would be no phase in his medico-political life more becoming than his "leaving on it."

Believing that this result would be one of the most practical services our profession could receive, we shall not stand in its way by the indulgence—however tempting—of a very natural feeling of triumph and exultation. We will this week, therefore, give the deceased bill all the honours of dead humanity—and, as we cannot praise, be silent. *De mortuis nil nisi bonum.*

PERILS OF THE PROFESSION.—THE CORONER'S INQUEST AT HERTFORD.

The character of a medical practitioner is all that is valuable to him, for upon its integrity depends his usefulness and prosperity. In no profession is it more necessary, and in none is it so exposed to injury and destruction. The benevolent acts of a medical gentleman may be turned to his own disadvantage, and the judicious exercise of talent may be misconstrued into the grossest ignorance. While in other callings character may be sometimes roughly handled, without any permanently serious consequences, in the medical profession it assumes such a delicate constitution that the smallest amount of rudeness towards it may be followed with fatal results. It is no strange thing to see men in the height of prosperity cast down into the depths of obscurity and contempt by the publication of an unjust suspicion. Professional reputation is, therefore, a thing which ought to be so highly valued as to make us very watchful for its safety, and to countenance no proceeding which is calculated in the least to affect it.

These remarks have been suggested in consequence of an inquest which was recently held at Hertford, to inquire into the cause of the death of a man named George Jeffreys, a detailed account of which is given in another part of this journal. The man had been addicted to drinking, and had lived in a state of concubinage with the woman who figured as principal witness at the investigation. He was attended by Mr. Reilly in his last illness; and a day or two before his death, after taking a dose of his medicine, he exclaimed that the "stuff would kill him." He did continue to get worse, retaining the impression to the last that the medicine "had done for him." This wild expressions of a dying man are—strangely enough—made the basis of a judicial investigation, and the coroner, without waiting for the parish authorities to summon him to duty, establishes his court and takes the deposition of the witnesses. The point sought to be established was, that the "stuff" which the patient had taken contained some deleterious ingredient, and the accusers retained the bottle in their possession till it was delivered to the constable.

Dr. J. Davies performed a *post-mortem* examination of the body, and found sufficient cause of death in the liver—preternaturally enlarged, "of a very dark, black, dirty colour, and in what is vulgarly called a rotten state." The stomach presented no very remarkable appearance, and, upon the application of a few tests to the medicine, it was found to consist of solution of acetate of ammonia, coloured with the compound tincture of lavender.

Such an investigation must have been a source of great pain to the medical attendant, though fully conscious of his own integrity; and, while the results are completely favourable to his skill and beneficence, it is another proof among many of the dangerous position in which medical men are placed when prosecuting their professional engagements.

The sick man, in the pangs of dissolution, had the impression that this medicine was the cause of all his suffering, and it is not quite clear that certain parties did not urge the friends of the deceased to insist upon an official investigation, merely to annoy the professional attendant. If this were the case, they have signally and deservedly failed.

The practice of medicine is indeed beset with many dangers, the surgeon being oftentimes expected to effect a cure when the case is hopeless; and the death of the patient is viewed not as the inevitable result of disease, but of the doctor's want of skill. Even his pills and draughts are too frequently blamed for inflicting the very sufferings which they were intended to mitigate, and the consequence is, that by the diligent propagation of unjust insinuations, his prospects of success are for ever blighted. Neither must it be forgotten that medicine has been sometimes made the vehicle of administering poison to an individual in order to destroy his life. Judge Alderson relates a case to this effect:—A medical man prepared some medicine, into which another put a poisonous ingredient, in order to destroy the person for whom the draught was intended. The patient not liking its taste, and thinking there was something suspicious about it, sent it back to the compounder, who, knowing of what drugs he had composed it, and wishing to prove to his patient that he had done nothing wrong, drank it himself, and died.

Add to these injustices that it is not an uncommon thing for the poorer classes of people to endeavour to free themselves from the obligation of discharging a debt due to the surgeon by reflecting upon his skill, thus inflicting a double injury, by robbing him of his right and wounding his reputation. This is, doubtless, one of the reasons why medical men are so seldom found urging the payment of a bill by proceedings in a court of law.

The testimony of Dr. Davies was creditable to him, in not only exonerating the medical gentleman who attended the patient from all blame, but in declaring that he considered, from the evidence adduced and the manner in which the proceedings were instituted, that Mr. Reilly had not been well used.

The conduct of the coroner appears not altogether free from blame, in so hastily placing a medical man, if not exactly in the position of a culprit, in one very nearly akin, for he was suspected of having given his patient improper medicine; and the fiat of the jury was to decide the matter. It is high time these magistrates were taught to exercise their authority with a little more discretion, that the members of the medical profession may not be subjected to those annoyances of which they so justly and so frequently complain.

THOMAS WAKLEY, ESQ., *VERSUS* HIS OWN REGISTRATION BILL.

(From a Correspondent.)

The general practitioners have only to appeal to Mr. Wakley for an *honest* opinion on his Registration Bill. The bill proposes to repeal the penal clause of the Apothecaries' Act; and Mr. Wakley has emphatically addressed the general practitioners in the following words:—

"The announcement of the meditated REPEAL OF THE ACT OF THE APOTHECARIES,—the announcement of the intended ANNIHILATION of that basis ON WHICH ALONE stand the decisions of the JUDGES of the superior courts, making it unlawful and penal for chemists and druggists, and all other unqualified persons, to practise medicine in England and Wales,—that announcement, we say, has struck upon the ears of general practitioners with a startling, a stunning effect; and is, happily, arousing them not only to a true sense of the danger of THEIR PRESENT POSITION, and to a clear foresight of the injury intended for them, but it is also producing in them a fixed resolution to engage in a just and holy struggle for the maintenance of their own honourable professional character, and for increasing the amount of their utility amongst their fellow-citizens."

Mr. Thomas Wakley proceeds:—"Whilst the general practitioners of England and Wales cling to the Apothecaries' Act—supporting as it does the decisions of the Judges—as the only existing check and barrier against their being swamped by an overwhelming tide of unlawful practice, the graduates in medicine of the universities and medical colleges of Scotland and Ireland are at this moment actively memorializing the Government and petitioning the Legislature for the UNQUALIFIED REPEAL, the UNCONDITIONAL DEMOLITION of THAT STATUTE."

This was the language of Mr. Thomas Wakley in the month of March, 1844. (*Leading article of the* "Lancet," *March 9th, p.* 794.) On the second day of the same month, in a leading article also, he furnishes his readers with his own estimate of the value to the general practitioners of the penal clause of the Apothecaries' Act, in repressing the practice of the chemists and druggists especially; he states that, with the repeal of that act, will he annihilate "the vitally important decisions OF THE JUDGES OF THE COURT OF QUEEN'S BENCH, interdicting the *medical* practice of chemists and druggists."

But Mr. Thomas Wakley was at that time engaged in organizing "THE MEDICAL PROTECTION ASSEMBLY," and "annihilating" the MEDICAL TIMES—at which, by the way, both attempts proved only his wretched imbecility. This respectable, consistent, honest, and redoubtable individual is now the author of the "Medical Registration Bill," which proposes to repeal the penal clause of the Apothecaries' Act, and thus "to annihilate the vitally important decisions of the Judges of the Court of Queen's Bench." The insulted general practitioners have only to appeal from Mr. Thomas Wakley, the author of the bill, to Mr. Thomas Wakley, the editor of the *Lancet*, and those who have been his foolish dupes must treat him with the well-merited scorn which such contemptible conduct has so richly earned.

The words in small capitals are exactly as printed in the *Lancet*.

ADDRESS OF MR. SKEY.

TO THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Gentlemen,—A recent circular of the college will have apprized you of my relation to the council of that institution. The circumstances which have afforded me this disagreeable notoriety are peculiar, and, inasmuch as they point to my possible exclusion from the council for ever, I trust I may stand acquitted of indelicacy, if I intrude my name once more on your attention.

My tale is fortunately short, and is not without its lesson to succeeding aspirants to the honour of a seat at the college council board.

At the nomination of 1846, I was informed that my name would be announced for election. It was so announced. It passed, however, unnoticed, and my junior was elected. I owe my non-election to a morbid opinion I entertain, that every office of public trust, like that to which I thought it not improbable I was about to be appointed, should come by right, and not by favour. Having no personal inclination to gratify, which might warrant a personal obligation, I felt that it would derogate from my honour, and from my independence, if I made a private application, even to a friend, the path to success. However willing I may have felt to undertake the duties and responsibilities of the council, I did not estimate the value of my services so highly as to warrant my adoption of indirect means in obtaining a seat at its board. I consider a personal canvass, or an application in any form, indirect means, and I declined to adopt them. My present opinions and my future intentions, notwithstanding the experience of the past, remain to this hour unchanged; and with such opinions, be they right or wrong, I will not compromise myself so far as to accept an office which demands the advocacy of public and often contending interests, and by the instrumentality of private favour. I do not conceal the fact of my disappointment in the result, but I have never reproached myself for my failure.

Many of my personal and intimate friends were present on the occasion in question. That they reproached themselves for my exclusion, I am quite content to know: one and all endeavoured to acquit themselves by the assurance that "I had no one to blame but myself;" but, as I do not blame them, I do not see why the charge of failure should necessarily recoil on myself. It is a source of great satisfaction to me, to acknowledge that any regret I felt at my possibly temporary exclusion was more than compensated by the kind interest expressed to me personally, by the almost entire body of the council, at an event which was apparently the result of accident merely.

On the 1st of July, a vacancy will be declared by the necessary retirement of three gentlemen from the council board.

Let it not be supposed that I aspire to fill either of the three offices thus vacated, notwithstanding the announcement of my name in the college circular, as eligible for the office. These three gentlemen, with high professional rank and the experience of two years of the duties of the office, will be re-elected as a matter of course. Should, however, either of the three fail of re-election, my name will be proposed, and, if unsuccessfully, I am informed that, in obedience to the requisitions of the college charter, I shall be excluded from the council for ever. This negative position I am not ambitious to fill. While I would shrink from obtruding myself either on the council, or on the notice of the Fellows at large, I do not pretend indifference to the honour of a seat at the council board of the College of Surgeons of England.

I am, gentlemen, your most obedient servant,

H. S.

THE EDUCATION OF IDIOTS.

[To the Editor of the Medical Times.]

Sir,—Can anything be done to ameliorate the physical and moral condition of this unfortunate class of the human race? Are there existing any institutions where efforts are made to improve the habits of children born with defective intellect; of congenital idiots, whose mental organization is of the lowest grade? It is a fact that such institutions do exist on the Continent, and the most happy results have followed the use of means to raise these objects of our pity to a position useful in the sphere they occupy, and the attainment of qualities which have rendered their social condition a source of gratification. In this country, however long famed for the support and extensiveness of philanthropic and benevolent institutions, not one is to be found for the reception of the imbecile, with a view to the cultivation and training of his low and imperfect mind, for the improvement of his moral habits, and qualification for those practical duties which prepare for the useful sphere of life. The deaf and dumb are regarded as objects of sympathy and compassion, and their interests have called forth the full tide of benevolent exertions in their favour, while it is a fact, that juvenile idiots have been neglected and left to their fate, without a solitary effort being put forth to ameliorate their condition, and raise them from a state of degradation all but on a level with the animal creation. Why, may we ask, is it that the philanthropy of the Continent should be in advance of the benevolence of this country in this particular? Why has France and Prussia deemed it important to stretch forth the hand of pity, and so nobly and disinterestedly come to the aid of this unfortunate class of beings, whose claims on their sympathy have met with so generous a response? Let England answer the question by the resolve, never to rest until she has imitated their example, and raised an institution worthy of her great name for the reception of juvenile idiots, their training and improvement and moral cultivation, until they shall rise into manhood, better qualified to occupy the station alloted them by Providence, instead of dragging out a miserable and wretched existence. The records of the Bicêtre establishment in France, and of the Berlin Deaf and Dumb Institution, place beyond a doubt the favourable results of the skilful treatment adopted to ameliorate the moral and physical condition of this class of individuals. A German newspaper contains the following:—"The instruction of idiots has succeeded; the problem, theoretically and practically, has been solved by M. Sargent, in conjunction with M. Sacks, first teacher of the Deaf and Dumb Institution, Berlin. So fully assured are the Prussian Government of the complete efficacy of the system, that a portion of the Deaf and Dumb Institution at Berlin is to be set apart as an hospital for idiots, where the most effective methods of education can be tested and carried out. All were imbeciles intrusted to the care of M. Sargent: they were twelve in number. After the lapse of some months, those who could hear were learning to speak; some were beginning to draw and write, and some to sew; others played most naturally, and sang and danced as other people; all appeared neat and cheerful, improved both in mind and body. A deaf boy, who was one of the worst cases, washed and dressed himself daily without assistance, and was learning to draw; he made his picture upon a slate, and evinced quite a passion for the employment. Most of them appeared in a hopeful way to attain ultimate restoration to the rank and society of rational beings. M. Seguin (of Paris) was also intrusted with the care of ten idiots, who were inmates of the Hospital of Incurables, and who formed the subjects of his experiments. In his observations or treatise, he gives a lucid statement of the moral and intellectual condition of his class, also accurately describing their habits. His task was an arduous one, and such as would have made many an individual shrink from attempting. He had to encounter a Babel of discordant sounds, hideous and unearthly cries, and the most determined resistance at first to control. But, in spite of every difficulty, his labours were attended with the most marked success, as the following will show in his own words. He says:—'1st. I have developed and applied, as much as the material means have permitted, the muscular system of the children. 2nd. The nervous irritability of several has disappeared or sensibly diminished. 3rd. They have walked, run, jumped, and begun different gymnastics, so useful in early years to young children. 4th. They have learned to seize hold of, handle, throw, and carry burdens, the weight of which

surpassed the strength of their age. 5th. Five among them have learned to read, write, count, to ascertain limit, which permits us to hope that they can still be improved by instruction (th Their notions have become precise and enlarged 7th. Ideas have begun to form themselves, and to be made manifest in their conduct and speech 8th Obedience and morality, which were both to be created, have begun to regulate part of their acts and of their existence 9th Several are sought for in the establishment to perform manual labours, in preference to older persons, and are employed to work in the gardens 10th During the six months, nine of my children have been severely ill, and the health of all is strengthened" On a calm review of the labours of this excellent man, we cannot but be struck with the fact that obstacles which formerly appeared insurmountable in the education of idiots have been overcome, and the development of hidden powers have been made apparent, to an extent quite beyond human calculation

What an amount of misery may be relieved in this our fallen world by the establishment of kindred institutions to elevate the creature from his isolated, forlorn and hopeless condition, to the social pleasures of life, the pursuits of science, and the advantages of education! How dignified the pursuit to commence and co operate in a work so great so noble, so distinguished which shall have for its object the expanse and growth of the intellect, from the atoms of sunk humanity, and raise the standard of the mental and moral condition so as to render existence a pleasure, not a curse!

Once more I may refer to Dr Alexander's work on Switzerland, lately published, in which he refers to a young German physician, Dr Guggenbuhl, who has devoted his talents and his property to a great and noble purpose, for the benefit of youthful idiots. Such is his confidence to ameliorate the condition of this unhappy class of sufferers, that he has sold his property in order to purchase a house where he may conduct his benevolent object There he resides with his family of idiotic children The most encouraging results have followed, and by the published reports he has put forth of the working of his institution, and the testimony of those who have visited there, he has earned for himself a name in Germany amongst such as are best able to appreciate his disinterested labours The public mind, through the press, needs only to be informed of the rise and progress of such institutions which have done so much for the benefit of mankind, and the alleviation of misery in its worst form, to be awakened to the importance of raising one of a similar character in this country commensurate with the wants of the population It is not too much to hope that a benevolent Christian people, whose aims and purposes in the cause of philanthropy embrace the universe, will be alive to the appeals that are made on behalf of the poor, neglected, and wretched idiot, and, by a generous impulse of the noble and right-hearted feeling, decide that England shall no longer remain in the background, forgetful of the outcasts of society Why not have an English Bicetre started?

In conclusion I would recommend all who may feel an interest in these deplorable cases to procure Dr Scott's small pamphlet containing a series of remarks on the education of idiots and children of weak intellect There are also three most interesting papers on the same subject in Chambers' Edinburgh Journal for January and February, 1847, which are well worth an attentive perusal

I remain, Sir, yours truly

Tiverton, June 16 [illegible]

GENERAL MEDICAL ANNUITY FUND

[To the Editor of the Medical Times]

Sir, —I have read with much pain the singular communication of Dr S. Palmer, published in your journal of the 19th instant. I say, I feel pain, because I had not the slightest idea that that gentleman left the meeting at Northampton with any sentiments inimical to our proceedings, or at all objecting to the free and impartial manner with which his project was discussed I must say, too, that he has misunderstood the feelings of the gentlemen present on that occasion, if he believes they came there with any predilection in favour of any particular system they were all open to conviction, and ready to adopt any principles which in their development and character were practicable and efficient indeed, so highly do I estimate the goodness of heart and purity of feeling which actuate Dr Palmer that I told him distinctly, that if he could verify his statements and prove the practicability of his plan, no man would rejoice more than myself, and nothing would afford me higher gratification, than to forego my own project and adopt his

Surely there cannot arise a question in the heart of any man, whose object is the comfort of those he seeks to benefit, between granting the parties a large sum and a small one but to hold out hopes that might not be realized would be to sin against common sense and expectation

Dr Palmer's project, as far as we could understand it, was untenable, on the ground that he could not realize it by the proposed subscriptions, that he could not accumulate a *fund sufficient* to the annuities proposed and that to furnish such annuities would require a much larger amount of capital and annual payment than he had at all contemplated It was proved to him the utter impracticability of insuring an income even equal to the twentieth part of what he proposed, on the terms of his project, and let me ask, will the experience of the past justify any efforts to establish a society, which should guarantee a certain amount of advantage, where the resources are varying and uncertain as they must ever be when principally derived from donations and bequests? Think, too, of the number of years which must roll away together with the originators and promoters of the plan before such a society as Dr Palmer would establish could be in a position to grant assistance at all Is it not better, then to commence upon a small but certain scale of aid small but certain assistance, and trust to time and the further growth of the institution for the development of more extensive benefits

I am not aware that the secretary evinced any remarkable fluency of speech or laid eloquence in proving these facts to Dr Palmer He drew his information from the Government tables, and pointed them out to Dr Palmer with all the courtesy and kindness he could show and spent much time and, I will add, evinced much ability in pointing out the untenability of the project, as far as that project was shown

If he failed to convince Dr Palmer he certainly was more successful in convincing the other auditor

I have said, Sir, repeatedly, and I reiterate that statement that I am wedded to my project that I have hitherto supported my own with all the power and ability I possess because I have seen none other to supersede it but the moment I do so, that moment will I abandon my own Neither am I vain enough to pronounce it perfect, for what human institution is free from fault But I have seen nothing yet which has induced me to pause, but everything to stimulate my exertion, and stimulated they will be, until the blessings I seek to bestow are scattered over the land, and come upon the desolate heart of the widow and the orphan like falling dews upon the parched desert

Dr Palmer speaks as though the smallness of our number at Northampton excited his melancholy, but Dr Palmer is not ignorant of the great difficulty with which professional men escape from their duties, and the vast distance which separated our leading supporters. It would, however have been fair of him to refer to the pile of letters which had been received from all parts of the kingdom, regretting unavoidable absence, and all breathing one pure spirit of hope and expectation, and one cheering vein of implicit confidence in our proceedings, which ran through every communication I regard, therefore this meeting as a vast meeting, if the mind be recognised as the noblest part of man, for many spirits were with us whose bodies were absent, and their written testimony lay open for inspection

I think it somewhat unkind, too, of Dr Palmer to convey to the world the gratuitous assumption that either he or his project met with unfair treatment for I know of none who denounced his project as "visionary or utopian, or who tore it piecemeal, and scattered it to the winds of heaven" When men appear before the public, anxious to propound views, or propagate peculiar opinions, they cannot but expect that those views and opinions must undergo the ordeal of criticism, nor have they reason to complain, if such criticism be conducted with fairness, even although it shall expose the vulnerable parts It is illogical to wince on such occasions, for the great end of all controversy is to elicit truth, not to obtain victory I believe the greatest deference was paid to Dr Palmer—the purity of his motives were never impeached the excellency of his heart was never questioned, although it might be doubted whether the world in general could be influenced by the spirit which pervaded him, seeing how rife it is with selfishness and apathy, neither was the known acquirements and acknowledged talents of this worthy and excellent gentleman forgotten in our admiration of his character and I hold it one of the happiest circumstances of my life that any event should have given to me the honour of his acquaintance

Dr Palmer must pardon me if I complain of the contemptuous manner in which he treats of the arguments of the mere arithmetician, and the hard calculations of the actuary No institution can flourish that is not subjected to the searching ordeal of arithmetical correctness How many beautiful societies have sprung up, flourished for a time and then decayed, for the want of strict attention to this most essential consideration

When my project was first mooted it was not done without deep thought and rigid calculation It was done because I saw, or believed I saw, a great need for such an institution, and although the propagation of it has involved me in new cares and new anxieties, which were not contemplated at the time of its promulgation, yet I will not shrink from any toil or labour until my end be attained My calculations then were simply on the *annual guineas*, and I regulated the amount of annuities by what *they would produce* but it does not follow that we *should never exceed it* No, like Dr Palmer, I look for some offering and bequests —I look for assistance from the 'opulent and the childless,' and I anticipate the gratification of doing much more than proposed, and such, too, are the feelings of my coadjutors, the subscribers to this 'fund' or why have many amongst them been most liberal in their donations, and exceeded the stipulated amount of subscriptions —why at this moment do I hold in my hand the munificent gift of Dr Jephson, of 100 guineas, which that excellent and philanthropic gentleman instantly forwarded to the secretary on the receipt of the resolution passed at the Northampton meeting? accompanied, too, by a letter full of fervent wishes for the success of our institution. Let this noble example be followed by other opulent men, and the brightest visions of Dr Palmer and, I would add, the earnest prayers of my unworthy self will be fully realized

But, for all this, we have no right to form our calculation on such contingencies If they come, let us be thankful for them, and use them to the best of our abilities in advancing the interest and usefulness of our institution, but do not let us place the fabric we wish to last upon any uncertain foundation The directors of the General Medical Annuity Fund will alone be guided in their legislation by "the arguments of the arith-

matician and the the frigid calculations of the actuary"; and we must leave an enlightened public to judge whether we are not pursuing a legitimate course in offering that which we are certain to accomplish, however small it may be, rather than aiming at too much with the fear of never attaining it, or of breaking down in the midst of our career

In conclusion, let me add that, after the controversies which this society has called forth, after the many letters which I have written and published in various medical periodicals, and after the calm deliberation of the "little band of enlightened and philanthropic men" by whom I was surrounded at Northampton, I had hoped that we should be no more called upon to justify our proceedings, or to compare our society with others, but that we should all simply devote our energies in carrying out the principles of that institution which I have had the honour so long to advocate.

I am, Sir, your obliged servant,
EDWARD DANIELL

Newport Pagnell, June 19

THE DEFUNCT MEASURE.

[To the Editor of the Medical Times.]

SIR, —It is impossible to contemplate the provisions of the Medical Registration bill with'n a firm conviction that Mr Wakley is both a bold man and a presumptuous one ... in assuming the individual responsibility of passing a law for every grade of the medical profession, and presumptuous, in believing that the mere emanations from his "own small head" should determine the future destiny of every member of that profession in the United Kingdom. The principle of the bill is a *hybrid* combination of protection and free trade, but protection is only afforded when there is nothing left to protect, and when the price of qualification for medical practice is so reduced in the market as to offer a little temptation to the smuggler. The prominent features in the bill are unmitigated hostility to the Apothecaries' Act of 1815, the advantages of which Mr Wakley has never received, and a desire to render the College of Surgeons, to which he is indebted for all his academic honours, the *alma mater* of the profession. This bitter feeling, however morbid, is so conspicuous in the bill that had its enactments been edited by a Brodie or penned by a Lawrence they could not have better suited the present views of that college, and thwarted those of the general practitioners. Yet strange to say, even the college council will have none of him, nor accept a favour at his hands.

In the first few clauses, independently of the Government patronage so freely bestowed, and which is evidently intended to find favour for the bill in the sight of Ministers, our Finsbury Lycurgus commits a mercantile error in giving away that which might be profitably bartered. Some medico-politicians have offered, that if Government will prohibit in ... of encouraging the sale of patent medicines, the medical profession would submit to a tax to compensate for the loss of that nauseous portion of the state revenue. Mr. Wakley thinks otherwise, and it is ludicrous to observe the dexterity and liberality with which he throws us at the feet of Government as a taxable commodity. "Take them, he says, "and take them freely. You will find they can bear squeezing. £2 as an entrance fee, and five shillings annually, with a twenty shilling fine occasionally by way of bonus is nothing to them, they are all well paid and well fed, and very much under worked" So true it is, and the present age has afforded us so many examples, from Napoleon Bonaparte to the president of the College of Surgeons, that no despot is so tyrannical as the democrat in power

Clause 28, which provides that this act shall in no way affect the present business of chemists and druggists, is obscure. It requires an explanation of what is the business of a chemist and druggist as by law appointed. Their present business is undoubtedly to act as surgeons and apothecaries whenever and wherever their capacity or inclination leads them, and until they find some thing too hot or too heavy for them. It would certainly not be difficult to prove here after in any court of law that their customary "business," prior to March 1st, 1847, was to attend and prescribe as surgeon apothecaries. Nor, if we grant them counter practice and dispensing for aliments in their own shops, is it easy to find in what way this differs from medical and surgical practice ... most extensive and important degree ... strict "business," as in France, should be limited to the preparation and sale of drugs, &c, with ability to explain their properties, uses, and doses to their customers, and the dispensing of written prescriptions or receipts, and in these departments they should experience no rivalry from medical men who disgrace themselves in ... the ... under the *sobriquet* of "surgeon and chemist"

I am, Sir, your obedient servant,
A PRACTITIONER WITH TWO TAILS

June 16

THE APOTHECARIES' SOCIETY.

[To the Editor of the Medical Times.]

SIR, —As I am ... a member ... I have perused ... from Mr ... in today's ..., it ... unusually correct, ... it is your duty ... I will not defend the licentiate ... If they do not defend them their licens... As long as every college and chartered ... competing with each other in glutting the public with the various qualities of medical men so long will ... be humbug. If the Apothecaries Company cannot afford to protect their licentiates, let the licentiates subscribe, and continue to prosecute ... by the subscriptions ... The state of the medical general practitioner ... the ... being ... the Apothecaries' Company I would ... the privilege for which I would pay

Do ... Rhubarb Pill and rub the ... up well

Yours respectfully,
R P R...

Bodle...

THE INQUEST ON THE HICKMAN FAMILY.

[To the Editor of the Medical Times.]

SIR, —In the account of the inquest held in this town on the bodies of Thomas Hickman and family, poisoned by arsenic, in your journal of the 12th inst. several inaccuracies have occurred respecting the evidence ... which, in justice to me, I trust you will ... by inserting this letter correct. In the first place your reporter states that I gave in evidence that a mixture of son *flour of sulphur* with ... and ..., and administered it, ... what I stated to the coroner that I gave them the ... after ... was ... mixture of ... The second ... both ... and ... Elizabeth, contained ... of poison, and that Reinsch's ... tests slightly showed arsenic. Now, it should have been that Dr Barnes and myself only discovered traces of poison in the contents of the stomach of Mary Ann by Reinsch's test ..., but did not succeed in reducing it. The third and last mistake made by your reporters, that he has made me appear to say, whilst speaking of the *post mortem* examinations, that the ... appearances resembled those of spasmodic cholera, and that the *stomachs* were all collapsed. Now, what I in reality said was, that the appearances *before death* resembled those of spasmodic cholera, as they all fell into an extreme state of collapse. By affording me the earliest opportunity of this contradiction to the, I am aware, unintentional misstatement in your journal, you will greatly oblige,

Sir, your obedient servant,
J B ABERCROMBY, Surgeon.

Bloomfield place, Kensal New Town, June 15.

MR UNDERWOOD, IN REPLY TO DR. LANE, ON THE USE OF OXIDE SILVER AS A REMEDIAL AGENT.

[To the Editor of the Medical Times.]

SIR, —I am glad to see that my letter which appeared in the *Pharmaceutical Times* of the 22nd ult. has drawn attention to the point as shown in your journal of last week

To the letter of Dr. Lane only I beg to reply. I do not notice the former, as all that it contains is also contained in the latter. There is something peculiar about this letter I do not exactly understand. May be I am not accustomed to read of axioms in either chemical or medicinal science, indeed, I do not believe there are such words I believe the philosopher can never be certain that the results he has arrived at are the true ones, indeed, experience, from the furthest time when chemistry was a science, teaches us this.

The oxide of silver I used was obtained from Mr Morson's, Southampton-row, and he informs me it is not prepared with ammonia.

Dr Lane insinuates that I am throwing the preparation into undeserved discredit, and yet allows every fact that I stated, except that he explains that the explosion took place in a manner far less simple than the way I do.

I consider that the degree to which all new medicinal agents are used must depend upon their own merits, and not upon the opinion that their introducers may have of them: experiment should guide theory, not theory guide experiment. I think, then seeing my results were obtained with oxide of silver prepared in a proper manner, physicians cannot be too careful how they order it medicinally, for it is very evident it is a most dangerous preparation to deal with; indeed, it should not come into general use till repeated experiment has shown us what substances we may safely combine it with. Though Dr Lane has never met with an explosion, it only convinces me still further of the necessity of great care, as the subject of its explosion seems to be at present involved in obscurity. Our knowledge, then, stands, I believe, as follows —

1 That the oxide of silver prepared with or without ammonia will explode when mixed with either essential oil or the confection of roses.

2 That the oxide of silver prepared according to the way directed by Dr Lane has not yet been observed to explode, but whether it will explode or not by union with essential oils or confection of roses can only be determined by repeated experiments.

Your obedient servant,
J. UNDERWOOD.

1, Grafton-place, Kentish-town, June 10.

CORONER'S INQUEST

ON A MAN DYING WHILE UNDER MEDICAL TREATMENT.

On Monday evening an inquest was held before T. Sworder, Esq, at the White Hart Inn, Hertford, to inquire into the cause of the death of George Jeffreys, a middle-aged man, well known in the town, and residing at the time of his decease, in the Old Workhouse-yard. The deceased was a member of a club holding its meetings at the Black Swan, and had been unwell for some time. He was attended by Mr P Kelly, the surgeon to the club, who visited and prescribed for him up to Thursday, the 11th inst, the day before his death. The relatives of the deceased, being dissatisfied with some part of the medical treatment, made application to the coroner to institute an inquiry into the cause

of death, and the present inquest was held in compliance with the demand so made.

The jury, having been sworn in, proceeded with the coroner to view the body.

Upon their return to the inquest-room, Mr. P. Reilly and his brother, Mr. J. Reilly, of Ware, had arrived.

The Coroner said: It is my duty to inform you, Mr. Reilly, that the jury are desirous that Dr. Davies should be instructed to open the body, and analyze a portion of the medicine last taken by the deceased, which was contained in a bottle now in the possession of Mr. Superintendent Knight; they judge that to be the fairest mode of proceeding, and they wish to know whether you are willing to assent to that arrangement. I have sent for Dr. Davies.

Mr. P. Reilly: I presume you mean that should open the body, and that Dr. Davies should be present during the examination.

The Coroner: Certainly not; that is out of the question.

Mr. P. Reilly intimated that he should object to any other arrangement.

William Jeffreys, as the brother of the deceased, objected to Mr. Reilly making the examination.

Mr. Reilly was about to reply to this observation, when

The Coroner said: We must not have any discussion on the subject; I will arrange that.

Mr. P. Reilly: I am willing to submit to the wish of the jury; if they desire Dr. Davies to conduct the examination, let them express that desire, and I will abide by it; I only wish for justice.

The Coroner said that was the wish of the jury.

Dr. Davies having arrived,

The Coroner repeated what had occurred. It had, he said, been proposed that Dr. Davies should make a *post-mortem* examination of the body of the deceased, and analyze the contents of a bottle now in the custody of Mr. Knight. Mr. Reilly was of opinion that he should make the *post-mortem* examination; but he (the Coroner) had told him that that was quite out of the question, as it would not be right to allow the person whose conduct was, in some measure, the subject of inquiry, to do that.

Mr. P. Reilly: I wish to do nothing but what is legal and just, and I refer to you, as the tribunal of justice, to decide whether I am not the person who should make the examination.

The Coroner: That is impossible; I propose that Dr. Davies be instructed to make the examination. Mr. Reilly, if he wishes, may be present, if he does not interfere improperly.

Mr. Sedgwick (a juror) concurred in the arrangement suggested by the coroner. The other jurors also intimated their agreement.

Mr. P. Reilly: What I wish is that I should myself superintend the *post-mortem* examination, on the understanding that I shall take no steps without Dr. Davies' consent. That is what it ought to be.

The Coroner: Dr. Davies will have my warrant to make the *post-mortem* examination, and to analyze the contents of the stomach and of the bottle. You, if you like, and if Dr. Davies has no objection, can be present, provided you do not interfere.

Mr. P. Reilly: Your own precedent in a case which occured six months ago is against your present decision, by which you blast the opinion you then gave. I wish the question to be left to the jury.

The Coroner remarked that the decision to which Mr. Reilly referred would not help him at all; nothing could be fairer than the arrangement suggested.

Mr. P. Reilly: I want nothing but justice; I have nothing to dread.

The Coroner remarked that, in the case to which Mr. Reilly referred, he had wanted his brother to perform the *post-mortem* examination, to which proposition he (the coroner) objected; Mr. Reilly then named Dr. Reed, who was at once assented to. It seemed to him that they should follow the same plan in this case, selecting an independent professional gentleman to make the examination, and allowing Mr. Reilly to be present, upon the express understanding that he should not interfere with it. The coroner then formally requested Dr. Davies to undertake the examination.

Dr. Davies said he knew nothing of the nature of the case, but would discharge his duty as a professional man to the best of his ability.

The Coroner (to Superintendent Knight): You will now hand over the bottle containing the medicine to Mr. Davies.

Mr. Knight: I will first show it to Mr. Reilly.

Mr. Reilly: I want to see nothing of it.

The Coroner: Hand it over to Dr. Davies.

The inquiry was then proceeded with. The first witness examined was

Eliza Walls: I live at Hertford; I am a married woman; my husband is transported. The deceased, George Jeffreys, was forty-two years of age. I cohabited with him as his wife: we lived in the Old Workhouse-yard, in the parish of All Saints. Last winter deceased had a heavy fit of illness with fever; he was ill fifteen weeks. Mr. P. Reilly attended him in his illness, and he recovered, and went to his work as usual. Last Monday morning he was taken very ill with a pain in his chest; he had an asthma complaint. He continued to work during the day, and in the evening he told me he had called on Mr. Reilly and that he would send some medicine. The medicine came shortly afterwards. Deceased went to his club that night about half-past six, and came home about ten. He said he felt very poorly indeed, and went to bed directly, and took some of the medicine which Mr. Reilly had sent. It was a white mixture, like the colour of water, in a quarter of a pint bottle; there were four doses, and deceased took it all at intervals of four hours. He was much better on Tuesday, and told Mr. Reilly so on the afternoon of that day when he called to see him. Mr. Reilly said he was glad to find him so well as he was, and would send him another bottle of mixture, and that he thought would do. Another bottle of medicine came on Tuesday evening; it is the same one I delivered over to Superintendent Knight.

The Coroner: Was that medicine the same colour as the first?—Witness: No; the first was white, and the second red.

Examination continued: I gave two table-spoonfuls of that medicine to Jeffreys on the night of Tuesday, at about eleven o'clock; that was according to the directions on the bottle. About an hour and a half after Jeffreys took it, he said, "Oh, girl, what a pain I have got at my chest; it hoops up so that I can't get my breath." He continued to complain of the pain from that time until he died. He wanted me to give him the next dose at the third hour, but I was afraid, because he said the stuff was working about him. About the fourth hour I gave him another dose; and, after taking it, he said, "Oh, I shall die; this stuff will kill me." It made him worse and worse; he complained of his breath. I gave him no other medicine but that I had from Mr. Reilly. He said he was worse, and he would not take any more of that medicine. He did take some more after Mr. Reilly had been. I thought he would have died, and about noon on Wednesday I sent one of my neighbour's daughters to fetch Mr. Reilly. Mr. Reilly and his brother both came. Jeffreys told him that the bottle of medicine would kill him; that it had torn him all to pieces at his chest. Mr. Reilly then ordered me not to give him so much when I gave the medicine again, and I did not. Mr. Reilly saw the medicine then—the very bottle I have given to Mr. Knight. Mr. Reilly then ordered me to obtain twopennyworth of the best mustard, spread a plaster, and apply it to Jeffreys' chest, and keep it there as long as I could. I did as directed, and kept the plaster on for twenty minutes. He also said he would send an emetic which I was to administer directly. A packet came, and when I opened it I found two emetics; I gave deceased one, which did not operate; and in the course of an hour I gave him the other, which also failed to produce vomiting, but operated very much upon the bowels. It was about four o'clock on Wednesday afternoon when I gave him the last powder; he still kept getting worse. On Thursday, between eleven and twelve o'clock, Mr. Reilly came again, and said he thought of bleeding deceased, but whether he said he was too far gone, or too weak, I can't remember; I did not rightly understand him. He told me to get twopennyworth more mustard and some vinegar, and stir it up together, and clap it on him where the pain was at the chest. I did exactly as he told me, and kept the plaster on for half an hour. Another emetic was then administered to him, according to Mr. Reilly's directions, after taking which the deceased was very bad; the last emetic did not operate at all, and the application of the mustard did not relieve the pain. Deceased still continued to complain of the pain at his chest, and said, "That bottle of stuff had done him." He had no medicine beside that sent by Mr. Reilly on Thursday. In the afternoon, about teatime, he got so bad I was afraid he would die, and I sent for Mr. Reilly. Mr. Reilly did not come, but sent his young man, who felt about deceased, and said certainly he was very bad. I told the young man I was not satisfied with his coming, and that I wished to see Mr. Reilly. The young man then went away, and Mr. Reilly came in about a quarter of an hour. When he came, he said, "Poor man! how long has he been taken for the worse?" Jeffreys shook his head, and said, "Ah! that bottle's done me; that bottle's done me;" he repeated this three times in the presence of Mr. Reilly. Mr. Reilly said, "Pooh, pooh! George." He did not say what was the matter with the deceased; he looked at him, and was going to leave the room, to come down, when Jeffreys asked him "Whether he was going to send him anything more to take?" Mr. Reilly said, "No, not at present." Mr. Reilly did not stay with the deceased above five or six minutes, but did not send him anything more, and did not see him again alive. At eight o'clock next morning he was a corpse.

By Mr. Reilly: I did not see you shake hands with the deceased, or wish him farewell, and say "God bless you!" nor hear him say he should get better, or ask you whether you thought he would.

Mr. Reilly: What did I tell you when I came down stairs—did I not say, "George is dying"?—Witness: No, you did not.

Mr. Reilly: How many years have I attended you and your husband?—Witness: Five or six years.

Mr. Reilly: Did I ever ask you for any money?—Witness gave no answer.

By the Coroner: I knew Jeffreys was dying all Thursday, but Mr. Reilly did not tell me so; Mr. Reilly attended Jeffreys as member of a club of which he was the medical officer. I and my husband always paid him.

Mr. Reilly: During the period that I attended your husband, did you complain of being in great want?—Witness: Yes.

Mr. Reilly: Who relieved you?—Witness: That has nothing to do with the case.

Mr. Reilly: Did I and my brother—you are on your oath?

The witness made no reply; but, in answer to a question from the coroner, stated "That Mr. Reilly had attended her and her husband as private patients, and that she had bills to show that she had been accustomed to pay him for his attendance."

Mr. Reilly: Did not your husband express his gratitude to me for my care and attention to him?

Jeffreys (brother of the deceased): That has nothing to do with the question.

Mr. Reilly: But it has. You have not paid me the last two years' bills?—Witness: No.

Mr. Reilly: Did I ever ask you?—Witness: No.

Mr. Reilly: Did I not give you relief out of my own pocket?—Witness: You gave me one shilling.

Mr. Reilly: And how much for my brother?—Witness (so we understood her): Two shillings.

Mr. Reilly: Did I give you any rabbits?

The Coroner said these questions were beside the object of the inquiry; the only question bearing on this particular case was, whether Mr. Reilly's treatment of the deceased up to this time had been satisfactory. Did you ever (addressing the witness) have occasion before this time to make any complaint of Mr. Reilly's want of skill or attention to the deceased?—Witness: No.

Mr. Reilly: What did you say was the cause of death? Was it walking to London just before his last illness?—Witness: I don't know that I wish to know; he did not walk to London; he rode eight miles of the way.

The Coroner said there was no complaint made except in reference to the particular bottle which had been produced.

Witness: It was Jeffreys' wish that I should keep that bottle.

By the Coroner: The last time the deceased took any of the medicine was on Thursday. Mr. Reilly had told me not to give him so much the next time as I had upon the two first occasions, and so I gave him only a small quantity. That was before he had the emetic. I gave the red medicine to Mr. Mills. Jeffreys told me before he died to keep it, for no doubt it would be called for.

Mr. Reilly: Did I not tell you your husband's lungs were gone?—Witness: You said he was touched with asthma.

Mr. Reilly: Will you inform the gentlemen of the jury whether you were not stimulated to make the complaint by persons in the room?—Witness: Only by his own friends; we were not satisfied.

Mr. Reilly: Will you swear that you are not put up to this by a person who is unfriendly to me?—Witness: I do not know who are your friends, and who are your foes.

Mr. Reilly: Has Chesher done so?—Witness: No; I have not been stimulated to it by any one; his sister and brother were not satisfied.

By the Coroner: I swear that I kept the medicine in exactly the same state as when it was delivered to me, and when it was last taken by the deceased, until I delivered it into the hands of James Mills; I put nothing into it. The deceased had nothing but toast-and-water and arrowroot besides; he had only toast-and-water on Thursday.

Mr. Reilly, somewhat warmly, charged Chesher with having instigated others to institute these proceedings, when he was interrupted by the coroner, who said that such questions were not relevant to the case.

Mr. Reilly (to witness): Did not your husband say that I behaved to him as a gentleman and a friend?—Witness: Yes; you always acted as a gentleman, and he always thought well of you till the last bottle.

Mr. Reilly: Did I not attend him in all respects as a professional gentleman should?—Witness: Why, Jeffreys did say one day that you ought to attend him a little more, as he was so bad.

Mr. Reilly: What! three or four times every day?

By the Coroner: Deceased often expressed his satisfaction with Mr. Reilly's attendance.

After a variety of similar questions and answers precisely to the same effect,

The Coroner said that he thought it advisable that the inquiry should now be adjourned. Indeed, he thought that some injustice had been done to Mr. Reilly by the examination which had already taken place, as they were not in a condition to close the inquiry that evening.

Mr. Reilly (warmly): No; nothing is unjust; I want everything clear. So far as I am concerned I want the fullest and most minute investigation. I am confident that my conduct has been that of a professional man and a gentleman, and that the result of the *post-mortem* examination will disclose such disease as is quite sufficient to account for death.

The inquiry was then adjourned until seven o'clock on Tuesday evening.

The adjourned inquest was held at seven o'clock on Tuesday evening.

After some preliminary proceedings,

J. Davies, M.D., was called and examined. His evidence was as follows:—I performed a *post-mortem* examination on the body of George Jeffreys about eleven o'clock this morning. I was assisted by Mr. Shillitoe. Neither Mr. Reilly nor his brother was present. I met Mr. Reilly last night, and asked him whether he would like his brother to be present, he declined either being present himself or sending his brother, and said he would be perfectly satisfied with my examination. On opening the outer part of the body, I found it to be that of a fine man of middle age; he was very fat. The liver was very much diseased, was very large, and had the appearance of being in what is vulgarly termed a rotten state; it was of a very dark, black, dirty colour. There was a little appearance of inflammation about the stomach. The disease of the liver had extended to other parts, and was adhering to the inside of the belly. I think the cause of death was a combination of diseases. I don't think there was any one distinct cause. The lungs, on the whole, were very healthy; the right lung was quite healthy for a person of the deceased's age; the left lung had a little cavity at the top of it, which betokened a tendency to decline, but in a very small degree at that age; it was not in that state, but it might have continued to perform its functions for a great number of years; there were no tubercles for the disease to extend to. The heart was rather larger than natural. The appearance of the stomach might have arisen from irregularity of living, or from taking a little too much drink. If the deceased had been of intemperate habits that would have accounted for the appearances. There was quite sufficient disease to account for death; the wonder was, from the quantity of disease in the liver, and about the belly, that deceased had lived so long. The cavity in the left lung would account for the asthma of which he complained; some of the bronchial tubes were partially ossified. I have not analyzed the contents of the stomach; to perform a complete analysis would take many days, but I have to a certain extent analyzed the medicine, by applying a few tests. It appears to be a very simple mixture; the colouring matter is "red sanders," which is used to make compound tincture of lavender, and is slightly stomachic; there is also a little ammonia in it; there is nothing in it which could injure the man, looking to the state in which he was.

The Coroner: The deceased said that the medicine caused violent pains in the chest.

Dr. Davies: I think that was the complaint; I have seen many similar cases, and I could not help forming an opinion from what the woman said last night. The medicine could have had nothing to do with his death; he had taken none for two days before, and very little of it then. It was a very casual analysis I made; I think the ammonia was combined with acetic acid. I smelt and tasted the mixture, and applied all the tests I could, but found nothing noxious in it; I think it was a proper medicine to administer; I see no objection to it. Medical men differ a little in practice.

Mr. Sedgwick (a juryman): I presume that Mr. Shillitoe entertains the same opinion as yourself?—Dr. Davies: He does.

Mr. P. Reilly and his brother, Mr. J. Reilly, entered the room at this stage of the proceedings.

The Coroner immediately turned to Mr. P. Reilly, and said that Dr. Davies had just stated that the medicine administered to the deceased by Mr. Reilly was a proper medicine, and could have had no injurious effect upon the deceased.

Mr. P. Reilly (warmly): I should think so; I should think I should not administer improper medicine.

The Coroner: If you respond to my courtesy in that way I shall not take the trouble of addressing myself to you.

The coroner was about to read over the evidence of Dr. Davies, when

Mr. John Reilly said: Having seen the deceased, you will perhaps allow me to state my opinion before that is read; I hope I may be able to give just as correct an opinion as the one you have received.

The Coroner: I have no doubt of that; but you can hardly give evidence, as you must be looked upon something in the light of a person interested.

Mr. P. Reilly: No, certainly not; he has no interest in the case.

The Coroner: I do not say that he has; I do not say that he would not tell the truth; but, nevertheless, he would be looked upon as a person interested.

Mr. P. Reilly: Very well; I am satisfied.

In answer to questions from Mr. Littlechild, a juror, Dr. Davies said there was not great disease in the stomach; it was a little more red than it ought to be; there was no disease of long standing there; the liver was most affected.

Mr. P. Reilly: If you, as a regular practitioner, treating a patient who might die in the course of your treatment, were subjected to an inquiry of this kind, instituted without your knowledge, would you not say that you were treated badly, and would you not feel hurt at such treatment—at such an investigation being instituted without any authority from the churchwardens or the overseers?

Dr. Davies: If that is a proper question in the course of this inquiry, I have no objection to answer it directly.

The Coroner: There is no objection to it.

Dr Davies: Then I say that, if I had acted in the way that Mr. Reilly is stated to have acted in the evidence given by the woman last night, I should feel myself very much aggrieved indeed.

The room was then cleared; upon our return, William Jeffreys, the brother of the deceased, was examined, and entirely corroborated the evidence of the woman Walls, relative to the deceased's impression that the last medicine had been the cause of his death, and his injunction that it should be preserved. The witness added that the woman Walls was very kind to his brother, and that the inquiry had taken place at the desire of the deceased's relatives. There was a rumour about the town relative to the cause of Jeffreys' death.

The jury expressed their satisfaction with the evidence, and their unwillingness to examine any more witnesses.

The Coroner said he had called the last witness in consequence of the statements by the woman relative to the strong prepossession of the deceased, to see whether the deceased had made similar statements to others.

The jury then returned their verdict to the effect "That the deceased George Jeffreys had been deprived of life by the visitation of God, in a natural way." The foreman added that the jury wished to say they considered the case a proper one for inquiry, but that at the same time they were of opinion that Mr. Reilly had skilfully and properly attended to the deceased.

Mr. P. Reilly: Gentlemen, I thank you. I assure you that, after twenty years' experience, the circumstances that have characterized this case—the coroner's conduct———

The Coroner: If you are going to find fault with me, I shall not allow you to go on. I have been and am acting in the exercise of my duty, and I shall not allow you to insult me. I can conscientiously say that, from the circumstances detailed by the witness as occurring before the death of the deceased, there could not, in my opinion, be a more proper case for an inquest. The statement made respecting the man's strong prepossession as to the medicine being the cause of death induced me to call the witness who has just been examined, with a view to ascertain

whether that prepossession had been stated to others It appears to have been so, and that fact, coupled with others, was a sufficient justification for this inquiry

Mr Reilly I bow to your decision

The Coroner I have no objection to your addressing any observations to the jury but you must not insult me for doing my duty

Mr Reilly again rose

Mr R. Nunn (the foreman) Mr Reilly, the less said the better, we are satisfied

Mr Reilly (addressing the coroner) If I am not afforded an opportunity of speaking here, I shall do so on the hustings

The coroner intimated that he was at a loss to comprehend Mr Reilly's meaning in speaking of the hustings

Mr Reilly again rose to speak and the jury also rose from their seat and advanced to the door, when they were reminded by the coroner that they had not signed the inquisition They returned for that purpose and Mr Reilly at the same moment quitted the room

DEATH OF THE MEDICAL REGISTRATION BILL

Mr Wakley said that no other course was left him, at this period of the session, than to follow the example of the Government He should, therefore, withdraw his Medical Registration and Medical Law Amendment Bill for the present session At the same time he must add that if he had the fortune or misfortune of a seat in the next Parliament, he would in the very first week of the session move for the appointment of the committee which was now sitting on that subject

GOSSIP OF THE WEEK

As an instance of the fairness and decency with which the editor of the *Lancet* treats his contemporaries, we subjoin the following extract from a recent number, in reference to Dr Forbes's "British and Foreign Medical Review" I rejoice to learn that one book of slander is coming to a close It is the "British and Foreign Medical Review" of Dr Forbes, of which I will say that the minds formed by it *must* be degraded indeed Never were cliquism and calumny carried to such a height and such a length I wonder that, in so noble a profession, writers and readers could be found to foster such a debasing production Any answer to such disreputable and baseless abuse must surely be quite unnecessary

EDINBURGH UNIVERSITY.—NEW REGULATIONS —It was lately [illegible] determined that in future the student might attend one third of the prescribed class [illegible] graduation among the extra academical teachers instead of the whole of them, within the university as heretofore This privilege accorded to the extra academical lectures, however, [illegible] certain provisions, the principal [illegible] that they should demand the same fee as the professors [illegible] tickets which are to be received [illegible] medical faculty, and that all future lecturers shall be examined by the college of which the [illegible] The new regulations however have [illegible] received the sanction of the [illegible] several professors are much [illegible] In the meantime, the College of Physicians and Surgeons have made [illegible] the extension of the new [illegible] capable that the regulations [illegible] operation next session

HONOUR TO A SCIENTIFIC [illegible] son has received from the King [illegible] the appointment of commander of the order of the Polar Star, in recognition of his services to geology generally, and the geology of that country in particular.

ANATOMICAL SCIENCE —There is a foreign museum now in town which we ought to point out as peculiarly worthy of a visit from the English medical man and the *savans* The proprietor, a learned Florentine, has acquired a well known distinction for his ability in executing pathological and anatomical models, and, if it is suggesting the perfection to which these useful educational adjuncts may be brought, there is no one interested in medical science who should not have examined the remarkable specimens prepared and imported to this country by that gentleman The museum is composed of Botanical specimens in wax, [illegible], models of the living figure in health, two of which are of full length one being a child, the other a full grown and handsomely-formed negress every part from the outer integument to the interior of the spinal column, being delineated in successive layers The perfection with which the nervous system in particular is exhibited is, to our experience, marvellous We have also about seventy illustrations of morbid anatomy, some of which—the works of the Florentine Professors Calanu and Ricci—are depicted with a finish and exquisite faithfulness for which our hospitals and museums offer no parallel Three of the illustrations are full length figures [illegible] to belong to one of our larger medical institutions But what we would especially recommend to the attention of the readers of the *Medical Times*, is the collection of ninety anatomical plates by the discoverer of the lymphatic—the celebrated Professor Mascagni That distinguished man was fifty years on this great work, which [illegible] [illegible] collection [illegible] It should [illegible] [illegible]

Mr [illegible] [illegible]

PHRENOLOGY [illegible] From the [illegible] the head, externally, of Dr Chalmers, the celebrated Scotch divine, the leading phrenologists have long spoken of him as of necessity [illegible] a large brain, but the *post mortem* [illegible] of the encephalon [illegible] [illegible] the weight of brain in Dupuytren was [illegible], in Cuvier, [illegible], in Abercrombie, [illegible], [illegible] The average weight in persons [illegible] adult to sixty years of age being 50 oz 2 drams

A correspondent from the West Indies writes —We have found here, in our hospital practice, that the [illegible] employment of ether has been [illegible] at present I have not heard [illegible] result [illegible] very susceptible to its action, but there is [illegible] who is yet has completely foiled all our attempts to etherize him, although he is quite willing to inhale the vapour

HUMAN FOSSIL.—Dr Dickeson, of Natchez, has addressed a letter to the Rev Thomas Allen, on the subject of the human fossil, which has so much perplexed geologists Dr Dickeson gives reasons for believing that the bone, which was part of the os innominata, was a true fossil it resembled true fossil bones in colour, density, &c, it was associated in position with bones of the megalonyx and the like, it lay three miles from the river banks, seventy feet below the surface, and at least two feet below three skeletons of the megalonyx, in an unmixed homogeneous blue clay, not appreciably affected by any current or other displacing power; the osseous relics near it bore every appearance of quiet deposition, and the high antiquity of the bone is vouched for by Professor Agassiz, and the Philadelphia Academy of Sciences

The British Association have just put forward a programme of their proceedings at the approaching *séance* The first meeting of the General Committee was held in the council-chamber at the Town hall, Oxford, on the 23rd inst, at one p m, and the concluding general meeting in the theatre on Wednesday, the 30th, at three p m The following are the subjects announced for the evening meetings in the Radcliffe Library at eight p m

On Thursday, June 24, the Rev Professor B Powell will deliver a discourse on shooting stars

On Friday evening, June 25, Professor Faraday will deliver a discourse on his recent researches in Diamagnetism

On Saturday evening, June 26, the library will be opened for promenade and conversation

On Monday evening, June 28, Mr H. E. Strickland will deliver a discourse on the Natural History of the Dodo and other allied birds

On [illegible] evening June 29, the library will [illegible] the exhibition of microscopes and [illegible]

[illegible] have intimated their [illegible] following [illegible] chapels, &c, to [illegible] at certain hours, and the Duke of Marlborough will permit members to [illegible] grounds, private garden, hot [illegible] at Blenheim

MORTALITY TABLE.

For the Week ending Saturday, June 19, 1847

Causes of Death	Total	Average of 5 Winters.
ALL CAUSES	978	914
SPECIFIED CAUSES	978	909
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	201	186
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	101	99
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	117	158
Diseases of the Lungs, and of the other Organs of Respiration	251	275
Diseases of the Heart and Blood vessels	26	29
Diseases of the Stomach, Liver, and other organs of Digestion	91	70
Diseases of the Kidneys, &c	21	8
Childbirth, Diseases of the Uterus, &c	14	10
Rheumatism, Diseases of the Bones, Joints, &c	13	8
Diseases of the Skin, Cellular Tissue, &c.	3	2
Old Age	43	57
Violence, Privation, Cold, and Intemperance........	65	28

No. 405. **SUMMARY.** July 3.

A COURSE

OF

LECTURES ON SURGERY,

BY

SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London; Consulting Surgeon to London University Hospital, &c.

LECTURE XI.

It is my duty in this lecture to make some remarks on mortification, a term signifying the death of a part of the body, and generally restricted in its application to the soft textures, where the surgeon is able to treat it externally. When occurring in the bones it is called necrosis. When mortification takes place, the soft parts are converted into a dirty looking green or black mass, turbid, and having no longer any connection with the muscular and nervous systems. These parts become *sloughs*, insensible to pain, and not partaking of the natural heat of the body. The term will lead you to understand the total absence of all organic action, and the suspension of every function in the parts involved; at the same time it is worthy of remark, that, for the formation of one of these sloughs, the presence and agency of life are essential: that is, they can never only be formed in the living subject. The complete death of the part and not only an annihilation of sensibility and power of motion in them, is involved; since these two states may occur in paralysis, in which the parts continue to live, the fluids still flow, and nutrition and absorption are carried on, and life, though existing in a low degree, is not extinct. During the prevalence of cholera in London, we saw many patients in whom was interruption of the circulation and coldness in certain parts, then mortification was apprehended, yet these parts have regained their healthy condition. Where the cuticle is not separated from the cutis, and no fetid gas is evolved, you may generally consider that mortification has not begun. The terms *gangrene* and *sphacelus*, though sometimes used synonymously, are more properly applied to the early and advanced stages of mortification respectively. The descriptions of mortification, as given in books, is too generally restricted to such changes as are apparent to the eye, and it is very probable that a truer pathology would lead us to include other processes among the symptoms of its existence, such as the softening of cerebral substances. Mortification may be either preceded by inflammation, or may occur without it; the former is called humid, inflammatory, or acute gangrene. John Hunter ascribed it to the increased action of the natural powers of a part from a determination of blood to it; in case of mortification, however, it is the excess of the action over the power necessary to sustain it. The other gangrene, occurring without previous inflammation, is called dry or chronic, and sometimes, from the absence of any specific known cause, is termed *idiopathic*; it usually arises from internal causes of this kind are [illegible] senilis, and that which arises from the action on the system of deleterious articles of food. Considering this disorder in its causes, we may divide the subject under three heads: first, by stoppage of the circulation; second, by the violent action of external agents, whether mechanical, chemical, [illegible] physical; and third, from the action of certain poisons. Inflammation is said to bring on mortification by causing a stoppage of the circulation; though it may be perhaps more properly considered [illegible] accompaniment preceding, from the same cause, as mortification. We may often consider it as the result of certain [illegible] the weakness of the part affected, the want of supply of blood, [illegible] nervous energy, obstructions of the circulation, constitutional debility, where inflammation is sometimes the cause of the death of the part. Healthy phlegmonous inflammation is not often followed by mortification, although when the exciting cause is unusually severe, a [illegible] [illegible] common effect. When acute inflammation takes place after [illegible] external injury, [illegible] and fracture, or laceration of the soft parts, it is always preceded by inflammation; the part becomes red, swollen and tense, the cuticle [illegible] the [illegible] vesicles, of very dark color; the cutis is [illegible] and becomes of a dull purple, livid hue, changing to black; the cellular membrane is destroyed, and putrefaction commences. You know that when animal life is gone the parts become subject to the laws of chemical affinity, according to which they act and react on each other; thus air is generated in these dead parts, emphysema may be observed, and [illegible] the tissues [illegible] with the fingers, a crackling [illegible] may be heard; on this sound be not distinguished, the parts are in a flaccid state. [illegible] [illegible] [illegible] differing in intensity, according to the temperature and the kind of fluid which is always present in, and gives [illegible] [illegible] gangrene. In all the forms of [illegible] [illegible] cellular tissue suffers more than skin or muscle, which may be owing to their superior vascularity rendering them more tenacious of life. When the dead parts are about to be separated from the living, a red line, often very narrow, appears just at the edge of the slough between the sound skin and the destroyed texture; this is called the line of demarcation, and shows that adhesive inflammation has taken place in the skin near the slough. Its appearance should be looked for by the surgeon with much anxiety. Soon after the formation of this line little points appear, like very small ulcers, which, uniting together, make a hollow, extending round the dead parts, which extends in depth until, if the patient lives long enough, it effects the complete separation of the slough; this is accomplished by the action of the absorbents, by a process not unlike that of ulceration, a discharge of serum, and afterwards of pus, takes place from the line of detachment, increasing as more of the subjacent substance is exposed. The detachment of the slough takes place at various periods after mortification has commenced, sometimes, indeed, not till after a long time has expired.

The constitutional symptoms attending gangrene are very remarkable. When any considerable portion of the body is involved, the whole system suffers great derangement and depression of its powers. If violent inflammation has preceded mortification, sympathetic inflammatory fever commonly attends its first stages, which generally subsides when sphacelus becomes more marked, an oppressive, violent, and frequent hiccough informs the surgeon, if other symptoms are wanting, of the mischief which is going on. This symptom was formerly regarded as an infallible proof of the existence of gangrene in a [illegible] [illegible] hernia, but you are not to suppose that the hernia is mortifying merely on this evidence. The patient's countenance wears a wild cadaverous air, the stomach is distended, and vomiting may occur, the intestinal canal is tensely distended with gas, the pulse is weak, rapid, and irregular. There is often pain about the region of the heart, and sometimes the bowels [illegible] often a black matter proceeds from the intestinal canal. You are not to expect to find the same train of symptoms, either local or constitutional, in every case. Much depends on the extent of mortification, and the situation and function of the part attacked. A highly organized texture will exhibit the symptoms more rapidly and in a higher degree, than one less so. We have already seen that cases of mortification may be comprehended under three heads, resulting respectively from obstruction of the circulation, from the violent action of external agents, and from the presence and action of poisonous substances in the system. You know that in inflammation, whether of the acute or chronic kind, there is interruption of the capillary circulation; this is one of the causes of mortification, so also when it is of a specific or malignant nature, as in carbuncle. Frequently it attacks the soft parts, when the patient has been long confined in one position, as we often see in cases of typhoid fever, or after severe injuries of the spine. In this case gangrene may be the result of debility, together with long-continued pressure on the parts, which obstructs the circulation. Patients often suffer in this way from mortification over and about the sacrum, os ilium, and the spines of the scapulæ. Sometimes injurious pressure upon arteries results from negligent tying of bandages, which are made at first too tight; the part becomes flaccid and pale, loses its temperature, afterwards decreases in size, becomes black, and perishes. The greatest care should invariably be exercised in placing ligatures, and some allowance should be made for swelling, for, though the bandage may be slack at first, by the rising of the part it will become tightened, and, if you wet the bandage, you should expect its tightening in drying. Other cases of mortification follow severe mechanical or chemical injuries; sometimes, indeed, the violence is sufficient to destroy at once the part

struck, as when a gunshot enters the body it frequently destroys the fibres in its track at once, which become sloughs, and require separation in order to the healing of the wound. Compound fractures again furnish us with other similar instances; the mortification following injuries of this kind is called *traumatic* gangrene. Cold is another external cause of mortification; but from all experience it would seem that the too early approach to the fire is in these cases the true cause of gangrene, the cold predisposing to that disorder. Baron Larrey has afforded us some valuable information on this subject in his "Observations on the Battle of Eylau," where the French soldiers suffered very severely in their feet, noses, and ears being attacked with gangrene after freezing. He states that for the three or four cold days before the battle, and until the second day after it, although the mercury in Reaumur's thermometer had fallen from ten to fifteen degrees below zero, none of the men complained of any of the symptoms of freezing, although they had passed three days and four of the nights in the snow and frost. On the 9th of February the temperature rose, and on the 10th a brisk thaw set in, and a vast number of the men began to surround the ambulances, complaining of acute pain and pricking in the feet, with numbness and the other signs of mortification. These facts are borne out by other experience, and may serve to satisfy us that cold is a condition of mortification, and a rapid rise of temperature the exciting cause. Another kind of mortification, very common in some continental countries, results from the use of diseased or spurred rye, in which the grains have become black and horny. It generally attacks the lower extremities, in which a burning pain is felt after a time, this subsides, and the parts become cold and black, and slough. It is very rare in this country, but is deserving of the notice of the inquiring student.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), M.R.S.
Physician to the Royal Infirmary for Children, &c. &c.

(Continued from p. 330.)

GENTLEMEN,—I intend occupying your time to-day with the consideration of that interesting and important malady, commonly called *hydrocephalus*, or *water in the head.* You all know that when a child's brain is examined, who has died from this affection, in a great many cases there is found a preternatural amount of fluid in the ventricles, and in some beneath the arachnoid. This amount may vary from ʒij. to ℥vj. in one class of cases, to upwards of ten pints in another. The former quantity is found in that form of the disorder usually called *acute*, the latter in *chronic*, hydrocephalus. From the presence of this fluid the disease receives its name. It is, nevertheless, in a strict sense, a bad name, inasmuch as in a great many cases of acute hydrocephalus we do not find more fluid in the ventricles than natural, and even when we do it does not constitute either the pathologic essence of the disorder, nor can we always attribute to its effusion the fatal event or the more important of the previous symptoms. You will see then that *dropsy of the brain* is sometimes no dropsy at all.

Under this term of *hydrocephalus* several diseases are included, very different in their nature, and, although one or more lesions are common to all, yet, of course, we must separate these diseases one from the other. I shall at once break off the *chronic* form from the others, with which you know a child may be born and exist with for years, until its head becomes twice as large as its belly. To the so-called *acute hydrocephalus* I shall at present confine your attention.

Under this term varieties of two important affections are being constantly confounded or mixed up together, viz., *simple acute meningitis*, or *meningito-cephalitis* of a primary and secondary character, 2nd, *tuberculous meningitis*, of a subacute character when viewed in reference to the former. These are two essentially different diseases: with the one—the latter—I am very familiar; of the former I have comparatively slight acquaintance, having within the last three years had but four cases. The former is simple common inflammation of the membranes of the brain, and sometimes of the brain itself; the latter constitutes the disorder we usually see as the so-called *acute hydrocephalus.* Suppose a child of between two and six years of age, previously of good health and constitution, unmarked by scrofulous characteristics, is suddenly attacked with high febrile excitement, accompanied with great agitation, extreme headache, and vomiting, but no previous constipation to speak of; that the countenance becomes exceedingly anxious, the lips and nose dry and arid, and the thirst great; that these symptoms rapidly progress, delirium supervenes, and this acute in character; that partial or general convulsions come on, and coma gradually closes the scene; or it may be that, with proper and active treatment, the disease is cut short and the child recovers; but that, if it dies, the disorder runs its course in from thirty to fifty hours, and after death, a small quantity of clear or turbid fluid, or even pus, is found in the ventricles, the ventricular lining membrane injected and soft, or that upon the convexities of the hemispheres you find marks of inflammation with semi-fluid pus lying there, or great congestion of the cerebral vessels, &c.: in such a case you have an example of *simple primary meningitis.*

Suppose again a child of a constitution like the above has been ill with remittent or other fever, or with pneumonia or scarlatina; suddenly in the course of the malady the face becomes anxious, the agitation great, febrile exacerbation increased, the head rolled about, the brows knitted, the supervention of delirium, jactitation, twitchings, or convulsions, then quietude, coma, and death, and this within a couple of days, you have an example of a *secondary* form of the above disorder; or it may be that with proper treatment the disease is arrested. After death you find le[illegible] like to the former. These cases are called [illegible] of *hydrocephalus*, and they and their varieties a[illegible] those which you read about being so satisfactorily treated. But they do not constitute the common hydrocephalus which you will generally have to treat; they are not the common forms [illegible] *water in the brain*: this is another disorder altogether; and it is this which, when I talk about hydrocephalus or use this term, I always imply. What this is in symptoms and pathological nature I shall now proceed to tell you. I shall begin with the following illustration:—

A child who has been *apparently* in good health though betraying to the practised eye marks [illegible] a weak or scrofulous constitution, or, on the other hand, who has already presented external manifestations of open scrofulous disorder evident to every one, is brought to you by its mother because it has become all at once inclined to be quiet, and is less vivacious than before. It[s] mother says it does not "go about as it did," does not take so much notice as it used to do; it likes to keep in her arms, to lean its head against her breast, or, if older, will not hold its head up from the table. It has been sick, often continuously rejecting everything from the stomach, and the mother recals that the bowels have not been lately moved, though she still lays more stress on the indolent habits of her child. From the continuance of the constipation and sickness she gives it medicine; still no effect is produced. On regarding attentively this child you will, perhaps, find that the head is rather large; the veins ramifying over the scalp al[so] large and blue; the hair fair, scanty, and fine. On putting your hand over the anterior fontanelle, if the child is young, and the ossification not complete, you will find it largely dilated, raised up convexedly, and often pulsating with considerable force and volume. The scalp is warmer than natural, the brows very likely knitted, and the child does not like exposure to the light. The face is pale; delicate in complexion; and, in fine, the *artistic* characters of the scrofulous diathesis are more or less betrayed. Now the vomiting begins to cease, but the constipation still continues; the child constantly hangs its head about, or rests it; often cries or moans in a peculiar manner; puts its hands to its head, or throws them about, or picks its mouth, nose, &c., and there is much somnolency. Sometimes the head is rolled about, or shaken continuously from side to side, or is forcibly buried in the pillow. Next, the child is aroused with difficulty; it grinds its teeth; the thumbs are inverted, and jactitations often frequent. The face becomes paler; the child lies continually in a state of stupor, or, if it can be aroused, it opens its eyes, stares wildly or fixedly, and goes off again as before. It passes then into a constant state of stupor; it squints; one pupil may be dilated, the other contracted, or both may suffer considerable dilatation; then occur convulsions or paralysis. The respiration is irregular, suspirious, sometimes stertorous; some urine and scanty stools are passed involuntarily; mucus hangs about the mouth; the face becomes rather blue, or is deadly pale, often puffy; again, slight convulsions or twitchings supervene, and the child dies. The disease runs a comparatively prolonged course, sometimes even a month, in other cases six or seven days. Under the most careful management, under the most diversified forms of treatment, little will be found that can hinder the fatal event.

In the same way that you may have simple acute meningitis of a secondary or intercurrent form, so may you have the scrofulous disorder of the meninges occurring as a secondary form too. A child passing through remittent fever, pneumonia, &c., may present the above series of phenomena, or modifications of them, and after death the brain presents lesional appearances analogous to those of the primary form of the disorder. These appearances, which I shall refer to presently, are such to lead to the opinion that the common hydrocephalus of great towns particularly, as occurring in the offspring of the lower orders, is a disease dependent upon that peculiar constitution of body we call the scrofulous; that the local disorder consists in the deposit of tuberculous granulations, or confluent or semi-confluent matter closely allied to tuberculous exudations, accompanied with inflammation of a scrofulous character. Before alluding in detail to the morbid appearances, I shall analyze more particularly the symptoms of the disease. A person accustomed to see much of this disorder will soon discover that its symptoms may be arranged with facility under three heads, and, although one of these divisions is completely arbitrary, yet it is of practical importance, notwithstanding. Under the first head may be arranged those signs or symptoms indicative of encephalic disturbance; under the second, those arising from the secondary disorder of the digestive apparatus; and under the third, the condition of the circulation, respiration, &c. &c. In the table before you I have placed the chief of these symptoms under their particular heads:—

I.

Encephalic Symptoms.

Headache.
Increased sensibility of the organs of special sense.
Somnolency, stupor, coma.
Convulsions, &c.
Delirium.
Paralysis.
Strabismus, &c.
Loss of senses—special.

II.

Gastro-intestinal Symptoms.

Vomiting.
Constipation.

III.

Other Signs.

State of pulse.
State of respiration.
State of fontanelles.
General aspect, &c. &c.

I shall speak of these and correlated symptoms, as far as I can, in their order of progressive oc-

currence; but you must remember that, although tuberculous meningitis is in general a well marked and easily-diagnosed malady, yet in some cases the diagnosis is by no means easy. What I state, also, may differ somewhat from writers upon the subject; but, as these lectures are not *systematic*, I may be allowed to speak chiefly from my own experience.

Headache is a constant symptom, and one of the first that makes its appearance in the child. In reasoning about it, however, we labour under much disadvantage, since we have to glean a knowledge of its existence in many cases from circumstantial evidence alone. But the mother's phrases of "hanging about its head," "so heavy in the head," "it seems so quiet," "puts its hands to its head," "will not hold up its head," together with the dulness, apathy, crying, and disinclination to leave the nurse's arms, with tendency to sleep, are to me all many evidences of the presence of a degree of cephalalgia. The latter, however, I do not think is generally severe or acute; it is more *dull*, more frequently partial than general, and *frontal* than otherwise. I have seen it *vertical*.

Morbid sensitiveness of the eye and ear is very characteristic of the earlier period of the disease. The increased corrugation of the brows upon turning the child to the light, the closing of the eyelids even under diminished intensities of the same, the apparent increase of pain or headache in bright light, the turning in of the face to the breast of the mother or to the pillow of the bed, are so many proofs of increased sensibility of the organ of vision.

Somnolency sometimes is present at first; at other times we have rather wakefulness than a tendency to sleep; though, again, the latter may be sometimes very great.

Vomiting is one of the most important and earliest signs of the disorder; it very soon makes its appearance after those I have already mentioned; so slight, apparently, are the latter sometimes, and so early prominent and severe the vomiting, that this is the symptom to which attention is first directed, and first excites the attention both of practitioner and mother. I cannot enforce too much attention being paid to it.

Next in importance to *vomiting* comes *constipation*, in fact, much of the value of either, as symptoms, is their coetaneous existence. I am disposed to rank constipation as equal in frequency of occurrence to vomiting; and I am quite ignorant of those cases in which *primary* tuberculous meningitis is ushered in by diarrhœa or is so accompanied during its early progress. *Constipation* often precedes the headache, continues long after the vomiting has ceased, and is often great in the extreme, and, after purging and purging the patient, small or infrequent evacuations are only obtained. In other cases after the first few days, the bowels become more readily moved; in still fewer, towards the third period of the disorder, they become relaxed. I cannot agree with those writers who lay so much stress upon the "dark green stools," "stools covered with an oiliness or glossy bile," a "dark green gelatinous evacuation," as diagnostic of the disease; nor can I ascribe the importance which some do to the "retracted state of the abdomen." As for placing either of these symptoms in comparison with vomiting and constipation, it is out of all question, and the condition of the abdomen, when it does occur, is seen only after the first six or seven days, and bears more reference to the approach of the fatal event than to the diagnosis of the previous disease.

These, gentlemen, are the most important signs of the first stage of the disorder; and if you have a scrofulous-looking child brought to you, with *vomiting* and *constipation, headache*, &c. &c., place your hand upon the anterior fontanelle: if it be large, tense, or convexedly raised, pulsating with volume, there can be no doubt about the disorder, and which is further proved by the head being larger and warmer than natural, the veins larger and bluer, and the hair fine, but scanty.

The chief thing which you have to guard against will be that you do not mistake the vomiting and constipation for signs of primary disease of the gastro-intestinal apparatus, and look upon the encephalic signs as secondary upon them: the fact being quite the reverse. In some exceptional instances vomiting is absent, as in a remarkable case of Schweninger's, in which the disease commenced with coma, and during the whole course of it there was neither vomiting nor cephalalgia; and yet, on examination after death, there existed the three more commonly observed lesions, viz., granular deposits, softness of the cerebral centres, with effusion into the ventricles. On the other hand, the continual vomiting is sometimes so prominent and overwhelming a symptom as to alone attract attention.

The reviewer of Berton's work, in "Forbes," says:—"In our earlier practice we treated a fatal case of hydrocephalus, the exact nature of which was so masked by incessant and extreme vomiting that we could not be persuaded of its real character until we saw the ventricles full of fluid after death." Dr. Bennet, who, by-the-by, has written one of the best monographs on hydrocephalus, thinks that vomiting is most characteristic of cases attended by effusion of lymph at the base of the brain, and around the medulla oblongata.

The symptoms I have thus spoken of in detail are the more prominent ones which mark the first step or period of the disease. Those marking the second are, first, *stupor*. In some degree or other *stupor* almost always exists; in very rare cases it is wanting; I have observed it absent in one only. Sometimes the child will lie quite quiet for a long time; at others, every now and then it will shake its head from side to side, or force it into the pillow, or grind its teeth. I have generally observed the vomiting on the supervention of stupor to cease.

The whole series of *convulsive phenomena* met with in the course of this disease are in some relations difficult to reason on. Sometimes severe general convulsions supervene, either late or early, in the disease; at other times convulsive actions of a single member, or only twitching of the eyelids, or of the angles of the mouth; sudden snapping together of the jaws and immediate relaxation, grinding of the teeth, rolling of the eyes, opening and shutting of the eyelids, &c., come on only at an after period. In some cases inversion of the thumbs upon the palms, or flexion of the toes and feet, are observed early. In this disorder you may see the phenomena of excito-motory action range from a little quivering of the eyelid up to perfect *opisthotonos*; but none, however early they may appear, occur before headache and constipation. I have now a case under my care in which the child is constantly shaking its head, and tearing and pulling its face with its hands. This motion of the head came on very early, but with previous obstinate constipation and knitting of the brows.

The accession of *coma* marks another stage of development; but sometimes it comes on very rapidly indeed, after headache, piercing cries, knitting of the brows, pulsating tense fontanelles, constipation, and vomiting; so that the first stage seems to run at once into the last. It does not always continue unbroken until death, for what we must call, even in the child *delirium*, and convulsions appear intercurrently; but again, as I have said, the coma may be a deep quiet passage from life unto death. I think I may pretty confidently assure you that when deep coma passes off, being replaced by convulsions, or delirium again comes on, quick dissolution is indicated by the secondary accession.

Partial or temporary loss of power and motion of one or more members is often seen, but perfect and persistent *paralysis* is, I think, rare. Still I have observed an instance of complete hemiplegia in a girl of three years and a half of age. It came on early in the disease, first in one extremity, then in the other, and was preceded by inversion of the thumbs.

Some persons lay great stress upon *squinting*, and a peculiar state of the pupils. Any frequently or permanently altered condition of the visual organs only becomes prominent during the latter period of the disorder, and, I think, in most cases shortly before death. Temporary *squinting* is common enough; but still, as far as my experience goes, what I should call true *strabismus* does not exist so often as some suppose. I do not look upon the mere turning up of the eyes as this proper strabismus, but persistent, abnormal *convergent*, and *divergent* states of their axes as such. The pupils are more often unequally dilated than there is strabismus; and, generally, one pupil is far more dilated than the other, although the latter is more so than in health. The sense of vision is often lost altogether, or at least the contracting power of the iris is, late in the disease. I have not arrived at any conclusion as to the senses of hearing and smell.

When the child, after presenting symptoms like the above, lies on its back quite quiet, with the exception of now and then suddenly snapping its mouth—when the face becomes pale, or bluish and puffy, and glairy mucus hangs about the mouth—you have precursors of a quick event that our art is baffled to avoid.

I have, as you, perhaps, may have remarked, passed over the state of the *pulse* and *respiration* as affording you signs of importance. I *may* be wrong, but I have no fear in asserting that the pulse is secondary to all the phenomena I have spoken to you about. Without many of the latter we could never arrive at the nature of the disease, whatever was the state of the pulse. With them we do not require to consider the latter at all. I never notice it save at the close of life, and then I can pretty well glean from other circumstances the nature of the future. Only look to the writers on hydrocephalus, and you will find the most discordant statements as to the state of the pulse, whether at the onset or termination of this disorder. As far as my experience goes, the following axioms laid down by Rilliet are pretty correct:—

1. The pulse is moderately accelerated at the commencement.

2. Irregular, with or without slackening in the middle period.

3. Much accelerated and very small shortly before death.

I shall add, however, that in some cases I have felt it very slow and languid before death.

Although I cannot say that in the earliest stage *inequality* of *respiration* is a distinctive feature of our present malady, yet I regard it as very characteristic of it in its third period, and that in a few cases it is present from the first. I particularly drew attention to the value of it as a sign in a case which I read before the Medical Society of London, which I shall, perhaps, at my next lecture speak to you about, but which you will find noticed in the 4th vol. of Dr. Ranking's Report, at p. 333, together with the observations of a very great authority, M. Trousseau, on the same symptom, as well as another, viz., a peculiar redness of the skin on the slightest friction; which latter, by-the-by, I am ignorant of. It is not alone quickness, laboriousness, or slowness, that are observed in connection with respiration, but rather a *sighing* respiration in elder children, or in younger a hurried unequal breathing, sometimes alternating with a slow and heavy performance of the act. There is often a momentary suspension apparently of all respiratory function, the child appearing as if the chest did no duty at all. In some cases *stertorous* breathing is seen, and I have *read* of *rattling* and *whistling* respiration.

The general heat of the body is, like the pulse, subject to much change, sometimes being greatly increased, at others diminished. I have not noticed a fetor of the breath, as spoken of by some French writers; but this, if it exist, is to be attributed in all probability to the frequently-adopted plan of mercurial treatment. Nor am I aware that the teeth, gums, tongue, or appetites of hunger or thirst, present any peculiar,

constant, or particular relations to the disease we are considering.

Of the presence of the general disturbance *fever* I shall speak of hereafter.

DUMAS ON ORGANIC CHEMISTRY. No. XXIV.

(Continued from p. [illegible].)

ON THE MILK—(*continued*).

Alcohol, tannin, and metallic salts throw down precipitates with milk, either by robbing it of its water or by combining with the caseum.

Many plants are capable of coagulating milk; usually they produce this effect by the acids which they contain. Some, however, which do not offer any acid reaction, as the flowers of the artichoke and the thistle, still possess the power of which we are speaking. It is a remarkable fact, that, if we prepare the infusion of these flowers hot, it does not coagulate milk, although a cold infusion acts the more rapidly and effectually when the milk has been previously heated. The [illegible] possesses the property of turning milk sour, and rendering it so viscous that we may easily draw it out in threads. When once this operation has been performed in any wooden vessel, the latter preserves the power of propagating this action to fresh milk when introduced into it. So also does the milk itself, which has been thus modified, induce a similar alteration in other milk when brought into contact with it.

In some of the northern provinces of Sweden they make use of milk in this state as an article of food. It has received the name of [illegible].

Of all the bodies which determine the coagulation of milk, none acts in so remarkable a manner as rennet, one part of rennet in fact will coagulate 30,000 parts of milk.

Rennet, such as we usually meet with, is a very complex acid liquid; it contains hydrochloric acid, lactic acid, some fatty volatile acids, earthy salts, sal ammoniac, and chloride of sodium, also, an azotized animal substance to which it especially owes its property of coagulating milk. This body has received the name of *chymosine*: its characters resemble those of *pepsine*—if, indeed, these two bodies are not identical. Chymosine is insoluble in water, alcohol, ether, and in the oils. It is dissolved by water slightly acidulated, the alkalies precipitate it from this solution in flakes. Tannin, in like manner, throws it down. It reduces iodic acid to the state of iodine.

It is to the presence of this substance that the mucous membrane of the stomach of animals, as well as the liquid of the stomach itself, owes the property of precipitating milk.

Rennet is employed, sometimes in the liquid state, sometimes dry. The following is the mode of preparing it:—We take the stomach of a calf which has been fed only on its mother's milk, we detach the clots and wash them in fresh water. After having wiped them with a very clean cloth, they are to be salted and put back again into the stomach, which should then be dried and put by for use.

The minute quantity of rennet, whether liquid or solid, which suffices to excite the coagulation of milk, explains how it happens that the porous earthenware vessels, or even those which are made of wood, which have once been used in this process, may serve repeatedly for the same purpose, and even determine the coagulation of the milk, without the necessity of adding any fresh rennet. During the [illegible] coagulation, there is formed a peculiar ferment, which lodges within the pores of the vessel, and which is not removed away by reiterated washings.

We may here make one remark [illegible] the serum which separates from the precipitated caseous and fatty matters when coagulation has been effected by means of rennet. According to M. Schübler, we have only to add a little acetic acid to this serum, and to carry the temperature to about 75 C., and we [illegible] a coagulum, endowed with properties intermediate between those of albumen and caseine. But this precipitate of the substance thus precipitated [illegible] in all respects and [illegible] as [illegible] which is thrown down by acetic acid. In Switzerland they use [illegible] in [illegible] making [illegible] and [illegible] which they have named [illegible]. In some parts of France, the serum from which the first precipitate of caseine has been extracted is separated, and then coagulated anew. They thus procure a cheese of an inferior quality known under the name of [illegible], and which is chiefly consumed on the spot.

Hitherto we have been speaking of normal milk—that is to say, of milk such as it is when secreted by the female some time after bringing forth her young; but before the birth, and even for several days afterward, the milk offers some peculiarities worthy of interest, in this state, it has been designated by the name of *colostrum*.

The colostrum differs from milk, inasmuch as it holds in solution a remarkable quantity of albumen, thus, it becomes coagulated by heat. It contains but little, if any, sugar of milk; it appears, in general, to be richer in salts than ordinary milk. According to most observers, it putrefies very rapidly, without presenting any acid reaction. As the property which the milk possesses of turning acid, on exposure to the air, is due to the presence of sugar of milk, we may presume that, when the colostrum becomes acid, it contains a certain amount of this principle. Some observers have even affirmed that the colostrum is richer in sugar of milk than is the milk itself; they have also made the same observation with regard to caseine. These assertions must, however, be received with reservation. It is also worthy of remark, that the milk may be secreted independently of parturition or even of pregnancy, by a simple irritation of the breasts. We thus understand how it happens that, in some females, the secretion of the milk takes place during [illegible] lactation, or within a short time of parturition.

The colostrum not unfrequently contains [illegible]. We [illegible] find [illegible] large mulberry-form globules composed of an aggregation of mucus [illegible] and of fatty globules, these [illegible] together [illegible] the one [illegible] the fatty globules, the [illegible] M. Donné, however, [illegible] the globules of the colostrum as [illegible] with an envelope. When treated by ammonia, the colostrum becomes ropy, [illegible] under [illegible] circumstances [illegible] this [illegible].

The colostrum appears to act as a slight purgative.

The following table by M. [illegible], presents us with a comparative view of some of the characters of the colostrum and of the milk.

Synoptic Table, indicating the Physical and Chemical Properties of the Milk of the Cow at different periods before and after Parturition.

Dates.	Colour	Taste	[illegible]	[illegible]	[illegible]	Water [illegible]	[illegible]			[illegible]		Sugar of milk	Free lactic acid
42 days before parturition	Yellowish blue	Insipid [illegible]	10[illegible] to +[illegible]0	Coagulated	Turned blue	78[illegible]1	200 to 800	Soft consistence	Albumen	Free soda			
32 do	do	do	10[illegible] to +	do	do	78[illegible]	do	do	do	do		0	0
21 do	do	do	10[illegible]	do	do.	78[illegible]1	do	do	do	do		0	0
11 do	White	Sweetish	1040 to [illegible]	Partly coagulated	[illegible]	78[illegible]	do	More solid		0	Caseum	Sugar of milk	Lactic acid
— days after do	do	do	1039 to [illegible]	do	do	78	do	do	do	0	do	do	do
[illegible] do		Sweet	1[illegible] to +	Did not coagulate	[illegible]	7[illegible]8	do		0	0	do	do	do.
6 do		do	10[illegible] to +	do	do	[illegible]	[illegible] to 812	[illegible]		0	do	do	do.
20 do.	do	do	10[illegible] to +	do	do	[illegible]	78[illegible] to [illegible]	do		0	do	do.	do.
21 do	do	do	10[illegible] to +	do	do		[illegible] to [illegible]	do		0	do	do.	do
30 do	do		10[illegible] to	do	do	[illegible]	[illegible] to [illegible]	do		0	do	do	do

The colostrum has been analyzed by various observers; we will here give the results obtained by MM. F. Simon ([illegible], vol. ii, pp. 281—283), Chevallier, Henri, Boussingault and Le Bel.

M. Simon's analyses are as follow:—

	Colostrum of [illegible]	[illegible]
Water	[illegible]	
Fatty matters	[illegible]0 0	
Caseine	[illegible]0 0	
Sugar of milk	[illegible]0 0	
Ashes	[illegible]1	

M. Simon does not say whether the colostrum in the above cases was coagulable or not by heat.

	Colostrum of a she ass about fifteen days before parturition	Eight days after the first analysis
Water	[illegible]7 0	[illegible]1 0
Fatty matters	[illegible]0	[illegible]
Caseine	2[illegible]9	2[illegible]0
Albumen	19[illegible]3	12[illegible]
Extractive matters, salts, [illegible]	18[illegible]	28 6

MM. Chevallier and Henri analyzed the colostrum of the cow, the ass, and the goat, the following were the results they obtained:—

	Colostrum of the cow	Ass	Goat
Water	80[illegible]3	828 4	611 0
Albumen	1[illegible]0 7	116 0	2[illegible]0
Mucous matter	20 0	7 0	30 0
Sugar of milk	trace	[illegible]0	32 0
Fatty matters	26 0	5 6	52 0
	1000 0	1000 0	1000 0

That which I have called albumen, in these analyses, is the matter coagulable by heat, some authors have described it under the name of caseine, but, properly speaking, caseine is that substance which has been denominated *mucous matter*.

MM. Boussingault and Le Bel found in the milk of the cow, taken immediately after parturition —

Water	78 [illegible] 0
Albuminous caseum	1 [illegible] 0
Butter	26 0
Sugar of milk .	[illegible] 0
Ashes ..	3 0
	1000 0

We thus see that the colostrum differs from the milk by the presence of a considerable quantity of albumen. This fact was first pointed out by two Dutch physicians, A. Van Stiptrian and N. Bondt, and subsequently confirmed by MM. Parmentier and Deyeux.

It is not our intention here to enter into any minute details as to the production of the milk; we shall seek merely to present the question of which we are treating in its most simple bearings.

Undoubtedly, the milk is elaborated by the animal from the aliments which it consumes. It is, then, natural to suppose that the nature of the food must exercise a certain influence over the quality and quantity of the milk.

We have long known that different aliments and matters impart to the milk their characteristic odour and taste. [illegible] plant [illegible] the cruciferæ, communicate to it their peculiar odour; hyssop renders it purgative; [illegible] euphorbium, [illegible] impart to it a bitter taste, [illegible] in the course of a few days [illegible] Many mineral substances [illegible] iodide of potassium [illegible] pass into the milk.

The milk of nurses, who have been subjected to a mercurial treatment, [illegible] although we are totally unable to detect the presence of mercury in this fluid.

Ancient observers [illegible] that the animal [illegible] proportions of [illegible] milk of [illegible] The same [illegible] furnished a milk which [illegible] by itself. [illegible] owing to the presence of sugar [illegible] first instance [illegible]

I have lately been making a series of experiments, with the object of showing the influence which the mode of [illegible] exercise upon the constitution of the milk, and especially on the production of lactose. [illegible] chief facts which I have been enabled to observe.

The milk of animals, subjected to a vegetable or mixed diet, always contains, though in variable proportion, the four orders of matters which form part of the aliment of the herbivora; that is to say, the albuminoid matters represented by the caseum, the fatty matters represented by butter, the saccharine matters corresponding to the sugar of milk, and lastly, the various salts which are found in all the tissues and liquids of the animal.

In the milk of the carnivora, [illegible] judge, the one of these products, the sugar of milk, disappears, and this secretion, containing only the albuminoid, fatty, and saline matters, is reduced to the general constitution of the food itself. The experiments, on which these conclusions were based, were made in the menagerie of the *Jardin du Roi*, and at the Veterinary School at Alfort, on dogs which were alternately submitted to a vegetable and to a meat diet. The results at which I arrived were as follow.

The milk of a dog, at Alfort, fed during fifteen days on horseflesh, contained

Water	71 71
Butter	[illegible]
Extractive matters and salts	4 [illegible]
Caseum and salts	[illegible]

The same dog, after being fed for fifteen days on bread soaked in rich broth, yielded a milk which gave on analysis. —

Water	81 10
Butter	3 09
Extractive matters, sugar of milk, and salts ..	4 10
Caseum	11 [illegible]

In fact, the extractive matter of this sample, when left to itself, furnished crystals possessing the characters of lactose.

After other fifteen days of the same regimen of bread soaked in broth, the milk of the foregoing dog contained

Water	75 0
Butter	6 84
Caseum	12 17
Extractive matters, sugar of milk, and salts	[illegible]04

This time also, the extractive matter yielded crystals which, when properly purified, offered all the characters of sugar of milk, enough was collected to prove its nature by analysis.

The sugar of milk, which could not be detected whilst the dog received [illegible] [illegible] contrary [illegible]

These results [illegible] confirmed by other experiments [illegible] [illegible] facts, that sugar [illegible] [illegible] attended with [illegible]

The milk [illegible] properties [illegible] [illegible] whilst [illegible]

[illegible]

Upon the qualities of the milk. A she-ass, eating eighteen kilogrammes of carrots daily, furnished, at the end of a month, milk containing

Water	[illegible]	
Butter ..	1	
Sugar of milk	[illegible]	[illegible] solid principles.
Caseum	1 [illegible]	
	100 00	

Milk of the same ass, fed on beetroot for the space of fifteen days —

Water ..	.. 89 77	
Butter	. 1 [illegible]	
Sugar of milk	[illegible]	10 23 solid principles.
Caseum	.. 2 [illegible]	
	100 00	

Milk of the above ass, after being kept for a month on a daily allowance of seven kilogrammes of ground oats and three kilogrammes of dry lucern trefoil —

Water	. 90 63	
Butter	1 40	
Sugar of milk	[illegible]	[illegible] 37 solid principles.
Caseum	1 [illegible]	
	100 00	

Lastly, the same animal, being fed for fifteen days [illegible] yielded a milk containing —

Water	[illegible] 71	
Butter	1 [illegible]	
Sugar of milk	[illegible]	[illegible] 29 solid principles.
Caseum	1 [illegible]	
	100 00	

M. P[illegible] concludes, from these experiments, that [illegible] most suitable for [illegible] next [illegible] and lucern, then [illegible] He further found, [illegible] milk [illegible] matters, the [illegible] quantity.

M. [illegible] the influence of [illegible]

November 11	[illegible]						[illegible] was feeble, [illegible]
November 18	80	[illegible]	[illegible]			[illegible]	[illegible] animal diet.
December 1	[illegible]	[illegible]	[illegible]	[illegible]			After [illegible] privations
January 1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	after two days living on [illegible] animal food.

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.

By [illegible]

[illegible] III.

Endosmose, in its [illegible] may be [illegible] two liquids separated by a [illegible] solution [illegible] sugar, for instance [illegible] covered with [illegible] closed end of the [illegible] pure water, this [illegible] penetrate steadily [illegible] the tube, notwithstanding the [illegible] pressure of the liquid column [illegible] which will thus be raised to a certain height, and even to over flowing (if the process continue long enough), whilst, at the same time [illegible] but, of course, smaller portion of the solution in the tube will ooze through the membrane and mix with the water. Dutrochet, who discovered these phenomena first, has termed the former *endosmose*, and the latter *exosmose*. The instrument used in the experiments is called *endosmometer*. Membranes retain the faculty of producing endosmose up to the point of incipient putrefaction, but the moment this process begins, the endosmotic current ceases, and the liquid, which had risen in

[illegible] and sizes through the [illegible] producing endosmose [illegible] membranes [illegible] or better still, of baked [illegible] though in a less [illegible] and siliceous layers, on the [illegible] endosmose.

The nature of the liquid used has considerable [illegible] upon the endosmotic process, which [illegible] the more the density [illegible] the tube exceeds that of the [illegible] without. It would appear that the [illegible] of the current is proportional to the difference in the respective density of the two liquids. Yet, notwithstanding, water penetrates into an endosmometer [illegible] tube containing alcohol, although the latter fluid is of less density than the former.

With saline solutions the endosmotic process is most energetic, but of short duration. Increase of temperature augments the velocity of the endosmotic current. What is most strange in the phenomena of endosmose is that the presence of the slightest trace of sulphuretted hydrogen suffices to modify its progress, even in the case of the most active liquid; whilst hydrochloric, nitric, [illegible] acids do not exercise this modifying influence upon the endosmotic process.

The endosmose of water proceeds with energy in the case of all animal fluids, with the single

exception of those found in the large intestine, which is most probably owing to the sulphuretted hydrogen which they contain. So adverse is this gas to endosmose that the use of a membrane which has been in contact with it, even though for a very short time, will positively prevent its manifestation.—*Dutrochet.*

Dutrochet sought to measure the energy with which liquids penetrate, by the endosmotic process, from the exterior to the interior of the tube. He employed a tube of two millimètres in diameter, and graduated in divisions of two millimètres each; the membrane covering the lower, funnel-shaped, extremity of the tube measured forty millimètres in diameter. A solution of sugar, of a density of 1·145, rose 34 divisions in the space of one hour and a half; another solution of sugar, of a density of 1·228, rose 53 divisions in the same space of time; a third solution of sugar of a density of 1·083, rose 19½ divisions in the same space of time. Whence it evidently results that the energy and rapidity of the endosmotic process is directly proportional to the excess of the density of the liquid within the tube over that of the water without.

Dutrochet made, moreover, several experiments with various aqueous solutions of one and the same density, with a view to ascertain the respective intensity of their endosmotic action upon water. The following table shows the results of these experiments:—

Solution of gelatine acts with an intensity	=	3
" gum	=	5·17
" sugar	=	11
" albumen	=	12

In the course of his experiments on endosmose, Dutrochet had occasion to observe that the direction of the endosmotic current between certain acid solutions—more particularly solution of hydrochloric acid—and water is subject to changes according to the different density and temperature of such solutions. Thus, for instance, in the case of hydrochloric acid of 1·02 density, the current proceeds from the water to the acid, whilst with hydrochloric acid of 1 015 density the current proceeds from the acid to the water; but if the temperature in this case be raised above 20° (68 Fahrenheit), the current will regain its original direction, viz, from the water to the acid. This fact is extremely curious.

Dutrochet, wishing to ascertain the force of the endosmotic current, employed for this purpose the apparatus which Hales and, after him, Mirbel and Chevreul had used to measure the pressure of the juices in plants. In this apparatus the force of the current is estimated by the height of a column of mercury raised by the liquid. The result of Dutrochet's experiments, in this respect, prove that, *cæteris paribus*, the force of the endosmotic current is proportional to the excess of the density of the internal liquid over that of the water; the *force* of the endosmotic current appears thus to be governed by the same law as its *velocity*. Hence it would result, supposing this law to hold good in all cases, that sugar syrup of 1·3 density would produce a current capable of raising a column of mercury of 127 French inches (3 mètres 42 centimètres), or, what comes to the same point, would be equal to the enormous pressure of four atmospheres and a half.

Various attempts have been made to account for the phenomena of endosmose. Thus endosmose has been attributed to the action of an electric current, developed by the contact of the two different liquids, which current is assumed to create the movement of the water through the membrane, from the positive to the negative pole, as in the well-known experiment of Porret. However, to invest this supposition with any degree of probability, it should first be proved that the contact of water with alcohol, solution of sugar, &c., causes the development of electricity; and this has not yet been done. Poisson has started another hypothesis, viz., according to him, the less dense fluid of the two penetrates the capillary tubes of the membrane, and this capillary stream, drawn downwards by the action of the water, and upwards by that of the dense fluid, is raised into the tube by the superior force of molecular attraction possessed by the denser liquid. But this hypothesis seems equally inadmissible, if we reflect that alcohol, which is less dense than water, produces endosmose; that a trace of sulphuretted hydrogen stops the endosmotic process; and that certain calcareous and siliceous stones, although placed in the same conditions as membranes and layers of clay, fail to effect this process. It must be confessed, therefore, that we have no satisfactory theory of the phenomena of endosmose; we know, however, that the general conditions of these phenomena are—1. That the two liquids, or, at all events, one of them, should have affinity for the substance interposed between them. 2. That the two fluids should have a mutual affinity for one another and should, consequently, be miscible. Where one of these conditions is wanting, there will be no endosmose. The direction of the endosmotic current is determined neither by the less nor by the more dense fluid of the two, nor by that of the two which is endowed with the greater force of ascension in capillary tubes; but it proceeds generally towards that liquid which has the greatest affinity for the substance interposed, and is most susceptible of being imbibed.

Endosmose may be looked upon as the most important of the physical facts, with respect to its applications to the functions of living bodies. Microscopical observation has placed it beyond doubt, that in all animal and vegetable tissues, and in those fluids that are generated by the transmutation of organized and living bodies, there are invariably found, at a certain period of their formation, microscopic corpuscles of a peculiar and characteristic form, and which have been named *elementary* or *primitive cells.* These corpuscles consist of an exceedingly fine membrane, of spherical shape, enclosing a liquid, and upon the internal walls of which is found a small organized body, upon which the name *nucleus* or *cytoblast* has been bestowed. These elementary cells float at first in a liquid termed by Schwann *cytoblastema*, subsequently, when this liquid has acquired a greater or less degree of density, these cells become, as it were, *incorporated* in, and almost entirely blended with, it. According to the respective natures of the different tissues, the elementary cells are placed more or less near to one another; the cytoblastema, or intercellular substance, forms invariably the link of union between the cells. The life of the elementary cell forms, indubitably, the most essential part of the development and preservation of the tissues of living bodies; and, as these cells are placed in conditions favourable for endosmose, there is no reason why this process should not take place in them. A vesicle filled with a liquid, and floating in the midst of another liquid, may imbibe the surrounding fluid and eliminate its original contents by an operation analogous to endosmosis. Few and imperfect attempts only have, however as yet been made to study the phenomenon of endosmose in a physiological point of view. The author has, therefore, felt called upon to endeavour to supply this deficiency, for which purpose he has, in conjunction with Professor Cima, made a series of experiments.

In these experiments three different classes of membranes were used: the first class comprised the skins of the frog, torpedo, and eel; the second the stomachs of the lamb, cat, and dog, and the gizzard of a fowl; the third, finally, the urinary bladders of the ox and pig.

All the experiments were made at a temperature of from 12° to 15° (from 53·6 to 59° Fahrenheit), the liquids, employed, besides pure water, were:—

	Baumé's Areometer.
Solution of sugar, of a density of	19 degrees.
Solution of white of egg	4
Solution of gum arabic	6
Alcohol	44

These fluids were generally placed within the tube of the endosmometer, whilst the water served as immersion fluid.

Two endosmometers were employed simultaneously in every experiment, the membrane in the one being placed with the internal, in the other with the external, face towards the interior of the tube. This different position of the membrane exercises a very marked influence upon the phenomenon of endosmose.

Thus, a solution of gum arabic was observed to rise 30 millimètres in the one tube, having the external surface of the skin of the torpedo turned towards the interior of the instrument; whilst in the other tube it rose only 18 millimètres in one, and even as little as 6 millimètres in another experiment. The same marked differences were observed with a solution of sugar and of albumen: in the one tube, which had the external surface of the skin turned towards the interior of the instrument, the solution of sugar rose 30 and even 80 millimètres; whilst, in the other tube, it rose only 2 millimètres, or even remained altogether stationary. The skins of frogs and eels presented the same phenomena; the latter, however, only when fresh. When skins were used that had been detached from the animal two or three days, the several solutions were found to rise to the same height in both tubes. Eel-skin offered, moreover, another singular deviation from the general rule in this respect, viz., solution of sugar rose at first to an equal height in both tubes; subsequently, however, after the lapse of two hours, it was found to have risen 30 millimètres in the one tube, with the external surface of the skin turned towards the interior of the instrument, and only 20 millimètres in the other tube. With solution of albumen and of gum arabic the difference in the respective height of the columns of the liquids in the two tubes was observable from the beginning.

In his experiments with water and alcohol, Dutrochet found that, contrary to the general rule, the endosmotic current proceeds from the denser fluid, the water, towards the less dense fluid, the alcohol. The author's and Professor Cima's experiments in this respect proved likewise the influence of the respective position of the membrane interposed between the two liquids; with this difference, however, that the position favourable to the direction of the current from the water to the alcohol was found to differ for the three kinds of skin employed.

Thus, in using that of the frog, the current from the water to the alcohol was stronger when the internal surface of the skin was turned towards the alcohol, whilst the contrary happened when using the skin of the eel.

With regard to the skin of the torpedo, it resulted from a series of experiments, that when this skin has been recently prepared, and not been previously used for any similar purpose, the direction of the current proceeds from the water to the alcohol, the current being stronger in the proportion of three to two in the endosmometer which has the external surface of the skin turned towards the alcohol. This proportion is, however, maintained only during the first hour of the experiment: shortly after, the progressive elevation of the liquid column in the endosmometer which has the internal surface of the skin turned towards the alcohol begins to slacken; in another hour's time it comes to a stand still; and finally the endosmotic current alters its direction, and proceeds from the alcohol to the water. The elevation in the other endosmometer continues to progress steadily. The following table may serve to illustrate these several changes.

A. Endosmometer with the internal surface of the skin turned towards the water.

Elevation during the first hour	23	millimètres.
" second "	25	"
" third "	25	"
" fourth "	25	"

B. Endosmometer with the external surface of the skin turned towards the water:

Elevation during the first hour	17	millimètres.
" second "	3	"
" third "	0	"
Retrogresn. during the 4th "	3	"

Neither the skin of the frog nor that of the

sol offers this phenomenon of the reversion of the current, although with both of them the endosmotic process abates in intensity after the lapse of a few hours, no matter whether the inside or outside of the skin be turned towards the alcohol; this abatement follows, however, an irregular march, as the following table will show:—

A. Endosmometer with the internal surface of the skin turned towards the water.

Elevation during the first hour 23 millimètres.
" second " 40 "
" third " 12 "
" fourth " 22 "
" fifth and sixth 56 "

B. Endosmometer with the external surface of the skin turned towards the water.

Elevation during the first hour 30 millimètres.
" second " 55 "
" third " 15 "
" fourth " 35 "
" fifth and sixth 58 "

During the night the liquid overflowed the brim of both endosmometers.

Are the singularities which alcohol offers in this respect to be attributed to the chemical action which this fluid exercises upon the substance of the membrane, and to the consequent alteration of its structure?

Several experiments were made with a view to ascertain whether the part of the body from which the skin had been taken exercised any influence upon the phenomena: the results proved the negative.

A series of experiments were made for the purpose of determining the respective force of the endosmose of the several liquids through the three kinds of skin. The following table shows the results—(the external surface of the skin was invariably turned towards the interior of the instrument):—

Solution of sugar	Skin of torpedo	100 millim.
	" frog	25 "
	" eel	15 "
Solution of albumen	" torpedo	30 "
	" frog	15 "
	" eel	8 "
Solution of gum	" torpedo	120 "
	" frog	22 "
	" eel	6 "
Alcohol	" torpedo	35 "
	" frog	80 "
	" eel	55 "

These results show that the order in which Dutrochet arranged the solutions of gum, sugar, and albumen, relatively to the intensity of the endosmotic current produced between them and pure water, is not the correct one in all cases—in fact, we shall see hereafter that Dutrochet's arrangement holds good only in the case of the urinary bladder (which this able experimentalist employed in his researches).

We will now proceed to the second category—viz., the results obtained with the mucous membrane of the stomach of the lamb, the dog, and the cat, and the gizzard of the fowl. The membranes used were carefully freed from all muscular fibres; in the great majority of instances they were removed from the animals immediately after death.

To begin with the mucous membrane of the lamb. Two experiments were made with solution of sugar: in the first the solution rose 56 millimètres in the tube which had the internal surface of the membrane turned towards the interior of the instrument; in the second it rose 54 millimètres; whilst the solution in the endosmometer, where the reverse position of the membrane was adopted, rose, in the former case, 72, and in the latter 66 millimètres. These experiments lasted only one hour and a quarter. Solution of albumen, on the contrary, rose in the space of two hours 23, 28, and 35 millimètres, in the tube with the internal surface of the membrane turned towards the solution, to 11, 20, and 22 millimètres in the other endosmometer.

With solution of gum arabic the elevation was, in some instances, *nil*; in others, it proved equal in the two tubes, not proceeding, however, beyond 8 millimètres; in some cases the solution rose 12 millimètres in the tube having the internal surface of the membrane turned towards the interior, to 8 millimètres in the other tube. The intensity of the endosmotic current between water and solution of gum, through the mucous membrane of the stomach of the lamb, is exceedingly feeble, and stops altogether after the lapse of a comparatively short time. It happens frequently that the solution of gum, after having, in the course of two hours, slightly risen, remains subsequently stationary, even though the experiment be continued for several hours longer.

The stomach of the cat and that of the dog differ from that of the lamb, with respect to the position of the membrane most favourable to the incitation of the endosmotic current between the solution of sugar and the water. In an experiment made with the stomach of a cat, the solution of sugar rose 30 millimètres in the tube which had the external surface of the membrane turned towards the water, to 15 millimètres in the other tube; in the case of the stomach of the dog, the elevation in the former tube was 68 millimètres, that in the latter only 8 millimètres.

The endosmotic current between the water and a solution of gum arabic through the mucous membrane of the stomach of the cat is likewise stronger when the external surface of the membrane is turned towards the water than it is in the reverse position. This applies, however, only to membranes removed immediately after the death of the animal. When using the stomach of a cat that has been dead for some time, a slight elevation is observed during the first instants of the experiment, this elevation is sometimes equal in the two tubes; at one time it is more, at another less, considerable in one and the same endosmometer; the liquids redescend, however, very soon after. If the water be placed in the interior of the tube, and the solution of gum made to serve as immersion fluid, the former liquid descends. The stomach of the dog offers the same phenomena in this respect.

Several experiments were made with the stomach of the dog, removed several hours after the death of the animal; solution of albumen was employed in these experiments. The solution rose to an equal height in both tubes, in four different experiments: in one experiment, which may serve as a general type of the others, the solution rose 20 millimètres in both tubes in the space of one hour; it remained subsequently for three hours stationary in the tube which had the external surface of the stomach in contact with the water; whilst, in the other tube, a retrogression of 25 millimètres occurred in the same space of time. Generally speaking, the liquid column remains seldom stationary in either of the two tubes. In the great majority of cases the liquid redescends in both tubes after attaining a greater or less height; but the decrease in the tube having the external surface turned towards the solution of albumen is double, and frequently even treble, that observed in the other tube. If the position of the liquid is reversed (the water being placed within the tube, and the solution of albumen without) the internal liquid descends equally in both tubes. The retrogression of the internal liquid, observed in the experiments, is owing simply to the cessation of the endosmotic process, in consequence of alteration in the structure of the membrane supervening some time after death; but the influence of the respective position of the two sides persists, to a certain extent, even in the altered membrane.

With the mucous membrane of the gizzard of the fowl the endosmotic current between water and solution of sugar proceeds more strongly from the external to the internal surface of the membrane, although the difference in the respective elevation of the liquid in the two tubes is generally inconsiderable—such as, for instance, 48 millimètres to 13. In some experiments, however, the solution of sugar was observed to rise 17 millimètres, 20 millimètres, &c., in the one tube, which had the external surface of the membrane directed towards the water, whilst it remained perfectly stationary in the other tube.

It is, moreover, worthy of remark, that the endosmotic current from the water to the solution of sugar, through the mucous membrane of the gizzard of a fowl, continues invariably only for a very limited period; in general, the liquid column becomes stationary in both tubes after the lapse of two hours at the most.

The endosmose between water and solution of albumen, through this membrane, seems to proceed equally in both tubes. Amidst a number of experiments, only one single instance was observed in which the albuminous solution rose 15 millimètres in the tube having the external surface of the membrane turned towards the water, to 5 millimètres in the other tube.

The same applies to solution of gum—the elevation is almost invariably equal in both tubes. In the few exceptional cases, where a trifling difference of one or two millimètres was observed in the relative height of the liquid in the two tubes, this difference was invariably in favour of the tube that had the internal surface of the membrane turned towards the solution of gum.

When employing alcohol as internal fluid, and the mucous membrane of the stomach of the lamb, cat, and dog, as interposing medium, the endosmotic current proceeds invariably from the water to the alcohol, and is most active in the direction of from the internal to the external surface of the membrane.

When employing the mucous membrane of the gizzard of a fowl as interposing medium, the endosmotic current proceeds, contrary to the general rule, from the alcohol to the water, and is strongest in the direction of from the internal to the external surface of the membrane.

We will now proceed to the consideration of the results obtained when employing the mucous membrane of the urinary bladder of the ox as interposing medium. The membranes used were fresh, and had been carefully freed from all muscular fibres. Solution of sugar rose 80, and even as many as 113 millimètres, in the usual space of two hours, in the tube having the external surface of the membrane turned towards the water, to 63 or 72 millimètres in the other tube: which shows that the endosmotic current from the water to the solution of sugar is strongest in the direction of from the external to the internal surface of the membrane. The reverse was observed with solution of gum arabic: this solution rose 18, and sometimes even only 7, millimètres, in the tube that had the external surface of the membrane turned towards the water, whilst it rose from 20 to 52 millimètres in the other tube. In some cases, however, the solution of gum arabic was at first observed to descend in both tubes, and subsequently, after the lapse of some time, to rise in the same respective proportion as solution of sugar presents. In one experiment the liquid retroceded in both tubes to the extent of 7 millimètres in the space of one hour; it began subsequently to reascend, and three hours after, it had risen 12 millimètres in the tube that had the external surface of the membrane in contact with the water, and 8 millimètres in the other tube.

No endosmose takes place between water and solution of albumen when the mucous membrane of the urinary bladder of the ox (in a state of freshness) is employed as medium of interposition; the liquid descends in both tubes, no matter whether the albuminous solution be used as internal fluid, or as immersion fluid. It should, however, be observed here, that the decrease of the column is less considerable when the internal surface of the membrane is in contact with the solution of albumen placed outside the tube as immersion fluid, than when the membrane is placed in the reverse position; and that the contrary happens when this solution is inside the tube, and in contact with the external surface of the membrane.

Finally, with regard to alcohol and gum-water, the endosmotic current proceeds from the latter to the former; in one experiment the alcohol rose 24 millimètres; in another 59 millimètres, in the tube having the internal surface of

the m[illegible] in contact with the water, to 26 and 13 millimetres in the other tube.

These marked differences, which are observed when using fresh membranes, disappear totally, or nearly so, when dried bladders are used, bladders that have been altered by a more or less advanced putrefaction. The results of the [illegible] experiments made in this respect with dried bladders of the ox or pig (that had previously been moistened, to render them fit for use), have shown that the elevation of the liquid is equal in the two tubes, whatever be the position of the membrane, and that if any trifling difference occur, this is altogether independent of the respective position of the latter. When the same bladders are used, after having been kept in water for several hours, the effects are sometimes found in a certain measure analogous to those obtained with fresh bladders, but if the bladders used have been kept in water for a whole night, no elevation is observed in either tube or the elevation is equal in both. We can in a certain measure, account for these anomalies; when a dried bladder is kept long in water the muscular fasciculi swell, acquiring thus a certain thickness and approaching close to [illegible], returning to a state analogous to that of freshness. Now, several experiments have proved that the mucous membranes of [illegible] gizzards, and stomachs will not perform the process of endosmosis if they are not previously freed from muscular fibres. In [illegible] that have been exposed for a shorter time to the action of water, the muscular fasciculi [illegible] slightly dilated, but not so much as not to leave interstices between them, through which endosmose may be effected. But the inequality of the interstices, [illegible] two symmetrical portions of one and the same bladder, must necessarily cause vague and uncertain results.

Some experiments made with gizzards of fowls in a state of more or less advanced decomposition (with a view to ascertain the influence of putrefaction on the phenomena of endosmose) gave very contradictory results: in some instances the liquid failed altogether to pass through the membrane, in others it attained to an equal elevation in the two tubes. In some cases the endosmose was energetic, at one time in one sense, at another in another sense, and this altogether irrespective of the nature of the liquid used, and of the disposition of the membrane. [illegible] in some cases, the liquid descended in both tubes. In [illegible] elsewhere of the results obtained when using the skin of certain mucous membranes of the [illegible] of certain animals, we had occasion to [illegible] how much the phenomena of endosmose [illegible] according as the membranes are [illegible] upon the death of the animal [illegible] after. All these facts show clearly the [illegible] and intimate relation that exists between the [illegible] phenomena of endosmose and the physical [illegible] condition of the membranes.

The phenomena of endosmose, like all others that manifest themselves in organized tissues, does not present the [illegible] regularity which we [illegible] in the physical phenomena [illegible] the [illegible] [illegible] accidental organic condition of the membranes that are to be attributed the [illegible] observed increases, in the respective [illegible] of the fluid which we see, for instance, at one time rise to 80 millimetres, and at another [illegible] 10 millimetres, though the liquid and [illegible] the respective position of the [illegible] in both cases. The difference of [illegible] which invariably attends the difference in the respective position of the faces of the [illegible] the same [illegible] be referred [illegible] [illegible] physiological condition [illegible] latter [illegible] functions [illegible] important [illegible] the influence of certain accidental circumstances (such as the depletion of blood the animal [illegible] of certain [illegible] the animal previously to killing it &c.) upon the phenomena of endosmose through fresh membranes. The author has made one comparative experiment only in this respect, of which the results have led him to conclude that the endosmose through the skin of the eel is more energetic when the animal had been kept several days out of water.

A careful comparison of the results obtained in the preceding experiments on the various membranes leads to the deduction of the following general conclusions:

1. The membrane interposed between the two liquids performs a very active part, both with regard to the intensity and to the direction of the endosmotic current.

2. In general, every membrane affects a certain position of its two faces (relatively to the two liquids), in which the endosmose proceeds with greater intensity than in the reverse position, the exceptions from this rule are very few, as far as fresh membranes are concerned.

3. With regard to skins, the direction most favourable to the endosmotic current is generally from the internal to the external surface, with the exception of the skin of the frog in the endosmose between water and alcohol, when the current is most strongly excited in the direction of from the external to the internal face.

4. With the mucous membranes of the stomach, and those of the urinary bladder [illegible] animals, the direction most favourable to endosmose varies, according to the different liquids, much more than is the case with skin.

5. The phenomenon of endosmose is closely and intimately connected with the physiological condition of the membranes.

6. Dried membranes or such as have been altered by putrefaction either fail altogether to produce endosmose or do not present the usual difference in the intensity of the endosmotic current according to the respective positions of the faces of the membranes.

To account satisfactorily for the results of the experiment on endosmose, and the conclusions deduced from them, it is indispensable that we should consider [illegible] in a new point of view different from that in which it has hitherto been looked upon. The augmentation of volume presented by the internal liquid, which is usually the denser of the two, is regarded by Dutrochet as a result of the difference between *the strong current of endosmose, and the feeble current of exosmose*.

According to this view, the one of the two liquids which receives from its antagonistic fluid more than it yields to it, should augment in proportion to the excess of the gain over the loss, or in other terms, to the difference between the strong and the feeble current. The adoption of this view would compel us to admit that all the facts observed in the numerous experiments on endosmose lead to the conclusion that the various membranes allow the water to pass to this liquid in the endosmometer more or less readily according to the respective disposition of their surfaces, and likewise according to the nature of the internal fluid. But this mode of viewing and explaining the phenomena of endosmose presents a great many difficulties which need not be further particularized here, as they are so obvious that they will necessarily have occurred already to the reader of this treatise. It will, therefore, suffice to remark that, in attributing everything to endosmose the presence of the solution of gum or of sugar in the interior of the endosmometer will not afford us the slightest explanation of the phenomena presented by the internal membrane of the stomach of the lamb and the mucous membrane of the urinary bladder of the ox. These phenomena are susceptible of a more easy and natural explanation by admitting that the divers membranes [illegible] to the internal fluids, by *exosmose*, a [illegible] towards the water, more or less readily [illegible] the [illegible] are in contact with the [illegible] with [illegible] of their respective faces [illegible] always the *endosmotic* current to proceed from the water to the denser liquid, according to the [illegible] general law of endosmose.)

This view has been submitted to the test of experiments by the author and Professor Cima. The skins of the frog and eel were used in these researches, salt water and, in some cases, solution of sugar were employed as denser (or internal) liquid. The endosmometers were prepared as usually, the skin being placed, in the one with the internal, in the other with the external surface turned towards the interior of the instrument. Equal volumes of salt water of known density were introduced into both endosmometers, which were then placed in separate vessels of crystal, containing each a volume of distilled water equal to that of the salt water in the tube. After the lapse of a few hours, the volumes of the liquids, both in the tubes and the vessels, were accurately measured. The result proved that the endosmotic current from the water to the salt water had proceeded with greater intensity in the direction of from the internal to the external surface of the skin, than in the opposite direction. In determining the respective densities of the liquids in the two tubes, and of the water in the two vessels, it was found that in the endosmometer in which the volume of the salt water had increased most, the density of the solution had been preserved more intact than in the other, and, *vice versa* that the amount of [illegible] solution introduced by exosmose was smaller in the vessel which had lost the greatest amount of distilled water, than in the other vessel.

The subjoined table gives the numeric results of the [illegible] experiments that have been selected from amongst a great number. The first column indicates in tenths of cubic centimetres, the respective volumes of the liquids found in the tubes after the experiment, the second volume shows the [illegible] of [illegible] volume of these liquids, the third shows the respective volumes of distilled water found in the two vessels after the experiment, and the fourth column indicates the accession of weight during the experiment to a given volume of water in the vessels. The respective weight of equal volume of salt water and distilled water, before the experiment was 17 [illegible] grammes of the former and 16 0[illegible] of the latter.

FROG'S SKIN.

I	II		III	IV	
1[illegible]0 0	17[illegible]5	grammes	112[illegible]	16 165	grammes.
11[illegible]0	17 [illegible]80	„	11[illegible]	16 40[illegible]	„

EEL'S SKIN.

I	II		III	IV	
[illegible]	17 11[illegible]	„	[illegible]00 0	16 170	„
17[illegible]	17 1[illegible]0	„	[illegible]0	16 220	„

In some cases the experimentalist precipitated with nitrate of silver the salt contained in the two external vessels. The last column of the subjoined table shows the result.

FROG'S SKIN.

I	II		III	IV	
172 0	17 1[illegible]0	grammes	160 0	0 190	grammes
171 0	17 17[illegible]	„	161 0	0 280	„

Similar results were obtained with solution of sugar, as the following table will show. 18 180 grammes was the weight of a given volume of the solution of sugar before the experiment:—

EEL'S SKIN.

I	II		III	IV	
1[illegible]0	18 03[illegible]	grammes	181 0	16 015	grammes
1[illegible]1 0	18 010	„	183 0	16 050	„

These facts are inexplicable upon the supposition that the elevation and increase of volume of the liquid in the two tubes are simply the result of the difference between the current of endosmose and that of exosmose. If this were really the case, the endosmometer in which the volume of the salt water has increased most ought to contain a less dense liquid than the other in which the volume has increased least. But these facts may be at once satisfactorily explained upon the assumption that the endosmotic current is equal, or nearly equal, in both positions of the membrane, and that the reason of the difference lies simply and entirely in the current of exosmose, which is less intense in the endosmometer in which the elevation is most considerable, and more energetic in that in which the elevation is less.

These results give great importance to the action of the membrane interposed between the liquids, indeed, the peculiar nature and physiological function of the membrane enable us to account for the more or less ready passage which

it affords to divers liquids of greater density towards a fluid of less density.

The important subject of endosmose, as effected through the divers fresh membranes, demands still a very attentive study, and requires many more experiments and researches, particularly with regard to comparison between the stomachs of different species of animals, and more especially between the stomachs of the carnivorous and herbivorous animals. This much, however, the author ventures to assert, that his experiments and his notion of exosmose conduce to a more correct application of the phenomena of endosmose to the functions of organized bodies.

The exosmose of solution of sugar, albumen, and gum, through the divers skins examined by the author, is most energetic in the direction of from the internal to the external surface, and it is precisely in this same direction that an abundant secretion of mucus proceeds through the skin of the torpedo, eel, frog, and other animals. The endosmotic current from the water to the solution of sugar, albumen, and gum, is less intense from the external to the internal surface of the skin, than in the reverse direction. Consequently, even if it be not admitted that it is entirely to the phenomena discovered by the author and Professor Cima that are owing this direction of the mucous secretion and the feeble absorption of the water in which these animals exist—functions which must necessarily stand in a certain relation to another, to permit their normal exercise—it cannot be denied, at all events, that these phenomena exercise a considerable stimulative influence upon those functions. This much seems certain, that the skin of those animals which live constantly in the water could not perform these functions, or, at all events, could not perform them well, if the endosmotic action of this membrane proceeded in a direction the reverse of that in which the author's experiments have proved it to proceed.

We disregard here, of course, the anomalous phenomena observed with water and alcohol, when the skin of the frog is used as medium of interposition; alcohol has no correspondent amongst the fluids found in the animal organism; and, if the anomalies that have been observed when using it as endosmotic liquid should be confirmed with regard to the human skin, they would find their application rather in therapeutics than in physiology.

The mucous membrane of the stomach of the different animals does not present this constancy, as regards the direction in which the endosmotic and exosmotic currents proceed with the greatest vigour. But every one knows how much more complicated are the functions of the stomach than those of the skin, and that this organ does not absorb all the substances introduced into it, or absorbs them but very unequally. The fact that the stronger current from the water to a solution of sugar, for instance, follows a different direction through the mucous membrane of the stomach of a ruminant than through that of the stomach of a carnivorous animal, shows clearly that the phenomenon of endosmose is intimately connected with those essential modifications to which the digestive functions are respectively subjected in those two orders of animals.

The great importance of endosmose in the functions of life has induced us to give in detail the results of the experiments made on this subject. It is by endosmose that physiologists now account for the nutrition of the ovules in the ovaries of the mammiferous animals; and explain how it happens that the vesicles containing the sperm of the cephalopodous (or spermatophorous) mollusca open immediately upon coming into contact with water.

Before concluding this subject, we have to mention certain experiments made by Poiseuille, with a view to account by endosmosis for the purgative action of certain substances. The experimentalist observed that the endosmotic current through the animal tissues proceeds from the serum to seidlitz water, and to the solutions of sulphate of soda and of sea salt; and this is precisely what happens when these substances are used internally. The excrements contain an abundant and unusual quantity of albumen. It must be admitted here that endosmose takes place from the serum of the blood to the saline solution, through the capillary vessels of the intestine.

But, to place the correctness of Poiseuille's conclusion beyond doubt, it was indispensable to demonstrate that endosmose still takes place, even though one of the liquids be in a state of motion and incessant process of renewal. This desideratum has been supplied lately by Dr. Bacchetti, who has proved by experiments that the energy and velocity of the endosmotic process are considerably increased when one of the two liquids is incessantly being renewed. This result is, moreover, perfectly in accordance with the principles of the theory of endosmose: the constantly proceeding interchange of the liquids through the membrane tends certainly to suspend the action of endosmose; or, in other terms, the conditions for the manifestation of the phenomenon are preserved the more intact the longer the fluids continue without intermixing. Poiseuille has likewise shown that membranes, after a certain time of action, lose their endosmotic faculty with respect to the liquids with which they happen to be in contact, but that this faculty may be restored to them by making them act for some time upon other fluids.

The most remarkable fact of those discovered by Poiseuille, on the subject of endosmose, is that the influence which hydrochlorate of morphine exercises upon this phenomenon. The addition of this substance to saline solutions considerably impairs the endosmose from the serum to the solution, and changes finally the direction of the current. Dr. Bacchetti has confirmed this fact, which is of a nature to aid the physiologist and physician most materially in their endeavours to explain the remedial action of morphine and other preparations of opium in cases of diarrhœa, and the constipation resulting from the administration of these agents.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of June 21; M. Brongniart in the Chair.

COMPOSITION OF THE BLOOD IN SCURVY. BY DRS. BECQUEREL AND RODIER.

An interesting memoir on this subject was presented by the authors to the academy. The following is an abstract.—

Scurvy, more common and more fatal during the middle ages than at present, has always been attributed to an alteration of the blood. Boerhaave and Hoffman considered this alteration to consist in a sort of dissolution of its solid particles, Lind held a similar opinion; Huxham attributed the disease to the alkaline condition of the circulating fluid. Modern researches have led to somewhat more precise results, and that state which was formerly called "dissolution" in the blood may be translated in the language of modern organic chemistry by the words "diminution of fibrin," or "defibrination." Thus, ingenious experiments of M. Magendie tend to show that a scorbutic state of the blood must be referred to a decrease of its fibrin, and to an augmentation of the quantity of alkaline salts naturally contained in that fluid. Messrs. Andral and Gavarret having twice abstracted blood from a patient affected with scorbutus, and having on each occasion found a diminution of the average quantity of fibrin, attribute the disorder to this primary modification. These researches not being sufficiently numerous to settle in a definitive manner the pathogenic problem connected with the question, the authors embraced the opportunity offered by an epidemic scurvy, which showed itself during the spring of the year 1846, to examine further into the subject, and, by careful analysis of the blood, to remove, ... the darkness with which it is still surrounded.

Five of the patients affected were in a condition which warranted venesection, and these five cases, the principal features of which are delineated in the memoir, present with each other the closest analogy. All were aged females, and had resided at least six months in the asylum; in all the disease manifested itself in the usual manner, viz., general debility, frequent epistaxis, swelling of the gums, petechial patches on the legs, occasional pains in the extremities, &c. The ecchymotic stains were also the seat of considerable tenderness on pressure, and the pulse was small, weak, and depressible. In connection with the results of chemical analysis of the blood in these five cases, the authors remark that, although the globules had fallen below their average standard, in no instance was a souffle present in the arteries or in the heart. It should be recollected, however, that it is only when the quantity of globulin descends below 80 in 1000 parts of blood that bellows murmurs are almost invariably found in the carotid arteries—a circumstance which could have been observed in one case only. We now proceed to state the exact composition of the blood in each of these five cases:—

						Avr.
						63
Fibrin	2 6	3	16		2	3 1
Organic matter of serum	631				8	6[illegible]3
Inorganic matter.—						
Chloride of sodium, alkaline soluble salts, alkaline insoluble salts	7·3					
Water	811					5

The density of the blood was as follows, ... being taken as the average of the specific gravity of the circulating fluid in a healthy state:—1047·2, 1051·7, 1048·6, 1050·6, and 1038·3—mean d., 1017·3.

The authors conclude, from their researches—

That the analysis of the blood in these five instances of scurvy did not show any of the characters of dissolution described by ancient writers, and hitherto admitted without discussion; neither has the alkaline quality of the blood appeared to have been increased. 2. That the blood was clearly deprived of a portion of its usual amount of globules—a circumstance which must not be looked upon as the cause of the disease, but as a result of loss of appetite by which it was constantly attended. 3. The quantity of fibrin was natural, and even perhaps slightly increased. 4. The only positive alteration which it was possible to detect in the blood was a very considerable diminution of its specific gravity—a diminution not by any means in proportion with the decrease of the solid components of the circulating fluid.

ETHEREAL VAPOUR.

M. Pirogoff, of St. Petersburg, forwarded to the institute a volume containing the result of his experience on the subject. The work was accompanied by a letter, in which the author mentioned that he had occasion to employ injections of ethereal vapours in the following cases:—Twice in the partial removal of the upper jaw, three times in the operation for artificial pupil, and twice for strabismus; once in rhinoplasty, once in the removal of two metacarpal bones, and once in lithotomy. In none of these cases was ethereal insensibility followed by any unpleasant consequences, and in the operations performed on the eyes the author states that the perfect immobility of the eyeball greatly facilitated the surgical process.

The success obtained by M. Pirogoff in the application of his method having reached the ears of the Emperor of Russia, his Majesty has sent M. Pirogoff to the Caucasian army, in order that the benefit of ethereal injections may be extended to those who undergo operations in consequence of wounds inflicted on the field of battle.

ACADEMY OF MEDICINE.

Meeting of June 22; M. Bégin in the Chair.

LITHONTRIPSY AND LITHOTOMY.

M. Civiale read a report on a paper by M.

Chaumette, of Bordeaux, on the relative advantages of these two methods of treatment of calculus. The reporter, adopting lithontripsy as a general method for the removal of the stone in children, was of opinion that cystotomy should be resorted to when the concretions were voluminous, and might require, therefore, several operations in order to be crushed with complete success. M. Chaumette had twice vainly endeavoured to apply ethereal inhalations to lithotomy; but cases were not yet sufficiently numerous to warrant any conclusive remarks on the subject. M. Civiale did not think that vesical catarrh was more frequently observed as a consequence of lithontripsy than of lithotomy, but a reappearance of the concretions was more common after the latter than after the former operation. Foreign bodies introduced through the urethra into the bladder were generally looked upon as requiring the operation of cystotomy; still M. Chaumette had, with the assistance of lithontriptic instruments, succeeded in extracting from the vesica various foreign bodies—such as peas, beans, two bougies, one pencil, and a barometer-tube. The reporter proposed the thanks of the academy to the author, and the publication of his paper.

M. Roux requested permission to make some observations on the report. M. Civiale did not seem partial to the use of ethereal inhalations in cases of lithotomy; now, M. Roux had lately performed the operation twice during insensibility produced by ether, and begged to lay the cases before the meeting. The first was that of a young man, aged twenty-one, from whom a calculus of oxalate of lime was extracted after a long and difficult operation. Insensibility had been induced previously by the inhalation of ether, and the patient declared that he had experienced no pain. The operation was performed on the 9th instant, and the case was progressing most favourably in every respect, and deserved attention, inasmuch as it might justify the inquiry as to whether, with the assistance of ether, lithotomy might not in all cases be considered preferable to the method of crushing the stone in the bladder. The second operation had been performed eight days ago, on a man aged eighty-two. This man had undergone lithotrity on three different occasions—sixteen years ago by M. Civiale, and since then by M. Légalas and by M. Menier; altogether, this process had been instituted in the present case at least one hundred times, each operation requiring a great many attempts before arriving at its full completion. On removing the calculus a week since, M. Roux had also extracted a large caoutchouc catheter, which, from its appearance, had undoubtedly been a long time deposited in the bladder. The man did not recollect anything whatever about this catheter, and could give no information as to the period or manner of its introduction. Previously to performing cystotomy, M. Roux had caused the patient to become unconscious by the inhalation of ether, and no pain whatever attended the operation, which had, it was true, been followed with symptoms of nervous prostration, referrible, perhaps, in some degree to the ether.

M. Civiale perfectly recollected the patient but could not give any information with regard to the bougie found in the bladder.

M. Blandin would not give an absolute opinion as to the advantages to be derived from ethereal inhalations in lithotomy. As to the innocuity of lithontriptic operations, asserted by M. Civiale, M. Blandin could not admit it. The occasionally severe consequences of the simple introduction of bougies protested loudly against M. Civiale's opinion; facts besides had already, on various occasions, shown that the attempts to crush the stone sometimes brought on most unpleasant and even dangerous results. M. Civiale, speaking of relapses, said that the reappearance of calculi in the bladder was more commonly observed after cystotomy than after lithotrity: how could this be, if, as it was admitted on all hands, relapses were the consequence of a diathetic predisposition of the subject? M. Civiale had also said that vesical catarrh was more frequent after lithotomy than after the other mode of operation. M. Blandin held that the contrary assertion was more true. Was it possible to believe that the bladder was less irritated by lithontriptic manœuvres than by the incision of lithotomy? M. Civiale was obliged to acknowledge the existence of unsuccessful cases of crushing, and attributed them to the novelty of the method; but it had now thirty years' existence, and that argument must, of necessity, fall to the ground.

The conditions of the report were then adopted.

SPARKLING SYNCHISIS.

Dr. Desmanes presented to the academy two patients affected with this variety of ocular disease. In one the bright specks were immovable; but in the other they obeyed the laws of specific gravity, and were thrown into agitation by every movement of the eyeball. (See *Medical Times*, vol. 13, p. 283.) It may be recollected that three opinions have been brought forward for the explanation of this singular phenomenon: M. Malgaigne conceives that particles of cholesterine floating in the eye may cause it; M. Sichel attributes the appearance to the presence in the vitreous humour of minute shreds of the hyaloid membrane in a state of disorganization; and M. Desmanes believes that it is an optical delusion of the observer, produced by the relaxed condition of the hyaloid cells in the diseased eye, in consequence of which these cells *reflect* rays of light that they are destined to *refract*.

The meeting adjourned at five P.M.

MIDWIFERY.—STATISTICS OF THE LYING-IN HOSPITAL AT WURZBURG. BY PROFESSOR HOFFMAN.

From January 1, 1812, to October 31, 1845, 637 accouchements were observed—31 cases of twins, and one "*mole*." Of these 651 children, 49 were stillborn.

Presentations	of the head	613
,,	of the pelvis	18
,,	of the face	10
,,	transverse	3
,,	not described	7

D. M'CARTHY, D.M.P.

Wounds from Firearms without Ball.—The *Philadelphia Medical Examiner* records a case, communicated by Dr. Paul Swift, of a young man who was shot by a pistol charged with powder only, by which a fatal wound was inflicted. It was on the fleshy part of the left hip, above and behind the trochanter major, about one inch in diameter, and four inches in depth; the integuments were destroyed, and the muscles presented a blackened, mangled mass: it bled but little, and was carefully probed with the finger, which readily passed to the bottom of the wound. No untoward symptom arose till the sixth day, when tetanus in its most distressing form supervened, and on the following morning he died. The wound was at least four times as large as a ball from the same instrument would have caused; and so mangled were the tissues, through this great extent, that vitality was utterly destroyed. It is not certain at what distance the pistol was held when the wound was inflicted, the patient supposing that it nearly touched him, while the witnesses varied in their statements at the trial from one foot to two or three yards. There was no wad either found or supposed to be used.

Experiments in Reference to Gunshot Wounds inflicted without Shot.—The pistol used had a bore four inches in depth, and six lines in calibre, and was wadded with paper. The dead subject upon whom the experiments were tried was a male, thirty-five years of age, not recent, and had undergone a preserving process with chloride of mercury, considerably hardening the muscles; it was also much emaciated. In the first experiment the pistol, with an ordinary charge, was held twelve inches from the fleshy part of the hip, the part being covered with one thickness of broad cloth and a twilled cotton cloth under it. Clothes lacerated, and skin abraded; wad on the floor on fire.—Experiment 2. Distance six inches; parts covered as before. Clothes lacerated; wad lodged one half inch below the surface.—Experiment 3. Distance two inches. Wound ragged, blackened with powder, and penetrating to the bone. One and a half to two inches; wad was found immediately beneath the integuments, and somewhat on one side of the principal wound; parts covered as before.—Experiment 4. Distance one inch and a half from the ribs of the right side; no covering of cloth. Penetrated the cavity of the chest, the wad passing through the intercostals between the ribs.—Experiment 5. Distance the same: no covering of cloth. The integuments removed; wad penetrated the thorax, carrying away a transverse portion of the rib.

Polypus of the Rectum.—The patient was a child, delicate from her birth, and when three years old, her mother observed that she suffered much distress previous to the act of defecation, and before it could be accomplished there was a protrusion of a dark red fleshy substance *ex ano*, which bled less or more on every occasion of the kind. The tumour was shortly associated with a second of a smaller size, which, after remaining some months, separated from the larger one; this latter continued to enlarge until it had acquired the size of a small hen's egg. It was very troublesome, requiring to be placed within the sphincter ani after every evacuation. This prolapse of the polypus always took place before the evacuation of the intestine, and never went up without manual assistance. This continued up to the age of five years, when Dr. Robert Burns, of Frankford, Pennsylvania, was consulted. The polypus was then found as large as a small Seckel pear, being considerably diminished at the time from frequent bleedings. On dilating the anus, the pedicle was found to be somewhat elongated from the mucous membrane of the rectum above the sphincter; to this was applied a ligature of silk immediately, allowing the ends to remain long, which were secured externally by a strip of adhesive plaister; about twenty-four hours after its application the polypus separated, and two days after the ligature came away. She suffered some pain while it remained. Since its removal no unfavourable symptom has occurred, and the functions of the part are quite natural.

The Treatment of Miasmatic Fever.—Dr. G. L. Upshur, of Norfolk, Virginia, had during the past year 105 cases of this fever under his superintendence. Of these eighty-three were intermittent, and twenty-two remittent. Of the intermittent, one was quartan, fifteen tertian, sixty-two quotidian, and five masked. Of the masked, one took the form of neuralgia, and four simulated hysteria. The treatment chiefly employed was the sulphate of quinine in large doses, without regard to the stage of the disease. In one case, a quotidian, occurring in a youth aged 16, of excitable temperament, fifteen grains were administered just as the cold stage was passing off. All the symptoms were ameliorated; the hot stage lasted but one hour, and the patient had no return of the disease. In twenty-five cases, thirty grains were given in five hours, during the height of the febrile stage. The pulse was lessened in force and frequency in every instance, and the paroxysm cut short by the speedy appearance of perspiration. In only one of these cases was the remedy preceded by other treatment. Dr. Upshur, from his experience, deduces the following conclusions:—1. In a large majority of cases, no matter of what type the fever is, the *preparatory treatment*, so called, is worse than useless, causing a loss of time which is often fatal to the patient. 2. A large dose of quinine (fifteen or twenty grains), administered at once, produces a more certain and permanent curative impression upon the system than small doses (one or two grains) frequently repeated. 3. Quinine in large doses, when administered in the hot stage, so far from exciting the circulation, acts as a decided sedative upon it, the pulse in every instance lessening in force and frequency under its influence. The dogma, therefore, that quinine in fever is poison, must be discarded

4. In uncomplicated miasmatic fever, mercurials are not at all essential to a complete and permanent cure. They may be sometimes given with advantage in cases where cathartics are indicated at the onset of the disease.

Polypus Uteri.—Dr. Wood exhibited to the New York Pathological Society a specimen which had existed for nine years, and which he removed by ligature. It was about the size of a Vergaloo pear, and hung by a well-defined pedicle from the fundus. Several fibrous tumours were attached to other parts of the uterus, appreciable by the hand externally applied, varying in size from that of a marble to that of a fist. In three days after the application of the ligature the polypus came away without hemorrhage; it had nearly lost half of its bulk. It was supplied by one large artery in the pedicle, which gave off other small ones. It was difficult to secure arteries after their section on all fibrous tissues, as room, owing to their elasticity, is not given for the hold of the ligature beyond the tenaculum. Hence the great danger of *excising* these growths, which Dr. Wood considers a bad and hazardous practice.

Aneurism of the Femoral Artery, and Communication of the Artery and Vein.—A gentleman, aged twenty-one, had been wounded two years and a half before his death in an affray, with a pistol-ball, which entered below the ant. sup. spinous process of the ilium, traversed the front of the thigh, and came out on the inside of the symphisis, under the skin. At the moment much hemorrhage ensued, arrested by pressure. He recovered entirely in six weeks; but on getting about discovered a pulsating tumour in the middle of the thigh, three inches below Poupart's ligament. When examined, it was irregular and ill defined; three or four inches in circumference, and over it, a very unusually distinct thrill could be felt. The tumour was in contact with Poupart's ligament. The external iliac artery was tied by Professor Mott, on the 16th of December, and on the 22nd he died, gangrene having extended over the whole limb, commencing at the foot. At the *post-mortem* examination, a little lymph upon the peritoneum around the wound was discovered. The ligature was applied about one inch and a quarter above the circumflex and epigastric arteries, and a clot of about an inch in length was above it. The artery began to be atheromatous just below Poupart's ligament. A true aneurism communicated with the artery just above the origin of the arteria profunda, a little larger in size than a partridge's egg, and of a regular oval shape, like a pouch, having a small jug-like neck and containing coagula formed before the ligature of the artery. It was enveloped by gristly cellular tissue. Immediately under the sac, and blended with it, was the anterior crural nerve much larger than natural in appearance, from thickening, probably, of its cellular neurilemma. The vein along the side was healthy, but thickened, and the cellular tissue at this point infiltrated and indurated. *Just here existed a communication between the vein and artery.* A little cyst of bony shell was attached to the surface of the vein just where the saphena dips into it. Dr. Van Buren, who relates the case, believes it to be unique; an *aneurismal varix, and a true aneurism* of the femoral artery.

Artificially-shortened Funis, with Rupture before Delivery.—Dr. Wilson Jewell read before the Northern Medical Association of Philadelphia a case of this kind. It occurred to a lady in labour with her fifth child. Her previous deliveries had always been remarkably quick when now visited she had strong pains, and the child's head was pressing forcibly during pain against the perineum. As the pain subsided the head receded quite high up, and remained there till the following pain brought it down. For two hours this state of things continued, when a powerful and continued effort of the womb expelled the head of the child beyond the vulva; yet when action ceased the head remained firmly wedged against the os externum. The appearance of the child at this stage of the birth indicated strangulation, without speedy relief, and it was now discovered, by passing the finger round the neck, that it was closely compressed, by being encircled with two turns of the cord, which was thus artificially shortened. At the next pain the cord suddenly gave way, and at the same instant the child was precipitated into the world. The rupture took place about two inches from the navel, and in a few minutes the child breathed and cried freely. Dr. Jewell considers this case of spontaneous rupture of the umbilicus, so novel in its character, as to be the only instance on record.

Retention of Urine, a Sequela of Scarlatina, successfully treated with Strychnia.—A delicate child, seven years of age, of strumous diathesis, was attacked with scarlet fever, and attended by Dr Upshur, and the case progressed towards recovery, under the use of calomel and ipecacuanha, with an occasional dose of castor-oil and an emetic. Shortly after the patient had ceased taking medicine he complained of pain about the neck of the bladder, and inability to make water. When Dr. Upshur saw him again there were feverishness, headache, and a distended bladder. He was immediately put into a warm bath, and a dose of castor-oil with forty drops of laudanum given. This failing to produce relief, the next morning the catheter was passed with some difficulty from the smallness of the parts, and the existence of a partial congenital phymosis. Three congenital strictures were passed, and not more than eight ounces of urine drawn off, from the catheter becoming clogged with mucus. Next day no urine had passed, when a warm bath was ordered, tobacco-leaf steeped in alcohol applied to the perineum, nauseating doses of tartar emetic given, and, finally, an opiate enema. These failed to relieve, when the catheter was again passed, and a quart of urine drawn off, with entire relief. The retention continued, and two days after, in attempting to introduce the catheter, coming in contact with a stricture, it was retained there for nearly ten minutes, when the spasm suddenly gave way and a stream of urine forcibly ejected the instrument from the urethra, and half a pint of water was passed. He was then ordered the following pills:—℞. Strychniæ, gr. ss.; pulv. rhei, gr. xx.; m. pil. 8. Take one every five hours. Four pills were taken during the night, and half a pint of urine discharged. From this time he continued to pass his urine with greater freedom, and the pills were discontinued the next day on account of the spasms of the muscles.

The Effects of Large Doses of Sulphate of Quinine.—Dr. W. P. Thom mentions four cases in which he administered large doses of this drug, in intermittent fever. He noticed that, while the patients were under the influence of the quinine, they had weak tremulous pulses and torpidity of intellect, which, however, speedily subsided. The phenomena he considers as only explicable on the idea that quinine exerts a powerfully sedative action on the nervous system. The symptoms manifested, though in a less degree, were not unlike those exhibited by some constitutions under the peculiar action of mercury, and described by Mr. Pearson as mercurial erethism.

Affection of Peyer's Glands in Adynamic Fever.—Dr. Swett stated, at a recent meeting of the New York Medical and Surgical Society, that he had lately three cases of typhus throwing some light on the pathology of the disease, especially as to the condition of Peyer's glands. In the first patient no alterations discovered, but some patches of the gland, near the ileo-cæcal valve, were enlarged and discoloured, being of a reddish-brown hue. In the second, a girl of twenty, who had the ordinary symptoms, the glands of Peyer were much inflamed and ulcerated. The third case was that of a boy, who had suffered much privation at sea, and was attacked a week after landing. When seen by his medical attendant he was exceedingly prostrate. Stimuli were given with temporary benefit; but he lived only a fortnight. A day or two before his death, livid discolorations, of a linear form, appeared about the the abdomen, as if from the bursting [illegible] veins. No disease of Peyer's glands was discovered, on a *post-mortem* examination, except that some of them were hypertrophied—the results of former disease. In the cæcum there were about a dozen sloughing ulcers, irregular in shape, the largest of them about the size of a threepenny-piece. Taking the three cases, it appears the disease, though of common origin, may or may not be attended with ulceration of Peyer's glands.

Ulcer of the Stomach.—Dr. George Budd remarks that Rokitanski, who has studied the morbid anatomy of the disease with his accustomed patience, states that of seventy-nine cases, of which he has given an analysis, the ulcer was situated—

In 15, on the lesser curvature.
20, on the posterior wall of the stomach.
16, at a small distance from the pylorus.
16, in different parts at once; especially simultaneously on the anterior and posterior surfaces.
1, at the fundus of the stomach.
6, in the duodenum.

79

This disease is met with more frequently in women than in men. In the seventy-nine cases, forty-six occurred in women, thirty-three in men. It seldom, if ever, occurs under the age of sixteen, but is found in persons of all ages from this to sixty and upwards. According to Rokitanski, it is met with more frequently in persons beyond fifty than in persons under thirty. This disease has not been found in conjunction with, or in sequel to, any other disease, with such frequency as to lead us to conclude that it has any intimate connection with it.

Symptoms of Ulcer of the Stomach.—In its early stages these are few and equivocal. Pain and soreness at the stomach felt after meals, occasional acid eructations, and occasional vomiting, which are often the only symptoms then present, may result from various other causes, and even from mere functional disorder. After these symptoms have lasted some weeks or months, their very continuance becomes significant: it leads us to conclude that they depend on organic disease, while the seat of the pain and the circumstance that it is always increased by eating, and usually abates as the stomach gets empty, lead us to infer, in the absence of any direct evidence of disease of the liver or other adjacent organs, that this disease is in the stomach. After a time, these symptoms are often succeeded by the sudden occurrence of vomiting of blood in large quantity. When this has happened, the detection of the disease becomes much easier.

Treatment of Ulcer of the Stomach.—The patient should prevent the ill effects of distention, of change of volume of the stomach, by eating little at a time; and the food taken should be of the mildest kind. Whatever irritates an ulcer of the skin will irritate an ulcer of the stomach. Milk, or milk with bread or with arrowroot, and other farinaceous food, are the articles of food which cause the least pain. Occasionally a little jelly or beef-tea may be allowed. The choice must be determined by the degree of pain which they severally occasion. Medicines are of comparatively little efficacy. When there are sour eructations, or when, in case of vomiting, the matters ejected are sour, fifteen grains of bicarb. of potash and three or four grains of nitre, two or three times a day, lessen the pain at the stomach, and are, therefore, productive of benefit. In vomiting of blood, a few grains of citrate of iron may be often given with advantage as soon as a little solid food can be borne without pain. When the bowels are confined, an aloetic or a compound colocynth pill should be given. If vomiting of blood should come on, ice swallowed, or applied to the epigastrium, alum, &c., with *long fasting*, are the means most likely to restrain it.

Effects of Galvanism on a Blistered Surface.—Apply two small blisters the size of a shilling, says Dr. G. Bird, to any part of the body, one a

few inches below the other, when the cuticle is thus raised by effused serum, snip it ... to the ... in which a permanent dis... is required a piece of zinc foil, and ... piece of silver, connect them by ... and cover them with a common ... and oiled silk. If the zinc pl... few hours, the surface of the ... will ... as if rubbed with nitrate of silver ... forty eight hours a decided eschar will ... (still keeping on the plates) will be ... at the edges in four or five days. The plates may then be removed, and the surface ... the silver was applied will be found to be completely healed. A common poultice ... the parts, and a healthy granulation ... with well-defined edges, freely discharging pus, will be left.

On the Croup, by Dr ...

In his memoir on croup the author reviews the principal writings which have appeared, and makes the following observations ...—"1. It is always difficult to distinguish true croup from the false ... catarrh ... the difference of opinion ... the treatment ... easily, and is liable ... the same individual ... appearance ... presents the ... difficulties, and resists the remedies most extolled. We must then admit that the greatest number of cases cured belong to false croup ... 2. It is not possible to say at what period of the disorder the croup is curable ... consider the medical attendant ... the issue of the disorder ... called in at the commencement of the ... still less ... ment of one mode of treatment rather than another ... The sulphate of copper ... specific more ... remedy. 4. The croup ... inflammatory disease, but of a special nature ... the treatment therefore, ought to be ... always having regard to the constitution ... subject. The application of leeches ... sufficient, but ... when they ... quick and prompt measures, they ... bleeding. After the ... especially to have recourse to ... principally to tartarized antimony ... efficacy of mercury ... not to be neglected ... progress, as ... the diagnosis ... of this malady, since the ... dure, and the ...

Hydatids ... Dr Thor...

with ... hypochondrium ... which ... and other worms ... the child ... was opened ... of ... condition ... tails as ... tinctly in warm water ... pus flowed out ... degrees the discharge ... less offensive ... posed of calomel ... by stool, lumbrici ... some hydatids ... stools contained no ... minished sensibly ... hypochondriac region ... fortnight. But the most ... was an abscess of the lower ... opened, and gave issue to ... living worm ... child ... ment in the ... to have ...

APOTHECARIES' HALL.—Gentlemen ... members ... June 17 ... Lund, Charles Palmer, Charles Warren ... Jonathan Wybrants, William Davies, and Joseph ... Walter Raleigh Baxte...

REVIEWS.

... submitted ... the ... Bl... By ... STEWARD, M.D., Fellow of the Royal College of Physicians, London. London: J. Churchill, Princes street, Soho. 1847, pp. 10...

The study of those phenomena which are manifested by living beings in health and disease has received most important assistance within the last few years, from chemistry and the microscope. Their employment is now ... great changes in medical science, developing new facts, reviving doctrines which were once entertained but which had been laid aside because they had not been established upon the sure basis of scientific induction. The ancient physicians considered the blood not only ... fountain of life, but as the source of all those diseases which invade the human frame ... employed ... intended to purify the vital ... its ... noxious principles which ... sickness and death. ... triumphant ... but ... gave place to other ... in accordance with the progress of ... It is now ... discoveries which ... the ... microscope ... Dr Steward ... doctrine that ... cause of ... disease ... the system ... his ... opinion ...

With ... the symptoms ... to ... author, however ... why ... he ... that ... in addition to ... treatment ... others ... himself ... rallied ... the ... nervous ... the ... consider ... but ... the ... explain ... the nervous system ... state of the ... the ... conclusion that ... hence the ... our duty ... evidently ... of disease ... the nervous system ... to explain the nature ... of ... any useful information ... treatment ... condemn his mode of ... "... cure those diseases called nervous by the appropriate remedies, ... driven to the use of purgatives ... to show that the nervous ... the ... of the blood ... the ... to the nervous system ... by the state of the blood ... upon the subject of ... of the disease the consequence ... irregularity of diet, or other circumstance capable of disordering the diges...

tive functions, ceasing with the removal of its cause, and that form which by neglect and a ..., continued application of the exciting causes, ... ever they may be, has become so rooted in the system that the mere removal of them is not sufficient alone to restore health." The exciting causes mentioned are those usually referred to, such as intemperance, sedentary life, imperfect mastication, &c., as also the symptoms. The treatment is divided into *mental, regimenal,* and *medical.* Every means are to be employed to abstract the individual from his morbid thoughts, and precaution highly useful in preventing an aggravation of that disquietude ever present in dyspepsia is, as far as possible, to withdraw the mind from the consideration of the remedies employed. As a general rule for regimen, the dyspeptic ought to avoid everything which, taken, produces uneasiness. The medical treatment is divided into *permanent* and *temporary.* "To answer the first indication, alteratives and purgatives are necessary, with occasional bleeding, should there be a full state of habit, or a disposition to determination of blood to the head." ... purgatives, except during the first three or four days of treatment are injurious, action upon the bowels, once or twice a day being all that is required. Calomel, as a purgative, is considered so important that, without the judicious use of this medicine, there is little hope of permanent relief to the dyspeptic. To counteract acidity the carbonates of soda and magnesia are recommended to be taken only in such a quantity ... necessary to produce the de... Pyrosis ... generally relieved by ... of nitrate of silver. Tonics are only recommended during convalescence.

As health advances, aperients which experience ... to be best are to be used if the bowels ... enemata of tepid water, the quantity not to exceed three or four ounces, or ... tablespoonful of mustard-seed swallowed ... in the mouth at a time ... washing it down with water. This ... at dinner ... meal. To secure ... produced, a careful attention ... is recommended, ... which experience proves to be ... drinking, except when ... a wine glass full of the solution ... in proportion of an ... pint of water, when there is any ... and keeping the bowels ... habits, and moderate exercise. The ... is recommended to ensure perfect ... of the surface of the body, and to ... the superficial vessels, cold water ... with a towel to different parts of ... the head, and drying afterwards ... as possible, is necessary.

... clothing, it should vary as little as possible ... sufficient to keep warm in cold weather, ... such as to encumber in summer; ... about the throat are considered bad. ... is objected to "because it keeps up an ... on the skin, and thereby ... morbidly susceptible of external impression."

The book is very well written, and the treatment of dyspepsia judicious. The author, however, must expect that there will be many who will not agree with him as to the proximate cause of disease affecting the general system being vitiated blood.

A Treatise on the Structure, Diseases, and Injuries of the Blood-vessels, with Statistical Deductions (being the Essay to which the Jacksonian Prize for the year 1844 was awarded by the Royal College of Surgeons of England, with numerous additions). By EDWARD CRISP, M.R.C.S., &c. London: John Churchill, Princes-street, Soho. 1847, pp. 354.

Observations on Aneurism and its Treatment by Compression. By O'BRYEN BELLINGHAM, M.D., Edinburgh, &c. London: John Churchill, Princes-street, Soho. 1847; pp. 181.

The subject which Mr. Crisp has handled so successfully as to obtain the Jacksonian prize for

1841 is one which recommends itself to the profession from its importance. Diseases of the blood vessels cannot fail to exert a powerful influence on the duration of human life, and there is scarcely any departure from the natural healthy condition of the body in which they are not in some measure involved. Doubtless, we are yet far from ascertaining the exact amount of mortality produced from this cause alone, many deaths occurring without a *post mortem* examination being instituted, and where this has taken place, from the defective manner in which it is conducted, many important facts have escaped observation. The statistical returns of the Registrar-General show that a very great many sudden deaths take place without the causes being clearly ascertained, apoplexy being the disease to which they are attributed, in order to cloak ignorance or spare trouble, although, as our author observes, it is a disease which rarely or ever proves suddenly fatal unless it arise from rupture of the basilar artery, only three instances of which have come within his knowledge. As the blood vessels possess an organization identical with the other soft parts of the body, they cannot escape those metamorphoses from disease which other vital organs undergo, it is incumbent, therefore, on every intelligent surgeon to investigate closely the condition of the principal arteries and veins in every autopsy which they may perform, and this will render more certain the amount of influence which diseases of these vessels exert in terminating physical existence.

In the chapter on the morbid condition of the arteries, the author remarks that the deposits of coagulable lymph, so common in other serous structures, are comparatively rare in these, but, as they present different forms of redness, he notices them as being capable of three distinct divisions—the inflammatory, the congestive, and the redness from imbibition. "The first is characterized by appearances hereafter to be described, and I believe when these are present we may rightly infer the existence of inflammation. The congestive discoloration is in many instances difficult to distinguish from the inflammatory, but the state of the blood as well as the turgid condition of other parts, especially the membranous tissues, will greatly assist us in coming to a correct conclusion. Thus in cases where the blood is found fluid after death, or where it is deficient in fibrine, and its colouring matter perhaps altered, these congestions are not unfrequent. Some writers believe that the congestive or inflammatory condition is frequent in granular disease of the kidneys. The sudden deaths, unless accompanied by violence to the artery, are not attended with this discoloration. In a case of poisoning by arsenic no redness was present, and from the examinations I have made of the lower animals destroyed by arsenic, opium, and prussic acid, I have reason to believe that the arteries are not perceptibly changed by these poisons. The exact nature of redness from imbibition is also but little understood, but it is generally believed to be a *post mortem* effect from the imbibition or absorption of the blood which is in contact with the lining membrane of the artery. I believe the best distinguishing mark between this and the foregoing discolorations is the absence of the soft pulpy state of the inner coats, as well as the facility with which redness is removed by immersion in water."

Mr. Crisp, in treating of arteritis, is compelled to acknowledge, from his examination of the writings of others as well as from his own observations, that this disease is still involved in much obscurity that in most cases it escapes the observation of the medical attendant, while "the only morbid changes which can be depended upon as indicative of inflammation in this vessel are redness and a pulpy and swollen appearance of the inner and middle tunics." It is not so difficult, however, to ascertain when inflammation of the arteries of the extremities exists, there being "pains of a burning, pricking, and shooting character present, with great tenderness on pressure along the course of the vessels. These symptoms are often followed by absence of pulsation in the affected artery, with a disposition to dry gangrene in the limb. In some cases I have felt the vessel hard and cord-like. The [illegible] in the [illegible], is hot and dry, with the usual symptoms attending upon febrile [illegible]. Some authors have described an intermittent pulse to be one of the characteristics of arteritis. I have never met with this phenomenon." In dry gangrene of old people, in the inferior extremities, when the vessels have become obstructed or obliterated from the effects of inflammation of the arteries, Mr Crisp has "found most benefit derived from large doses of opium, combined with a mild and unstimulating diet. The local treatment [illegible] in attention to the position of the limb, [illegible] fomentations, and sometimes the use of linseed-meal, yeast, and beer-ground poultices. In one case the limb is more comfortable when no external applications are used. He object[s] to amputation on aged subjects."

In the chapter on Diseases of the Pulmonary Artery and its Valves, some singular cases of its entire absence are recorded. We give one, the subject a young girl twelve years of age, whose body Mr Crisp examined after death. The father of the [illegible] the medical att[illegible] she had then no [illegible] she had been dumb from her birth, and always a very delicate child; she had frequent palpitation and dyspnœa on bodily exertion, [illegible] ascending the stairs, and the [illegible] heart [illegible] she was also subject to [illegible] the side, the hands [illegible] lips [illegible], were often blue, the former [illegible], the ends of the fingers were clubbed. [illegible] death frequent cough [illegible] At the [illegible] examination I removed the heart from the body, dividing the [illegible], about which there was nothing remarkable, close to the left subclavian, and on [illegible] observe that the pulmonary artery was [illegible] was pointed out to me by a medical friend. On [illegible] vessels which [illegible] common [illegible] of the [illegible], and terminated in two [illegible] smaller branches. On injecting the [illegible] trunks were found [illegible] the pulmonary [illegible] of the aorta, so that the blood must have regurgitated into them from a large branch; no trace of a pulmonary artery could be found.

Mr Crisp is an advocate for the treatment of aneurism of the [illegible] by compression, and he says "that the [illegible] in which it has been recently employed has been so successful that there is great probability that it will [illegible] the ligature, in the cure of [illegible] aneurisms, will hereafter be adopted."

Dr Bellingham [illegible] of this mode of treatment [illegible] in this way the cure is simpler and safer than the ligature, more certain and [illegible] [illegible] he acknowledges that it is not free from inconvenience, trouble, or pain. [illegible] the conclusions of his [illegible] summary of his opinions, and [illegible] the most material points bearing upon this method of treatment.

"The cure of aneurism by compression upon the artery, between the aneurism and the heart, according to the rules laid down here, is accomplished by the gradual deposition of the fibrine of the blood in the sac until both the latter ..... the artery are completely filled up. The process is, in fact, exactly similar to that by which nature effects a spontaneous cure of aneurism.

"Such an amount of pressure as would cause inflammation and adhesion between the opposite sides of the artery at the point compressed, is never required.

"The pressure should not be so great as to interrupt the circulation in the artery at the point compressed, an essential agent in the cure being that a current of blood should pass through the sac.

"Compression by means of two or more instruments, one of which is alternately relaxed, is much more effectual than by any single one, and in many instruments the pressure [illegible] by the patient himself.

"[illegible] to the patient, and a certain cure by [illegible]

"The cure is permanent

"The femoral artery remains pervious after the cure at the point at which pressure has been applied, and no morbid change can be detected.

"The vessel is obliterated only at the seat of the aneurism

"Compression is more simple and safe, and applicable to a number of cases where the ligature is inadmissible

"Compression is not necessarily a more tedious or more painful method of treating an aneurism than the ligature, while it is more certain, permanent, and free from danger."

Mr Bulley has invented an instrument, described in the *Medical Times*, Nov 14, 1840, for more effectually applying this mode of treatment, which seems well adapted for effecting the cure of aneurism with but comparatively little inconvenience.

Mr Crisp in his chapter on Wounds of Arteries, recommends in hemorrhage from leech-bites to introduce at once a very fine needle through the lips of the wound, and then use the twisted suture, cutting off the ends of the needle. In bleeding from the extraction of a tooth he advocates the following plan:—"After plugging the cavity with lint, a piece of cork is introduced, which fits firmly between the two teeth and projects a little beyond their crowns. A bandage is then to be applied tightly under the jaw, so that firm pressure is kept up (by means of the opposite tooth upon the cork) several hours."

Mr Crisp's treatise is illustrated by five plates, and the work does honour to the author as a talented, diligent and observant surgeon. Dr. [illegible] on aneurism, &c., are calculated to remove the prejudices of those who are opposed to the [illegible] treatment which he advocates.

TO CORRESPONDENTS

THE MEDICAL TIMES may be procured by an order to any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times. Subscribers sending by a Post-office order, [illegible] Ingerstein Carfrae, [illegible] in town, One Guinea [illegible] which will free them for twelve months. Half-yearly Subscription, 13s., Quarterly [illegible]

The following important Lectures and Original Cases will appear in next week's Number.—

[illegible] on some very important Dis[illegible] by Dr. S. Wright, Queen's College, Bir[mingham].

Case of Large Abscess of the Liver, successfully [illegible] Puncture, by C. Clay, Esq., M.D., Man[chester].

[illegible] of the Breast, by Alfred Markwick, Esq.

Sugar Found in the Perspiration, Nasal Mucus, Tears and Ceruminous Matter of the Ears, by J. O. [illegible], Esq.

Anomalies of the Ciliary Ganglion, by C. H. Hallett, Esq., Demonstrator of Anatomy in the University of Edinburgh.

Remarks on the Scurvy Endemic at Nottingham, by W. P. Stiff, M.B., Surgeon to the Nottingham Union Hospital.

Fracture of the Base of the Skull by W. D. Dalgairns, Esq., Surgeon to the Strangers Hospital, Granville, Havre, France.

Dyspepsia, by Metcalf Johnson, Esq., Lancaster.

We have again received letters in reference to Dr Ryott's qualification, which we must decline to insert, except as advertisements.

L. D., London. *Our correspondent ought to state his reasons for requiring the answer he does.*

Dr. Frederick Brittan, Clifton, Bristol.—*The*

work has been received, and will have our earliest attention.

Mr. Thomas Brown, Castle Donnington, *is thanked for his communication; the case is an interesting one.*

E. J., Piccadilly.—*We have not yet received the paper to which he refers.*

A Student of the Edinburgh University.—*The certificates will qualify for both the College and the Hall. The fee for the certificate is six guineas for the country, and ten for London.*

A Dupe.—*The debt cannot be recovered in consequence of practising within the prohibited distance without having paid the additional sum.*

Mr. Henry Cottrell.—*A communication shall in a short time be transmitted. We have not yet decided upon what course we shall pursue.*

A Surgeon in General Practice.—*Candidates for the Diploma, from the University mentioned, must reside a certain time at the place. The examination is conducted* viva voce, *in Latin or English, and comprises anatomy, physiology, materia medica, chemistry, pathology, therapeutics, and midwifery.*

N. B., West-end.—*The penalty for selling patent medicines without a license is, we believe, £20; if there be not also a stamp affixed to the article, so that it cannot be readily removed, £10. Soda, seidlitz, and ginger-beer powders, are not included amongst patent medicines. The license costs £2 for London, Westminster, and Southwark.*

A Subscriber from the Beginning.—*We are unable to comply with our correspondent's wishes.*

Mr. G. Maysey.—*The surgeons to county lunatic asylums are, we believe, appointed by the magistrates.*

Invalide *should state his case to some medical practitioner, the parties mentioned are* quacks, *and have probably given a fee to the editors of the newspaper to puff them into notoriety. The undertaking is too profitable to be put down without the interference of the Legislature.*

An Apprentice.—*Fractures are not unfrequently produced by mere muscular action. The Number required is out of print.*

Amicus.—*We do not retain manuscripts after they have been used, and communications not inserted are destroyed.*

Our friends at Thirsk, *we think, must, on consideration, agree with us, that on a matter of merely local interest we should not, in the absence of any new facts, be justified in further drawing upon the attention of our readers.*

A Navy Surgeon.—*There is good cause for complaint, and we trust that the Government will see justice done. We shall be obliged to our correspondent for his promised communication.*

Democritus. *We have not overlooked the case, but shall attend to it when we have received all the details.*

Mr. Jackson.—*A double qualification is required, though practitioners of 1815, having appointments at the time, were not superseded.*

M.D.—*An English diploma will be an introduction to the wards of Parisian hospitals, or a passport in which the party possessing it is described as a surgeon.*

An M.R.C.S., Ireland.—"*To visit, prescribe, and dispense,*" *legally, the Apothecaries' certificate is necessary. Without this, a prosecution may be instituted, and there are many urging the society to use their power, in consequence of some persons boasting that they care not for their certificate, so long as they have the College diploma.*

Chirurgus.—*The subclavian artery has been frequently tied above the clavicle, and external to the scalenus anticus muscle.*

Incog., Liverpool.—*The doings of the select vestry are by no means praiseworthy. It is a matter of regret that they should have an opportunity of insulting the profession in the way they have done.*

Medico-Chirurgus.—*Ergotine has been used in hemorrhage, by M. Bonjean of Chambery. In one case it stopped the flow of blood in two minutes from a wound in the hand, when compression had been used and found of no avail.*

An Advocate for Reform.—*It is certainly needed, and the suggestions of our correspondent are plausible.*

The correspondent who has written to us on the reason why the druggists supported the late bill, as also the gentleman who expresses his condolence about the non-support of a periodical he names, are thanked for their obliging communications.

A. W. London.—*The Editor of the* Pharmaceutical Times *will give the required information.*

J. A., Bury St. Edmunds.—*They cannot.*

A correspondent has forwarded to us an analysis of the valorous remonstrants to the proceedings of the council of the National Institute. *We have not space to publish the document entire; but we are told that of seventy-seven, the total number, five* are not members, *and thirty-six* have not paid their subscriptions! *What sort of conscience can these gentlemen have? When a man runs up a score with his baker or his butcher he generally submits very quietly, even to a palpable imposition; his conscience makes a coward of him; but these gentlemen assumed a right to* complain *before they have established a right to* have. *When the voracious Dando had eaten a barrel of oysters, and found that he had no money in his pocket to defray the expenses, he turned round and abused the landlord for the stinginess of the supply. It appears that the race of Dandos is not yet extinct.*

A correspondent thus addresses us:—"*My attention was particulary attracted by the short allusion made, in the* Medical Times *of the 12th ult., to the treatment of tænia, by M. Rayer, at the Hôpital la Charite, having a patient under my care who has been grievously troubled with it for at least four years. Perhaps it would not be infringing too much on your editorial capacity to request the favour of some further inquiry upon the subject from your Parisian correspondent. The worm is of the tænia solium (osculis marginalibus) kind, and appears of great length, if the numerous fragments occasionally voided be any criterion. The attendant dyspepsia is of the atonic and* irritable *variety, the gastro-intestinal mucous membrane being highly sensitive and feeble; the bowels* rather *torpid, though plentiful biliary secretion attends, from the constant irritation present. Acidity, weight, and nausea are constant symptoms, notwithstanding the best-conducted hygiene. The reflex nervous actions are slight, but constant tonic or clonic spasm, with general debility—almost paralysis; the base of the brain being evidently much irritated, interferes to some extent with volition and motion, pulse soft and feeble, easily accelerated. Precordial anxiety, with leanness and loss of strength, is present. The person is of the male sex, thirty years of age, unmarried, and of a delicate and nervo-bilious temperament. I am informed that* masturbation *was practised from twelve to eighteen or nineteen years of age, sometimes to a considerable extent, this no doubt is a predisposing cause; but is the presence of tænia a symptom merely, or a disease to be* directly *and* chiefly *treated? The usual remedies—turpentine, pomegranate,* oil *of fern, oily purgatives, &c.—have been tried in all shapes and forms.*"

Letters and communications have also been received from A Navy Surgeon; Democritus, Mr. Jackson; M D.; An M.R.C.S., Ireland; Incog., Liverpool; Medico-Chirurgus, An Advocate for Reform; Amicus; An Apprentice; Invalide; Mr. G. Maysey; A Surgeon in General Practice; Mr. H. Cottrell; A Dupe; A Student of the Edinburgh University; E. J., Piccadilly; Mr. T. Brown, Castle Donnington; Dr. F. Brittan, Clifton, Bristol; L. D., London; Mr. G. Corfe, Middlesex Hospital; A. W., London; J. A., Bury St. Edmunds; Chirurgus; A Subscriber from the Beginning; N. B., West-end.

American Patent.—Among the notices of recent American patents in "Newton's London Journal of Arts" is the following:—"To John Allen, of Cincinnati, Ohio, for a method of restoring the fulness or roundness to the cheeks. The patentee claims as his invention, and desires to secure by letters patent, restoring hollow cheeks to their natural contour and rotundity by means of metallic bulbs, formed, fitted to, and secured in the mouth by any suitable attachment between the jawbones and the cheek.

THE MEDICAL TIMES.

SATURDAY, JULY 3, 1847.

THE MEDICAL OFFICERS OF THE ARMY AND NAVY.

Good service is always entitled to reward, and that of such a kind as shall be in accordance with the principles of justice. In civilized communities the mere payment of money is not always an adequate compensation, there being a species of remuneration, honorary in its nature, yet pleasing to those to whom it is granted, because of the respect and veneration which always accompany it. Men are taken with names as well as things; and what society has, by its all-powerful fiat, invested with value, those who are benefactors to society are entitled to receive in return for their services. Governments, however, which are supposed to be influenced in their conduct by the communities over which they preside, do not always dispense their favours either wisely or justly. Wisdom is knowledge in action, and is manifested by the employment of the best means to accomplish the most desirable ends; while Justice consists in bestowing upon individuals that amount of reward which is proportioned to their deserts. Society is protected by brave and well-disciplined armies, and those whose skill in military tactics enables them to come off victorious in battle are entitled not only to a "lip service" from their countrymen, in the shape of thanks, but to the most substantial rewards which it is possible for a Government to bestow. In the distribution of them none should be exempt, though their efforts may have only contributed indirectly to successful results.

The strength and efficiency of an army depend greatly on the health of those who compose it; and the officers who watch over this, and are enabled by the knowledge which they possess to make efficient and useful soldiers of those who have been disabled in battle, ought surely to come in for no small share of the rewards which the people bestow. The skill of the medical officers of the army and navy has saved this country an immense expenditure of men and money; yet who ever heard of a coronet adorning the brow of a military or naval surgeon, or even a piece of ribbon, the badge of some order, decorating his button-hole? We are not of the number of those who would take honours from those who have won them: their merits add a lustre to the brilliant jewels which compose the stars of the several orders; but, while we feel pleased at their success, we are deeply grieved that the members of the medical profession in the service of the Government should be so lightly esteemed. "Right and obligation are reciprocal," observes Dr. Paley; and if, by the aid of professional skill, numbers of wounded have been healed, and, in climates where pestilence and death seem wafted on every breeze, the sick have been raised to health, who can justly dispute the surgeon's right to honours, and the obligation of the Government to bestow them upon him? It seems, however, that the Executive either does not understand the real worth of their medical officers, or that it is very unwilling to acknowledge and reward it. At the present time medals are preparing for the heroes

of the Sutlej; and the veterans who fought under the banner of "the Great Captain of the age" have a prospect of receiving still further proofs of a nation's gratitude, in the shape of increased pensions and additional decorations. They have found in the press, moreover, an advocate which has used its irresistible power to enforce their claims. But who has heard the voice of those members of the profession who re employed in the fleets and armies of the empire demanding some token of gratitude to be bestowed on them, or who among the senators or the press have pleaded their cause? Never can it be said that they have not as well and as faithfully served their country as those who are about to receive a decoration or a medal. In battle their dangers have been as imminent as other officers, and they would be utterly unfit to discharge the duties of attending the sick and wounded without, at least, an equal share of courage and deliberation. But we say that more is required; and it has been exhibited without the aid of those excitements which call into exercise martial courage. To enter into battle with all "the pomp and circumstance of war" requires but an ordinary amount of resolution; but in addition to the perils of the contest to have unceasing converse with human suffering in its most frightful forms, and to be saluted with the constant wail of the wounded and dying, would paralyze the energies of many of whose courage as soldiers none could entertain a doubt. The military and naval surgeons have, under the most trying circumstances of which it is possible to conceive, to pursue their avocations—that of repairing so far as is possible the injuries which the combatants receive in a sanguinary engagement. And yet, while thus employed, they are not permitted to anticipate the honours which are professedly bestowed on the brave and good. A wreath of laurel has never yet been plaited to encircle their brows, and among all the monuments which have been erected at the public expense in Westminster Abbey and St. Paul's, to the memory of those who perished in battle by sea or land, we know not of one to a member of the medical profession. And we are compelled to ask, why not? Let the Government answer that question; and if they are about now to withhold from their medical officers the medals and ribbons which are the insignia of honour, let them say if the profession has not done enough to deserve their consideration, or that the science of healing is of less consequence than the science of killing. It is to medical knowledge that we owe so much for mitigating the evils which war inevitably produces, and for discovering the means of holding in check those diseases which have caused more havoc by sea and land than the guns of an enemy.

But why should we wonder that the Government overlooks the claims of its military and naval officers, when it deliberately insults the latter as they first enter the service. Especial care is taken that they shall be well educated, for they must not only possess a diploma, but undergo an additional examination by the Director-General. When, however, they are first sent on board ship, they have to content themselves with the midshipman's berth, and they are actually denied the privileges which naval schoolmasters are permitted to enjoy. It is true that they *nominally* rank with lieutenants in the army, but their treatment is worse than that of many non-commissioned officers, being compelled to submit to the most wretched accommodation. Such treatment must not only damp the energies of an honourable-minded young man, but must check that intellectual cultivation which his profession requires, while it will bring into exercise a feeling of contempt towards him by the whole ship's company, which, perhaps, is never entirely removed. Such a state of things ought no longer to continue, and we trust that the profession generally will feel itself bound to use exertions on behalf of the assistant-surgeons of the navy.

No better time can present itself for medical officers in both the services to press upon the Executive their claims to honourable marks of distinction. Amongst them can be numbered men who have benefited their country as much as generals who have fought the most decisive battles, and won the most brilliant victories. Harvey, and Hunter, and Guthrie, are names which posterity will reverence, for their labours will confer blessings upon future generations. Let it not be supposed that Government can long resist the earnest, united, and fair demands of its meritorious officers: they have only to exercise firm and respectful solicitation to secure the object they have in view. A change has come over the spirit of the times; so that those who are placed in authority over us hearken to the voice of the public, and show a deference to its demands. Neither can the example of surrounding nations be lost upon our own country. They are beginning to acknowledge the medical profession as worthy of all honour, and upon its members in their service they bestow titles and rewards. This is wise policy, because the stimulus thus given to the medical staff will urge it to do everything to secure the approbation of those who have titles and rewards at their command. If the Government should, in the distribution of medals which is about to take place, pass by its medical officers, it will be an insult to one of the most deserving branches of the public service, and which ought to be resented by the profession generally. Their cause is ours, and we ought to stand by them in their efforts to obtain a share of that approbation which is so liberally accorded to other officers in the same service. We trust that those medical gentlemen who served in the actions for which the present marks of distinction are to be given, will urge their claims upon the Government; and it will be a high honour for it to admit those claims and reward them.

MEDICAL REMUNERATION.

The profession of this country has for a long time been agitated on the great subject of Reform—one which shall elevate its character, consolidate its energies, increase its usefulness, and advance its respectability. At the present time we are not in a position which commands those respectful feelings, either from the Government or the public, to which our calling is entitled. The surgeons of the army and navy are considered of too little importance to merit the rewards and honours of other officers in the service, and the general practitioners of the empire are treated by the managers of public institutions, and guardians of poor-law unions, as if their attendance upon the sick in eleemosynary institutions were of little value. If we look to the public hospitals of the United Kingdom, we find that their medical officers receive but an insignificant remuneration for the services which they render, while the surgeons employed in attending those who are paupers are paid such niggardly stipends as cannot fail to be injurious to the sick poor, and is certainly degrading to the medical community. These evils may be attributed in some measure to a want of union amongst the members of the profession, while their numbers are such as to produce so great a competition as greatly to reduce the value of their services. This latter circumstance may be attributed to the reprehensible conduct of corporations to whom the Executive has given the power of granting diplomas or certificates to practise the several branches of the profession. Instead of demanding a high standard of qualification, and of instituting a rigorous examination, inspired by the demon of cupidity, they have endeavoured to make diploma-mongering a profitable business to themselves at the expense of the honour and prosperity of the great body of medical practitioners. The consequence is that professional education has not attained that high standard which it ought, and many have been admitted within the pale of the profession whose principal recommendation has been an ability to pay the required fees for examination. Our corporations have been guilty of betraying the trust committed to their charge, and the consequence is a degrading and injurious competition amongst those who are authorized to practise the healing art.

The present condition of the medical practitioners in Ireland is one which cannot fail to enlist our sympathies in their behalf, and has called forth a powerful remonstrance from upwards of a thousand physicians and surgeons of that kingdom, which has been recently sent to the Lord Lieutenant. In England we find that the medical superintendence of extensive districts is undertaken for a sum which cannot remunerate the surgeon, and it is utterly impossible that the sick poor can receive that attention and those medicines which are absolutely necessary for their ultimate restoration to health. The guardians and the poor-law commissioners may endeavour to shield themselves from just opprobrium by placing upon the medical officer all responsibility; but if medical districts are too large, and medical attendants too ill paid, and as a consequence the poor neglected or improperly treated, we should like to know by what species of logic those who employ the surgeon, at a price for which they know he cannot possibly do justice to himself or his pauper patients, are to be exonerated from blame?

At Liverpool we have a specimen of the miserable working of this system. The guardians there determined to dispense with the services of the honorary medical officers of the parish, because they acted in accordance with the dictates of honour and humanity. The fault with which they are charged is not that of neglecting the poor, but of exhibiting too great a concern for their welfare. Their places, we find, are occupied by others, and the liberal sum of twenty shillings per week is allowed to one of the district medical officers for an additional assistant. Twenty shillings a week! for a man to employ his time and risk his life in attending upon the most frightful and contagious diseases—a mechanic can earn double the sum without incurring any of the danger. And can we wonder at the announcement which the *Liverpool Mercury* has made—that one of the assistants had been dismissed for being intoxicated, neglecting his patients, and giving away some of the parish tickets

for whisky? If there is degrading pay, who can wonder at degrading conduct?

But we have another sad specimen of the state of the profession, and the feeling of the public towards it, in the town of Liverpool. A correspondent there informs us "that an immense number of diplomas and testimonials for the vacant medical offices at the workhouse were received and laid upon the table, when the chairman sarcastically observed, that he thought the committee had better sit *de die in diem*. This announcement was received with a shout of laughter—the applications being so numerous as to be ridiculous in the eyes of these merchant and tradesman guardians. The derision which the pile of diplomas excited is a melancholy proof of the position of medical men. Among them, says our informant, are some gentlemen worthy of a destiny far better than that of a pound-a-week workhouse surgeon, who applied only to be received with laughter, whose claims will be regarded with contempt and who must in time probably be dismissed with the like consideration. It behoves the members of the medical profession to hold to themselves, and to demand such a measure of reform as shall enforce a liberal education and a stringent examination, or else they will sink still lower in public estimation.

STATE MEDICINE.

Lord Morpeth and the Government have deserved well of the medical profession by their recent efforts at sanitary reform. They have done much to establish the truth we have been so long teaching, that our body has in its utilities [illegible] of public service to the public, and have produced the conviction, that the public health is a commanding question which should be cared for in the same way as any other department of the public weal. This public invocation of our aid for social well being is the beginning, let us trust, of that new era wherein Governments will make it a higher glory to have introduced and infused one large social improvement which will remain for ever, effecting the happiness of unborn generations, than to have achieved a hundred victories in the warfare of mere party politics.

We cannot urge on our medical brethren too warmly the duty of supporting Lord Morpeth in these first steps that Governments have made towards recognising the large state utilities of our profession, investing us with a social importance of at least as much service to the public as of distinction to us.

Lord Morpeth's Town Improvement Clauses Act, which has just received the royal assent, contains the following provision, which medical men should [illegible]:—

"The commissioners [illegible] person, by the title of [illegible] permitted and enter [illegible] duties to be [illegible] under this or the special act [illegible] commission is [illegible] the provisions of this or the special act [illegible] therewith, or of the by-laws [illegible] tions of the commissioners [illegible] of any nuisances within the [illegible] special act, and the commissioners [illegible] publish the name of any inspector [illegible] appointed by them, and shall require him to [illegible] and keep a book in which shall be entered all reasonable complaints made by any inhabitant of the district within the limits of the [illegible] of any breach of the provisions of this [illegible] act, or of any act incorporated [illegible] the by-laws, rules, and regulations [illegible] commissioners for the preservation [illegible] and cleanliness, or for the suppression of nuisances; and the inspector of nuisances shall forthwith inquire into the truth of such complaints, and report upon the same to the commissioners at their next meeting; and such report and the orders of the commissioners thereon shall be entered in the said book, which shall be kept at the office of the commissioners, and shall be open at all reasonable times to the inspection of any inhabitant of the said district or other person interested, and it shall be the duty of such inspector of nuisances, subject to the direction of the commissioners, to make complaints before justices, and take legal proceedings for the punishment of any person who has committed any offence under this or the special act, or under any by-law made by virtue thereof.

"The commissioners may, if they think fit, appoint, subject to the [illegible] approval, or, where no approval is pr[illegible]ed, subject to the approval of one of her Majesty's principal Secretaries of State, a person of competent skill and experience, who shall be styled 'the officer of health,' whose duty it shall be to ascertain the existence of diseases within the limits of the special act, especially epidemics and contagious diseases, and to point out the nuisances or other local causes likely to cause and continue such diseases, or otherwise injure the health of the inhabitants, and to point out the best means for checking or preventing the spread of such diseases within the limits aforesaid, and also the best means for the ventilation of churches, chapels, schools, registered lodging-houses, and other public buildings within the limits aforesaid, and from time to time as required by the commissioners to report to them upon the matters aforesaid, and to perform any other [illegible] which may be required of him, and the commissioners, with the [illegible] approval [illegible] the officer of health [illegible] such officer [illegible] out of the rates to be levied under this or the special act, and the commissioners, with the like approval, may dismiss such officer, or remove any such officer of health.

"The Health of Towns Bill, [illegible] amended in committee, now before Parliament, contains the following clauses which also should be generally known:—

"Be it enacted, by the Queen's most excellent Majesty, by and with the advice and consent of the Lords spiritual and temporal, and Commons, in this present Parliament assembled, and by the authority of the same that it shall be lawful for her Majesty, by warrant under the royal sign manual, to appoint four persons to be, with the first commissioner for the time being of her Majesty's Woods and Forests, Land Revenues, Works, and Buildings, commissioners for superintending the execution of this act, and from time to time at her pleasure, to remove all or any of the commissioners so appointed, and to appoint others in their stead, and the said commissioners shall be styled 'the commissioners of health and public works,' and the first commissioner of her Majesty's Woods and Forests, Land Revenues, Works, and Buildings shall be the president of the said commissioners.

"And [illegible] the commissioners of health and public works [illegible] from time to time appoint, and at their pleasure remove, such superintending inspectors, and also a secretary and such clerks and servants as they, subject to the approval of the commissioners of her Majesty's Treasury, shall deem necessary, and the persons so appointed shall assist in carrying this act into execution at such places and in such manner as the said commissioners shall direct."

"And be it enacted, that the said commissioners of health and public works, as they shall see fit, may cause inquiry to be made into the condition of any town or district in England, especially with regard to the supply of water and drainage thereof, and the best means of improving the same, the prevalent causes of disease therein, and any other matters which they shall [illegible] to know for enabling them to report to her Majesty whether or not this act ought to be put in force within such town or district."

"And be it enacted, that it shall be lawful for the councils or town commissioners to appoint out of their own body from time to time such and so many committees, either of a general or special nature, and consisting of such number of persons as they may think fit for any purposes in the execution of this act, which in the discretion of the said councils or town commissioners respectively would be better regulated and managed by means of such committees: provided always, that the acts of every such committee shall be submitted to the council or town commissioners for their approval."

"And be it enacted, that the council or town commissioners shall from time to time appoint, subject to the approval of the commissioners of health and public works, one or more physicians or surgeons to be officers of health for their town; and the provisions of the Town Improvement Clauses Act, 1847, with respect to the officers of health thereby authorized to be appointed, shall apply to every officer of health so appointed."

"And be it enacted, that the inspectors shall from time to time, as directed by the commissioners of health and public works, visit any town, district or place and view and take cognizance of all things done or omitted to be done by the councils or town commissioners in execution of this act, or by the council of any corporate town, or any commissioners or trustees acting under the powers of any act of Parliament for paving, cleansing, improving, sewering, or draining any place, and of all works in progress and completed, and of all rates made and assessed, and of all expenses incurred or omitted to be incurred, and of all by-laws, rules, and regulations made by such councils or town commissioners or trustees, or such of them as he shall have been directed to view and take cognizance of by the commissioners of health and public works, and shall attend and inquire into any complaints or objections made by the inhabitants of any town, district, or place, as to the manner of the execution of any works or intended works, or as to the existence of any nuisances, and as to any of the proceedings of the councils, town commissioners, or trustees with reference to the purposes of this act, and shall from time to time report to the commissioners of health and public works the proceedings of any such councils, town commissioners, or trustees, and as to the condition of any town, district, or place, and on any other matters relating thereto, in such manner as the commissioners of health and public works may direct."

POISONING BY HYDROCYANIC ACID.

We noticed a short time since the death of Mr. Shepherd, surgeon, of Worcester, in consequence of having taken prussic acid. The case is interesting in a medico-legal point of view, inasmuch as there was both consciousness and volition after swallowing the poison, and death, so far as could be ascertained, was not preceded with any convulsions or the shriek. The deceased, after purchasing the acid of the chemist, walked into his back parlour, whither he was followed within two minutes, but the acid had been swallowed, which amounted to two drachms of Scheele's strength, and he retained for some minutes the perfect use of his faculties, and then quietly expired. As the quantity of acid measured out to the deceased was known, and as he was seen to drink it out of the bottle, it became desirable to ascertain its strength, which was accordingly done by Mr. Alfred Taylor, and it was found to be 1.9 per cent or 2 per cent. The following is an account of the *post-mortem* examination, conducted by Mr Pierpoint:—

"Countenance (particularly the lips) livid, neck, shoulders, and all the posterior part of the trunk, purple. On dividing the integuments, dark blood flowed freely; the blood of the body universally dark and quite fluid; the lungs loaded with dark blood, which had to a considerable extent gravitated to their posterior portion. The right auricle and right ventricle of the heart, and vena cava, full of dark fluid blood; the left ventricle firmly contracted and quite empty. Five out of six gentlemen did not perceive any

odour of prussic acid upon approaching the body, either before or after it was opened. All the abdominal viscera healthy, urinary bladder half full of urine, which exhaled no unusual odour, brain natural, but full of fluid blood. The stomach contained about one ounce of a raspberry-coloured looking fluid, and had a strong smell of almonds, the stomach itself, particularly at its cardiac extremity, had a very vascular appearance, and in some of the patches oozing of blood had evidently taken place. Some of the patches had also a brownish appearance."

THE CAW-ME CAW-THEE SOCIETY.

"*Conceits in him*
Where Crows I sit to ..."

At an annual meeting of the Suffolk and Norfolk branch of the Provincial Association, the worthy president (W. H. Crowfoot) is reported to have looked round the assembly on seventeen members, and to have expressed his gratification in seeing—

"So many of the members of the association and their friends around him, for they had probably all seen the course and unprovoked attack which had been made on the council of the association by the *Medical Times*, and they would now be able to form their own opinions as to the character of our proceedings. To the accusation that the association had not strenuously supported the cause of Medical Reform, he would reply that he should be glad if it were so. (Cheers.) The society was not founded for political purposes."

This worthy President Crowfoot's argument may apparently with a peculiar aptitude [illegible]. Even the presence of such a [illegible] common sense as Mr. Cross cannot [illegible] him away from [illegible] Whilst [illegible] letters of our classical correspondent "Vox Veritatis," [illegible] humble propensities—"*caws*". The [illegible] of seventeen members out of two counties to extort wonder is "*so many!*" [illegible] are too gauntly with these seventeen members [illegible] mate of the character of the [illegible] at *Worcester*! Finally, he *repeats* that the association has done nothing for Medical "*Reform*!" and that it was not formed for political purposes! though at that very meeting resolutions and petitions are passed under his presidentship in favour of the Registration Bill! [In the last matter it is, perhaps, right; such petitions and resolutions are certainly doing nothing *for* Medical Reform!]

We instinctively have some suspicion about the accurate judgment of a gentleman who, reading the *Medical Times*, offers to us opposite opinions; it is, we flatter ourselves, a dangerous presumption that a man has *our* recorded conviction against him: we know no step more perilous in the way of proving a man a blockhead. What, then, shall we say of a person, like this Monsieur Corbeau, differing with us so modestly, and cawing out those differences so consistently and rationally? What but this—Print his nonsense, and leave him and it to the parallel insignificance both so well vindicate.

DR. JORDAN ROCHE LYNCH.

We regret to announce the death of this talented medical practitioner. The event took place at his house, in Farringdon-street, on the 2nd ult., after a short illness (malignant sore throat) of two days' duration.

The deceased, besides being known as an M.D., was a licentiate of the Society of Apothecaries, and a member of the College of Surgeons.

For years past he had taken a very active part in the politics of one of the City wards, and consequently was elected a poor-law surgeon to one of the districts, and subsequently a common councilman. In the latter position a rather celebrated quarrel took place between him and a very well known author (connected also with [illegible] Carpenter), and in the course of the literary [illegible], several charges were publicly exchanged [illegible], which we need not further advert to.

Dr. Lynch's [illegible] connection with Medical Reform [illegible] from the very prominent part he took in the founding of the Medical Protection Assembly, great hopes were formed that he would reach considerable eminence in his advocacy of that cause. It is [illegible] to say that these hopes were never [illegible], one perhaps principal obstacle being the circumstance attending his breach with the conductors of the *Medical Times*: circumstances which we have good reason to believe were subsequently a subject of considerable regret with Dr. Lynch himself. It [illegible] to add that Dr. Lynch's abilities were in some part of the very highest order [illegible] power of [illegible] very [illegible] his perception [illegible] remarkably quick and happy [illegible] command of [illegible] employed [illegible] tinctured with [illegible] classes, with which he was [illegible] With [illegible] comprehensive judgment, [illegible] possessed every quality [illegible] brilliant public career.

[illegible]

[illegible]

[illegible] Majesty [illegible] Newport, Esq. [illegible]

It is well [illegible] Mr. Newport [illegible] physi[illegible] "In [illegible] are fully aware [illegible] the reward of scientific [illegible] a great [illegible] to some of the [illegible] at present [illegible] circumstance [illegible] which [illegible] Lord John Russell [illegible] pressed his [illegible] letter announcing her Majesty's gracious intentions. [illegible] testimony had been wanting [illegible] Mr. Newport's merits, it was certainly afforded, on Tuesday last, at Oxford, when the [illegible] Professor of [illegible], Dr. Milne Edwards [illegible] Mr. Newport to be the [illegible] European authority on the subject of the [illegible] physiology of the invertebrata.

EDINBURGH ROYAL INFIRMARY.

[To the Editor of the Medical Times.]

Sir,—In the *Medical Times* of Saturday last the following statement is made respecting the Edinburgh Royal Infirmary:—"We learn that a form of [illegible] resembling this very formidable disease [hospital gangrene] has appeared in the wards of this institution. It has already all but cleared out some of the wards."

The managers of the Royal Infirmary, having had their attention called to this statement, have instructed me to request that you will take the earliest opportunity of giving it the most complete and unqualified contradiction.

I am, Sir, your most obedient servant,
Alexander M'Dougall, Treasurer.
Edinburgh Royal Infirmary, June 21.

REPRESENTATION OF THE PHYSICIANS AND SURGEONS OF IRELAND TO THE LORD LIEUTENANT, IN REFERENCE TO THE MEDICAL PROFESSION.

[To the Editor of the Medical Times.]

Sir,—I enclose you a copy of a representation which has this day been sent to the Lord Lieutenant of Ireland, signed by 1050 physicians and surgeons in this kingdom, and I entreat your kind support of it in the *Medical Times*.

I am, faithfully,
W. R. Wilde.
15, Westland-row, Dublin, June 23.

"Dublin, 15, Westland-row, June 10, 1847.

"Sir,—We beg leave to call your special attention to the accompanying representation, and to request that, should it meet your views, you will, without delay, affix your signature to it and return it as directed on the other side, you will also be good enough to procure the signatures of such practitioners in your neighbourhood as may not have received this circular.

"We remain, Sir, your obedient servants,
"John Moylan,
"R. C. Williams,
"W. R. Wilde."

TO HIS EXCELLENCY GEORGE WILLIAM FREDERICK, EARL OF CLARENDON, LORD LIEUTENANT [illegible] GENERAL GOVERNOR OF IRELAND.

"May it please your Excellency,—We, the undersigned physicians and surgeons in Ireland, [illegible] respectfully to represent to your [illegible] that [illegible] members of the medical [illegible] frequently called upon [illegible] professional duties for the [illegible] community at large, and that the [illegible] efficiency with which those duties are [illegible], together with their importance to the public welfare, [illegible] entitle that profession to the protection and support of the Government.

"It is right to draw your Excellency's attention to the fact, that statistical returns, for upwards of twenty-five years, exhibit a fearful mortality [illegible] medical men of this country [illegible] recent events have shown that from the same cause we have to deplore the loss of many of the best and most efficient practitioners, who contracted typhus fever in the discharge of their duties among the sick poor.

"[illegible] members of the medical profession [illegible] to complain that they [illegible] injustice when employed in [illegible] service, as in some instances, from the imperfection of existing laws, medical practitioners are denied any remuneration whatever for their services, or are constrained to accept sums utterly disproportionate to the duties they are compelled to discharge; while in other cases, where the amount of remuneration is left to the direction of Government, or to the award of [illegible] in public departments, it is often unjustly and degradingly inadequate.

"We most strongly but respectfully protest against the amount of remuneration offered by the Board of Health to physicians and surgeons for attending fever hospitals during the present epidemic, as, in some instances, five shillings per day have been offered by the Board of Health for the discharge of that onerous, responsible, and dangerous duty.

"We need not enlarge on the importance and value of the services rendered to the country by the medical attendants of fever hospitals, neither does it seem necessary to do more than suggest that insufficient and degrading remuneration for professional services cannot fail to injuriously affect the public interests, and we confidently trust that your Excellency will take such steps, as may in your Excellency's wisdom seem fit, to remove those grievances, and cause such remuneration to be awarded to the medical officers of fever hospitals and fever districts, as may be commensurate with the great value and importance of the duties required of them."

THE NATIONAL INSTITUTE OF MEDICINE, SURGERY, AND MIDWIFERY.

The National Institute is established in accordance with the following resolution, carried unanimously, at a general meeting of the members of the National Association of General Practitioners of Medicine, Surgery, and Midwifery, held at the Hanover-square Rooms on the 12th day of August, 1846, viz. :—

"That this meeting hereby declares the formation of a 'National Institute of Medicine, Surgery, and Midwifery,' upon the plan approved by the meeting of the National Association, held at the Hanover-square Rooms on the 17th of April, 1846, and with the objects recited in the report just read. That the Institute consist of those gentlemen who have already signified their intention to co-operate in the formation of the same, with such other qualified practitioners as may join within the specified time, or who may become members in accordance with the future arrangements of a regularly-constituted Council."

THE OBJECTS OF THE INSTITUTE.

The objects which the National Institute is established to promote, are—

1st. The cultivation and advancement of the art and science of medicine, surgery, and midwifery, and of the sciences ancillary thereto.

2nd. The establishment of a high standard of education and qualification, with a satisfactory test, by efficient examinations, for every individual authorized, by law, to practise medicine, surgery, and midwifery.

3rd. The registration of all the qualified practitioners of medicine in actual practice in this country, and the suppression of unlawful and unqualified practice.

4th. The introduction of the elective principle in the appointment of the governing councils of the corporate institutions of the profession.

5th. The encouragement of friendly intercourse and social concord among the various members of the profession, and especially among the class of general practitioners.

6th. The maintenance of the interests, social respectability, and professional status of the general practitioners, and the amendment of the conflicting laws that now operate so injuriously to the repose and welfare of all classes of the profession.

7th. The formation of a body competent to negociate with the Government, in the event of the Right Hon the Secretary of State determining to grant the general practitioners a Charter of Incorporation.

In order to carry out the foregoing objects, it is proposed :—

1st. To adopt a comprehensive and well-considered code of by-laws for the government of the Institution, calculated to produce harmony of sentiment and unity of action among the members, and to discourage, as far as practicable, discreditable acts in connection with the practice of medicine.

2nd. In the absence of any legal registration, to publish, or to further the publication, on authority, of a complete register of the qualified practitioners in actual practice.

3rd. To form a library for circulation among the members of the Institute.

4th. To collect a museum of general and pathological anatomy.

5th. To publish transactions, as occasion may require, acquainting the members with the nature and bearings of any legislative changes that may be proposed, and giving them such information of the proceedings of the Institute as may be deemed interesting or useful.

6th. To open reading and lecture rooms.

7th. To institute prize essays and public examinations on specific subjects; and, by such means, to enlist the zeal and ability of the great body of the profession in the cause of medical and general science.

8th. To urge upon the Government the claims of the general practitioners to corporate rights, and to their establishment in an independent collegiate institution.

CONSTITUTION.—BY-LAWS.

CHAPTER I.

OF THE CONSTITUTION OF THE INSTITUTE.

1. The Institute shall consist of a president, three vice-presidents, a council, members, honorary members, and corresponding members.

2. The members shall be composed of gentlemen who were in actual practice previous to the 1st of August, 1815; licentiates of the Society of Apothecaries; members of the Royal College of Surgeons in England, Ireland, or Scotland, and masters of surgery; doctors or bachelors of medicine of any university of the United Kingdom, and fellows or licentiates of any college of physicians, or members of any faculty of medicine, in the United Kingdom, who shall have been in actual practice as general practitioners in medicine, surgery, and midwifery; or who shall satisfy the council of their qualifications to practise in medicine, surgery, and midwifery.

3. Each member residing within ten miles of the General Post-office, London, shall be enrolled as a metropolitan member, and each member residing beyond that distance shall be enrolled as a provincial member, of the Institute; and wherever any part of a town is within ten miles of the General Post office, it shall be understood that the whole of such town is within the metropolitan district.

4. Each member shall be entitled to a vote in the election of the council.

5. The honorary members shall not exceed twenty; the corresponding members may be elected at the discretion of the council; but neither honorary nor corresponding members shall be entitled to vote in the election of the council.

6. The council shall consist of a president, three vice-presidents, trustees, treasurers, and forty-eight other members; one-half of the latter shall be practitioners resident within ten miles of the General Post-office, the other half, country practitioners, resident beyond that distance. One third of the metropolitan and one-third of the provincial branches of the council, exclusive of the trustees and treasurers, to go out of office annually, and the vacancies to be be filled up in equal proportions from the respective branches, but the retiring members not to be re-eligible for a year.

7. The president shall be elected by the members of the Institute triennially at a general meeting, and shall be eligible for re-election.

8. The vice-presidents shall be elected by the council from their own body, by ballot. One shall go out every year, and shall not not be re-eligible for a year. The election of vice president shall take place at the last quarterly meeting of the council previous to the election of the council for the ensuing year; and at the said meeting the number of vacancies to be filled up shall be declared.

CHAPTER II.

BY LAWS OF THE COUNCIL.

1. The council are empowered to appoint committees for the transaction of special business, to employ such stipendiary officers and servants as may appear necessary, and remove or discharge them; and generally to make such arrangements and issue such orders, not inconsistent with the principles of the Institute and the by-laws herein appointed, as they may deem best calculated to promote the objects of the Institute.

2. The election of the new members of the council shall take place in the month of August of each year, and shall be declared within ten days after the report of the scrutineers.

3. The election shall be conducted by voting papers, in which the names of all candidates for the council shall be printed. The voting papers shall be sent to the members of the Institute ten days prior to the day appointed for the election, and the members who cannot vote in person shall return their voting papers, unsigned, but authenticated by writing their names on the cover. Any voting paper containing more names than there may be vacancies shall be invalid.

4. No member shall be eligible as a candidate for the office of councillor unless he shall have been recommended by at least two members of the Institute, and unless his name shall have been sent in to the secretary on or before the 31st day of July.

5. No member interested in the sale of any nostrum, or specific remedy, or keeping a shop for the retail of drugs, shall be eligible as a member of the council.

6. The names of the proposed new members of the council, together with the names of the retiring members, shall be read at the annual meeting.

7. Two or more members of the Institute shall be appointed by the members present at the annual meeting to act as scrutineers of the election, who shall report the result of the same to the council.

8. The election shall be decided in favour of those names having a majority of votes; and in case of any two or more members being at the end of the list of the majority, having an equality of votes, the election shall be decided by lot.

9. The names of the retiring members of the first council shall be determined by the number of their attendances at the meetings of the council. Those members whose attendances have been the least during the past year being the first to vacate their seats. Subsequently the vacancies shall occur by rotation; and in case of any greater number than eight, either in the metropolitan or provincial list, having been elected to the council in any year, when the period shall arrive for such members, or any one or more of such members, to vacate their seats, the vacancies shall be determined by the number of attendances as in the first instance

10. Any metropolitan member omitting to attend a meeting of the council or of a committee, for the space of nine months, and any provincial member omitting to attend a meeting of the council or of a committee, or a general meeting of the members, for the period of twelve months, shall be disqualified to continue a member of the council.

CHAPTER III.

OF THE MEMBERS.

1. No member of the profession who shall have received his certificate, diploma, or degree, subsequently to the passing of these by-laws, shall be admitted a member of the Institute, unless he can produce certificates of his proficiency, both in medicine and surgery, from some recognised institution or institutions, in the United Kingdom, empowered by act of Parliament or royal charter to grant the same, or shall give satisfactory evidence to the council of his proficiency to practise medicine and surgery.

2. Every candidate for admission as a member of the Institute shall send in his name to the secretary, together with his address and qualifications, at least fourteen days before the next ensuing quarterly meeting of the council.

3. The annual payment from a member shall be one guinea, payable in advance, and such payment shall be considered due on the 1st day of August; and in case of the admission of a member subsequently to that date, his payment for that current year shall be considered due so soon as he shall have received a letter from the secretary informing him of his admission.

4. The members shall be entitled to the use of the books of the library, and to access thereto, to admission to the museum, and to all such meetings for the delivery of lectures, as the council may appoint to be holden.

5. No proprietor nor vender of any empirical nostrum can be admitted as a member of the Institute.

6. If any member shall not have paid his annual contribution within three months from

the period of its being due, the secretary shall be required to write to such member, informing him of the same, and if he shall not forward his annual contribution to the secretary within one month from the date of such letter, he shall not be entitled, *ipso facto*, to any of the privileges of membership

7 The council to be empowered to investigate such charges that might be brought against any member of the Institute, together with such defence as he may be disposed to submit, and in the event of its being found that his conduct had been calculated to bring reproach upon his professional character, the council shall be authorized to remove the name of such person from the rolls of the Institute, having first informed him of the result of such investigation, and if, within three weeks after receiving such notice, the said member should in writing demand an appeal from the decision of the council, a committee shall be formed consisting of twelve—one half to be members of the council, and the other half chosen by the person accused from the members of the Institute and, in the event of such an appeal not being demanded within the specified time, such members shall *ipso facto*, cease to be a member of the Institute

8 The council shall be empowered to recommend to any general meeting the appointment of honorary members of the Institute, who may be gentlemen, eminently distinguished in the sciences connected with medicine, but not of the medical profession

9 Foreign members of the profession, who have highly distinguished themselves by their writings or labours, may be admitted by the council as corresponding members of the Institute

CHAPTER IV

OF THE GENERAL MEETINGS

1 The annual general meeting shall be held on the second Wednesday in August, when the report of the council on the state of the Institute shall be read, the names of the retiring members of the council and of the new candidates declared, and such other business undertaken as shall have been specified in the notices issued to the members

2 Notice of the general meeting shall be given to the members at least four clear days previously

3 No member shall be at liberty to propose a motion, unless notice shall have been given in writing to the council at least three weeks prior to the holding of the meeting, and the council shall upon the receipt of such notice, communicate the same to the members in their circular summons

4 Notice of any new by law, or of an alteration of a by law, shall be given to the council, in writing, at least three weeks prior to their quarterly meeting immediately preceding the general meeting and the council shall make known the said notice of motion to the members as in other cases

5 The president and council shall be empowered to summon a special general meeting, when they may consider it expedient, giving due notice of the same

6 All questions (other than those having reference to the by laws) put to the vote shall be determined by a show of hands, and shall be decided by a majority of members then present, and in case of an equality of votes, the president shall have a second or casting vote

7 No motion to form a new by-law, or to alter or revoke a by-law, shall be carried unless two-thirds of the members then present vote in its favour

8. A special general meeting shall be convened on a written requisition to the council, signed by twenty one members, specifying the business to be brought forward Such meeting shall take place within one month from the delivery of such requisition

CHAPTER V

OF THE MEETINGS OF THE COUNCIL

1 The council shall meet at the offices (or house) of the Institute at least once in every three months, and the secretary shall issue a summons to each member at least one week prior to the holding of the meeting

2 The summons sent to the members shall give notice of the business to be brought before the meeting.

3 A special meeting shall be called upon the written requisition of five members addressed to the secretary

4. Nine members shall form a quorum

5 All questions shall be decided by a majority of votes; and in case of an equality of votes, the chairman shall have a second or casting vote

6 The postponement of any motion then under discussion at any meeting of the council (excepting the meeting immediately preceding the general meeting), to ascertain the opinion of the absent members thereupon shall be allowed provided that a [illegible] members are agreed thereto

7 The meetings of the council shall be continued by adjournment

CHAPTER VI

OF THE COMMITTEES

1 The committees appointed for special business shall be composed of an equal number of metropolitan and provincial members

2 In order to avoid the necessity of the frequent attendance of the provincial members of the committees the metropolitan members shall correspond, when necessary, with the provincial members to ascertain their opinion on questions then under discussion

Each committee shall consider and determine when it has made its report on the business which it was appointed to transact and if, in any case, such report shall not have been made, such committee shall notwithstanding, cease on the 1st day of July, in each year any such committee however, shall continue to act provisionally until a new committee shall be appointed

CHAPTER VII.

OF THE ELECTION OF THE OFFICERS

1 The treasurers and auditors shall be annually elected by the members, at their general meeting, held on the second Wednesday in August, and they shall be re-eligible to their several offices The trustees shall be elected in like manner as vacancies may occur

2 The council shall forthwith fill up provisionally any vacancy in the office of trustee, treasurer, or auditor which may occur antecedent to a general meeting

3 The council shall also appoint, at their first meeting after the annual general meeting, a secretary, librarian and curator and such other officers as they may deem necessary to conduct the business of the Institute

CHAPTER VIII

THE PRESIDENT AND VICE PRESIDENTS

1 The president shall take the chair at all the general meetings and meetings of the council and regulate the business of such meetings, he shall put every question to the vote, according to the intention of the mover he shall cause the rules and by laws of the Institute to be duly observed, and shall sign the minutes of all meetings, in authentication of their correctness

2 In the absence of the president, one of the vice presidents, or, in their absence, a member, elected by the members then present, shall preside at the general meetings and the meetings of the council, and perform all such duties as would otherwise devolve upon the president

THE TRUSTEES

3 There shall be four trustees elected for life, who shall hold in trust the funds and securities of the Institute vested in them shall pay into the hands of the treasurers all dividends and interest arising therefrom and shall dispose of the funds securities and property of the Institute intrusted to them in accordance with the instructions of the council

THE TREASURERS

4. There shall be two treasurers, who shall receive on account, and for the use of the Institute, all sums of money due to the Institute, and shall pay from the moneys in their possession all sums due from the Institute, upon order of the council at any regularly convened meeting, such orders being signed by three members then present.

5 They shall keep proper books of accounts, with vouchers of expenditure, and shall give all receipts in a prescribed printed form

6 Such funds as may not be required by the treasurers for immediate use, shall be vested in the name of the trustees in Government or other securities, as the council may direct

THE AUDITORS

7 The auditors shall annually examine the accounts of the Institute, and present a report of the same to the council.

THE SECRETARY.

8 The duties of the secretary shall be to attend the general meetings, the meetings of the council, and the meetings of the several committees, also to keep the minutes of the said meetings to summon all meetings in conformity with these by laws, to receive correspondence and to communicate with the members, to prepare all public documents and reports under the instructions of the council or the committees appointed to transact the business to which they may relate, and also to order all goods and hire such service, under the direction of the council, as may be required for the business of the Institute That the secretary be required to attend or provide an efficient substitute, from ten to four daily

THE LIBRARIAN.

9 The librarian shall prepare and adjust the catalogue and attend to the regular circulation of the books, he shall call them in once a year, to ascertain their condition, and collect the fines for their detention, injury, or loss, and generally carry out the business of the library. He shall attend from nine to four o clock daily

THE CURATOR

10 The curator shall keep a correct catalogue of the preparations in the museum, duly record all donations, superintend the arrangement and putting up of the preparations, and keep all the proper books for such purposes He shall be required to be in attendance from nine to four o clock daily

CHAPTER IX

OF THE DONATIONS

1 The name of every donor of money, books, or other property to the Institute, shall be entered on the minutes and recorded in a proper register In the case of books, and of pathological and anatomical specimens, the name of the donor shall, whenever practicable, be placed thereon

CHAPTER X

OF THE LIBRARY

1 The library shall be under the general management of the council, who shall be empowered to appoint a librarian, to purchase books and to make such arrangements to increase the efficiency of the library as they may deem proper.

2 A catalogue shall be kept in which the title of each book, edition, with a proper description of its size and place of publication, shall be duly registered

3 Each book presented to the Institute shall have the name of the donor placed therein, which shall be also recorded in a book kept for that purpose

4 Tickets shall be printed leaving blank spaces to be filled up with the description of the book applied for, and duly signed and dated by the applicant, which ticket shall be placed in the hands of the librarian, and returned to the reader when the book is replaced In the case of provincial members, a written application alone shall be deemed sufficient

5 The library shall be open every day (Sundays excepted), from nine o clock a m to ten p m

6 The books of the Institute shall be circulated among the members under the direction of the council, but each publication shall remain on the library table at least one month before it is allowed to circulate among the members.

7. Each metropolitan member shall be allowed to receive any book or books (being within the number specified in the 10th Regulation), and to keep it in his possession for seven days, but if detained for a longer period, shall be subject to a fine of 1d. per vol. per day for each additional day that it may be detained, unless he shall have obtained from the librarian permission for an extension of time.

8. Each provincial member shall be required to state the manner in which he wishes his books to be transmitted, and shall be allowed to keep a book in his possession fourteen days, dating from the day of its issue by the librarian, and shall be subject to a fine of 1d. per vol. per day for each additional day that it may be detained, unless the requisite permission has been obtained. The expense of the carriage of all books shall be defrayed by the member borrowing the same.

9. No further issue of books shall be allowed to any member incurring a fine for the detention, injury, or loss of books, until such fine has been discharged.

10. That not more than four vols. shall be allowed to be in the possession of a metropolitan member, and not more than eight vols. in the possession of a provincial member at the same time.

11. The member borrowing a book shall be answerable for its full value, if lost or injured; the liability of the member shall date from the period of its issue by the librarian.

12. The mode of collecting the fines in the case of metropolitan members to be determined by the council.

13. A book shall be kept, in which any metropolitan member may write the name of such books as he may wish to be purchased for the library. Any provincial member shall be allowed to recommend any such book by letter, and the said recommendation shall be taken into consideration by the council.

CHAPTER XI.

OF THE MUSEUM.

1. The council to be empowered to purchase anatomical and pathological preparations, and to receive donations of the same, for the purpose of forming a museum; they may also appoint a curator, and make all other arrangements, as necessary for the maintenance of the museum.

2. A catalogue, descriptive of the preparations, shall be duly kept.

3. No preparation shall be allowed to be removed from the museum, or house of the Institute, without an express order from the council.

GOSSIP OF THE WEEK.

JACKSONIAN PRIZE.—The Council of the Royal College of Surgeons has very recently awarded to Dr. Hulme of Exeter, the Jacksonian prize, for his treatise on Asphyxia.

TYPHUS FEVER.—This disease prevails at Bristol, Newport and other places on that coast, in consequence of the influx of Irish poor. The fever is also raging at Oldham, and in various other towns in Lancashire. At Liverpool, a large building is about to be converted into a fever hospital capable of holding 2000 patients.

NAVAL APPOINTMENTS.—Surgeon H. Jameson, to the Sir Joseph ...—Assist.-Surgeons D. Carter, to the Victory; H. S..., to the Caledonia; H. Crocker, to the S... ... convict ship; E. Pearce, to the ... ... Brown, to the Minos, steam-vessels, on the Lakes of Canada.

The students of the Royal Veterinary College have recently paid to Professor S... ... a most gratifying tribute of respect ... ... appreciation of his instruction ... ... the present session, and of his ... ... character. Mr. G. T. Brown and Mr. Cu... ... each represented the sentiments of the students in an appropriate address, the former presenting the testimonial, elegantly written on vellum and richly framed.

REGISTRATION OF BIRTHS IN EGYPT.—The Egyptian Government has decided that the inhabitants of each village shall be bound to deliver every month to the collector of taxes, an account of all the children born among the inhabitants since his last visit, in order that ... ... to establish a regular ... ... the country.

ROYAL FREE HOSPITAL.—The annual dinner of this charity (to the committee) took place the other day. Mr. Thomas Wakley, in a post-prandial oration, admitted that his hostility to it had recently undergone a change, as a proof of which he had accepted a share in it pecuniary management with Dr. Marsden and Mr. Packman, and his son had not refused an appointment to it as surgeon. The "charity" is now ... to be in ... flourishing a condition as its excellent management would seem to deserve.

THE POTATO DISEASE.—The French Government has ordered that scientific men in all the departments shall examine microscopically, every fortnight, the growing potatoes in the several districts, with a view to discover at the point ... ... the disease, ...

MANCHESTER ROYAL INFIRMARY.—The trustees have appointed ... ... surgeon ... ... of the out-patients of ... ... and ... ... the surgical ... patients ... Mr. W. Smith, Mr. A. W. D... ... and Mr. G. Southam.

OXFORD.—The following degrees were conferred at the University, June 1:—... ... ... Master ... ... Bachelor ... ...

CAMBRIDGE.—The following degrees were conferred June 11:—Doctor in Medicine ... W. Cohen, ... Bachelor ... ... D. White, St. Peter's; A. W. Pulley, D. B. Kendall, ... and Caius.

The authorities of the Leicester Infirmary have increased the number of medical officers from two physicians and two surgeons, to three physicians and three surgeons. In a conversation which then followed, any imputation on the conduct of the present medical officers was disclaimed by all parties.

Dr. Jephson has remitted to the General Medical Annuity Fund, Newport Pagnell, his munificent donation of one hundred guineas.

ROYAL COLLEGE OF PHYSICIANS.—The Conde de Montemolin, accompanied by the Chevalier de Borah and General Montenegro, honoured the president and fellows of the College by his presence with his company on Saturday, to hear the Harveian oration, which was delivered by Dr. Southey. The Conde was received at the foot of the staircase by the president, Dr. Paris, and the fellows, in full academical costume. After the oration, the party inspected the valuable collection of medical portraits belonging to the college.

We read in the *Gazette of Metz* that typhus fever has made great devastation in the environs of Nancy. The village of Maxeville ... ... where whole families have been seized with it, and lost several members in the course of a few days.

M. Ricord is about to be appointed a member of the Academy of Medicine at Stockholm, and Chevalier of the order of Gustavus of Wasa.

The *Courrier de la Moselle* reports that an affection which appears to partake of the nature of typhus fever and scurvy had just appeared amongst the troops in the garrison de Givet, Ardennes. Dr. Scoutetten, principal surgeon belonging to the School of Application of Metz, has received from the Minister of War an order to repair immediately to Givet to study the causes of this affection.

M. Baillarger has been elected a member of the Académie de Médecine, Paris, in the section ... ... anatomy and physiology. MM. Manec and Denonvilliers were among the unsuccessful candidates.

MEDICAL APPOINTMENTS.—William Watson Beever, Esq., has been elected surgeon to the Manchester Royal Infirmary.

OBITUARY.—It is this week our painful duty to record the death of Mr. Edwin John Quekett, a gentleman deservedly well known by his numerous contributions to microscopic science. Mr. Quekett expired at his residence, in Wellclose-square, on Monday evening at the early age of thirty-eight, of malignant sore throat, after only two days' illness. The lamented deceased was a member of the council of the Linnean Society, to the transactions of which and the medical journals he contributed several papers on "Vegetable Anatomy and Physiology." He was, until a very recent period, lecturer on botany at the London Hospital, a member of the Royal College of Surgeons, and a licentiate of the Hall. At the time of his death he held the appointment of surgeon to the Tower Hamlets Dispensary. Mr. Quekett was unmarried; he, however, leaves a family of brothers and sisters to deplore the severe loss they have sustained in the death of an excellent relative, one of the former is well known as one of the most celebrated microscopists of the day; another brother, the Rev. William Quekett, the incumbent of St. George's in the East, has lately been prominently before the public, on account of his exertions in ameliorating the condition of the wretched but deserving poor, in his populous parish, by sound sanitary measures, in conjunction with the lamented deceased.

OBITUARY.—On the 17th ult., at his house, 11, Upper Seymour street, Portman-square, after a short illness, Harris Dunsford, Esq., M.D., aged 9—.—On Thursday, the 18th of March, at the Brazils, aged ..0, Charles Jones Bowater, Surgeon ... ... of the late Capt. Bowater, of the ... King's Own Light Dragoons, and of Mrs. Bowater, of Parliament place.—On the 29th ult., at ..., on his way from Persia, in the 34th year of his age, George Joseph Bell, M.B., Balliol; ... ... travelling fellow of Oxford, and Physician to her Majesty's Mission in Persia, second son of the late Professor George Joseph Bell, of Edinburgh.

MORTALITY TABLE.

For the Week ending Saturday, June 26, 1847.

Causes of Death.	Total.	Average of 5 Winters.
ALL CAUSES......	921	914
SPECIFIED CAUSES	911	909
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	200	166
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	98	90
Diseases of the Brain, Spinal Marrow, Nerves, and Senses...............	136	158
Diseases of the Lungs, and of the other Organs of Respiration	253	275
Diseases of the Heart and Blood-vessels	32	29
Diseases of the Stomach, Liver, and other organs of Digestion	74	70
Diseases of the Kidneys, &c.	14	8
Childbirth, Diseases of the Uterus, &c.	15	10
Rheumatism, Diseases of the Bones, Joints, &c.	13	8
Diseases of the Skin, Cellular Tissue, &c.	2	2
Old Age	38	57
Violence, Privation, Cold, and Intemperance......	35	28

SUGGESTIONS

FOR A MORE SIMPLE ARRANGEMENT OF THE

MATERIA MEDICA,

BASED ON ITS PHARMACEUTICAL AND THERAPEUTICAL RELATIONS.

By GEORGE LEITH ROUPELL, M.D.

Cantab., F.R.S., Fellow of the Royal College of Physicians, Physician to St. Bartholomew's Hospital, Lecturer on Materia Medica at the College of St. Bartholomew' Hospita

[*Continued from page 346.*]

LECTURE III.

Having stated some of the objections which may be urged against the various classifications of the materia medica at present chiefly in use, and my desire, if possible, to suggest some more compendious arrangement, I have now to proceed with the several divisions of my subject. It will be remembered that in treating of the organic materia medica my proposal was to assume the chemical character or the obvious pharmaceutical qualities of our actual medicinal agents as the basis of my orders. Attention was thus to be paid to what was found, or believed, to be the active and efficient portion of the various drugs employed as remedies. Such will, no doubt, eventually constitute, as it alone properly deserves, the name of the materia medica. Practical utility, however, and conciseness were more thought of than a strict adherence to rule or a blind tenacity to a purely chemical arrangement. Some of my divisions may, therefore, on this ground be obnoxious to criticism; but convinced that it is of the highest importance, in order to secure efficiency in treatment, that medicines of real power and definite strength should be exhibited, and satisfied that the action of remedies will alone be successfully studied by accurately watching the operation of our agents thus isolated, I proceed, however imperfectly, with my design. It was suggested that the organic substances used as remedies should be divided into twelve sections, according as their medicinal effects might be due:—1, to an alkaloid; 2, to a neutral bitter principle; 3, to astringent matter; 4, to a fixed oil or fatty substance; 5, to resinous matter; 6, to an essential oil; 7, to gum; 8, to starch; 9, to sugar; 10, to an acid; 11, to colouring matter; and to conclude with some remarks upon 12, albumen as a remedial or therapeutical agent.

To commence, then, now with—

1. Drugs which owe their activity to an alkaloid.

These drugs belong exclusively to the vegetable kingdom, and they contain a series of principles capable of producing results singular in their variety, marvellous at present in their nature, and appalling in their power. These principles deserve the first place in my arrangement, as constituting the most important of our remedies; and a few general remarks upon them as a class may appropriately precede their individual consideration.

The vegetable alkalis or alkaloids have, as their name implies, an alkaline reaction, restoring the blue of reddened litmus, or turning the yellow of turmeric to brown. They are for the most part composed of four elements—oxygen, hydrogen, nitrogen, and carbon. They all contain nitrogen. Oxygen is wanting in some, and these are especially energetic. They all form salts with acids, a state in which they naturally exist. The salts thus formed resemble in many respects those of ammonia, to which, indeed, they might be supposed to owe their alkaline reaction. Ammonia, however, does not exist in them, although it is the source from which they derive nitrogen, to which their alkalinity is due. Two processes deserve notice by which the alkaloids may be procured: by one they are obtained in a pure form, by the other in that of a salt. The first process, namely, that for obtaining the alkaloid in a pure form, consists in adding to a solution containing the vegetable base a stronger inorganic alkali; this combines with the acid, and liberates the alkaloid, which, thus freed, is to be separated afterwards from the other principles with which it may be mixed, appropriate means being employed according as it may be soluble or otherwise in the menstruum used, or as it may be itself fixed or volatile. The second process, that for procuring the alkaloid at once in the form of a salt, consists in substituting for the inorganic alkali a salt composed of the acid, or its elements, which, it is proposed, should take the place of the one naturally in combination with the base. On their admixture double decomposition ensues, and thus the desired salt is obtained, and only requires subsequent purification.

The vegetable bases when pure are for the most part very insoluble. Their salts, however, with the exception of the tannates, are easily dissolved; hence are commonly employed. The sulphates, the hydrochlorates, and the acetates, are those chiefly in use. Opinion seems to be divided as to the relative value of these salts: the base, however, and not the acid, is the important part, and easy solubility is the only condition essential for activity. Some of the alkaloids are crystallizable; others amorphous; some again are liquid. These peculiarities will serve me as distinguishing features, and will enable me to divide them into three classes, as

I. CRYSTALLINE ALKALOIDS.

1. Morphia	obtained from the	Papaver somniferum.
2. Atropia		Atropa belladonna.
3. Hyoscyamia		Hyoscyamus niger.
4. Solania		Solanum dulcamara.
5. Daturia		Datura stramonium.
6. Strychnia		Strychnos nux vomica.
7. Digitalia		Digitalis purpurea.
8. Colchicia		Colchicum autumnale.
9. Quina		Cinchona flava.
10. Cinchonia		Cinchona pallida.

II. AMORPHOUS ALKALOIDS.

11. Aconitina	from the	Aconitum napellus.
12. Veratria	"	Veratrum album.
13. Delphinia	"	Delphinium staphisagria.
14. Emetina	"	Cephaelis ipecacuanha.

III. LIQUID ALKALOIDS.

15. Nicotine	from the	Nicotiana tabacum.
16. Conia	"	Conium maculatum.

1. Morphia stands appropriately at the head of the list, not only from its importance, but also from the fact that it was the first of the vegetable bases that was distinctly recognised and clearly defined. This was effected by the joint labour of Sertuerner and Robiquet, a little more than a quarter of a century ago.

Morphia, which is represented by the symbol $\overset{+}{M}$, and has for its formula $C^{34} H^{6} O^{18} N$, is obtained from opium, which, if good, yields to the pharmaceutical chemists of this country from ten to fifteen per cent. When carefully prepared it appears in the form of brilliant rectangular or rhombic prisms. Heat drives off six per cent. of water, afterwards fuses, and finally destroys it. Morphia turns red by the addition of nitric acid, blue by perchloride of iron, brown by iodic acid. It is soluble in alcohol, especially if aided by heat, soluble in fixed alkalis, sparingly so in oil, fixed or volatile, still less in water. Its taste is intensely bitter. By these tests we may readily distinguish morphia from all other substances. It is to be procured, according to the Pharmacopœia, by the addition of ammonia to the hydrochlorate of morphia in solution.

Morphia, the chief active principle of opium, exerts both a topical and a general action on the frame. It influences by its general action the nervous, the vascular, and the secreting systems, topically it allays local irritation, and controls the movement of the muscles.

The effect of morphia upon the nervous system is in the first instance stimulating, afterwards sedative. The period of excitement varying inversely as the dose is followed by one of calm

pain is allayed, sleep induced, and, if given in too large a quantity, death results with narcotic symptoms. It allays irritability, and thus checks undue vascular as well as nervous action. It controls all the secretions except that from the skin, which it increases, occasioning sometimes also intense itching. The secretions, it would appear, are not only controlled but changed, that from the kidneys, for example, abounding under its influence in lithic acid. The leading indications, then, for the employment of morphia in its various forms and states of combination will be:—

1. Acute and severe pain.
2. Urgent vomiting and violent spasms.
3. Exhausting dejections.
4. High nervous excitement.
5. Great prostration and debility.

As examples of the diseases benefited by the exhibition of the active principles of opium, under the first head may be quoted calculi descending through the various ducts in their passage out of the body, some forms of neuralgia, and malignant organic disease in various parts.

Under the second head we find colic, tetanus, hydrophobia, one class of asthmatic attacks, and inordinate muscular paroxysmal movements.

Diarrhœa, dysentery, pyrosis, diabetes, even hemorrhage, especially that from the stomach and uterus, when kept up as it often is by irritation, will find their place in the third section.

With regard to the fourth head, we have daily examples of the advantage of morphia in allaying nervous excitement. We see it in delirium tremens, in the pervigilium of fever, in the restlessness at certain periods of the exanthemata, and in other states of agitation and tumult.

The employment of morphia as a stimulant is of comparatively modern date in our country, though, as is well known, opium has been employed as a means of intoxication in the East from time immemorial. Its union of stimulating and calmative properties renders it or its principles of great use where powerful shocks or severe injuries have been inflicted on the system, as in burns, or after capital operations. In certain chronic states of debility, cachexia, and exhaustion, when the powers of life seem too feeble to carry on satisfactorily the processes of reparation, no remedy can equal morphia. By its employment the tendency to spread in ill-conditioned ulcers is promoted, and cicatrization takes places. By the use of morphia the excess of urea in the secretion from the kidney is converted into a healthy lithate, and the phosphatic diathesis is corrected.

Morphia is undoubtedly of value as a topical agent, and, in the form of fomentation, plaster, or ointment, is capable of allaying pain and irritation. It is, however, decidedly less efficacious than some other narcotics presently to be treated of. Morphia is very insoluble in water; hence it is rarely used in a pure state. It is given as a salt in combination with an organic or mineral acid. The acetate or hydrochlorate are the salts mostly in use. They are nearly equivalent in their properties, and are probably equally readily absorbed; the stronger acid in the stomach, indeed, may be supposed to supply the place of the weaker organic one; still, critically speaking, the acetate would be the purest, the hydrochlorate containing some codeia, which, contained in opium, is found to stimulate the skin and excite the system. The difference between the action of morphia and of opium, from which it is procured, remains to be noticed, as well as the preparations of both.

Morphia and opium alike are stimulating primarily, and sedative afterwards; alike are astringents (so called), save in the instance of the secretion from the skin, which they promote; alike they influence the circulating fluids; but the unpleasant effects of opium—headache, giddiness, sickness, waking in alarm, and frightful dreams—are least frequently met with when morphia is employed. It should have been observed that opium is an antiperiodic; whether morphia is equally so may be a question, as it is separated from narcotine, a principle itself capable of checking the paroxysms of intermittent fever. Besides morphia, opium contains two other alkaloids, codeia and paramorphia; three neutral principles, narceine, narcotin, and meconin; meconic acid, bitter extractive, resin, albumen, gluten, gum, volatile oil, and the salts of lime; potassa, alumina, and iron. The officinal preparations of morphia are the acetate and the hydrochlorate; of opium, the extract, the tincture, the wine, the confection, the plaster, the liniment, the enema. Opium is, besides, contained in many preparations, as in the compound pills of soap, storax, and ipecacuanha; in Dover's powder, in the compound tincture of camphor, the compound kino and chalk powders, the compound gall ointment, and in the cascarilla mixture of the Pharmacopœia.

The utility of the syrup, the extract, and the decoction of poppies is also to be referred to the same principle.

It were wearisome to dwell longer on this subject. In conclusion it must, however, be stated that age, idiosyncrasy, habit, and disease, materially influence the effects of morphia, rendering on the one hand enormous doses necessary, on the other entirely precluding its use.

I shall here finish my sketch of morphia, and proceed with atropia in my next.

A COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the Theatre of Queen's College, Birmingham.

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Skin diseases, importance of being able to diagnosticate and treat them; illustrations of the converse; case of eczema mistaken for itch; acne, from critical causes, in a lady, imputed to dram-drinking, smallpox mistaken for some unknown ailment; necessity of experience to the correct diagnosis and treatment of skin diseases, case of psoriasis, details of; treatment and comments; effects of arsenic and other remedies; pathology of psoriasis; intentions to be fulfilled in the treatment of it; causes of it; cautions in giving arsenic; severe topical applications to be avoided in general psoriasis, pityriasis, its pathological relation to psoriasis, case of both in the same individual, treatment; sycosis, case of; observations upon; treatment.

Gentlemen,—You have lately seen some cases of skin disease successfully treated at the hospital; give me your attention whilst I offer a few comments upon them.

The diagnosis and treatment of cutaneous affections are not of trifling importance; you will find your professional distinction or discredit much related to these things in after life. Should your practice fall chiefly in the way of families of respectability or rank, it will behove you to be very mindful how you designate or prescribe for their superficial ailments. With the fairer sex especially, there is great sensitiveness on the subject of personal appearance, as the sale of "Rowland's Kalydor" can testify; and to fail to remove their spots or specks, or to impute the presence of these to exceptionable causes, is to lose caste with the offended party for ever. I remember, some years back, a physician of respectability being consulted by a lady for a troublesome affection of her skin. After deliberate examination, he told her she had got the itch: she was horrified, and the more so when he informed her that it was a communicable disease, and only to be acquired by contact with an infected party. She protested that she had never in her life been exposed to the possibility of such a thing; but all to no purpose: the doctor maintained that her ailment was itch, and that there was only one way of getting it. In the despair which his unhappy diagnosis induced, the lady willingly submitted to be smeared from head to foot with that execrable compost, sulphur ointment, and to lie in that coating of filth all night. The next morning she was considerably worse: additionally to a spread of her eruption, sympathetic fever had supervened. Alarmed at this, she sent for another medical man, who immediately discovered that her formidable ailment was nothing more than the simple variety of eczema. I need not say how utterly the first adviser lost the good graces of the patient, and of the many friends to whom she industriously reported his unfortunate error.

An anecdote is related of a distinguished surgeon committing the fatal mistake of suggesting to a titled lady who consulted him for acne, that it had probably arisen from spirit-drinking. If the imputation had been true, the manner of making it was ill-judged enough; but the sagacity of a subsequent adviser led him to refer the eruption to the critical period of the lady's life, and he proved to be correct. You may easily imagine how these two practitioners stood afterwards in her estimation.

I remember being much amused, when a student in Edinburgh, at hearing an Oxford M.D., who had come for the sake of hospital practice, descant upon a singular case of skin disease, as he called it. After a disquisition of some ten minutes or more, during which he told us what the disease was *not*, and that what it really might be, was a pathological question of some "dubiety" (so he said), a bluff old nurse cut his learning short with the remark, "Why, it's just a case of smallpox, man." Faith the nurse was right. In the walls of the hospital nothing came of the adventure but a laugh; but suppose the mistake had been committed in private practice, and the merit of the diagnosis had been conceded to an old woman, how would the reputation of the practitioner have stood?

Diseases of the skin are only to be known by an acquaintance, *de facto*, with them. You may look at all the pretty pictures, and read all the descriptions and endless subdivisions of these things, and be no wiser when you have done. If, when you come to diagnosticate and treat them, you fall back upon your mere library learning, you will be on a level with the operating surgeon who has nothing but book anatomy to aid him. There is no department of the healing art wherein practice is more utterly essential to success, than that of cutaneous diseases. There is only one way in which the subject can be properly taught, or learned, and that is by reference to its living evidences. You will perceive, then, that in the present lecture I must confine myself to the particular cases of skin disease which you have seen treated at the hospital.

The first to which I beg your attention is one of psoriasis. The subject of it is an out-patient who has been under my care for about nine weeks. You saw him this morning. When he first came to the hospital, he furnished an excellent specimen of psoriasis. The eruption appeared in irregular patches, from the size of a sixpence to that of a five-shilling piece, over the knees and the anterior part of each leg, over the elbows and each forearm; his head was completely covered with smaller patches. These were of a dullish red colour, and very slightly elevated above the surrounding skin, where there was no accumulation of exfoliating epiderma; where this collected, the elevation was more considerable, especially in its centre, and the dirty white mass consisted of scales of epiderma variously superimposed, with cracks or fissures runing irregularly through the substance. The epidermal scales chipped and peeled off in abundance, leaving the integument beneath, tender, glossy, and of a dull red colour. When they were removed by scratching, the subjacent skin was left sore, bright red, and, sometimes being broken, there was a discharge of ichor or blood, which incrustated and formed a rough dark scab.

The patient was twelve years of age when we first saw him: the disease had existed about seven months. There was nothing obviously to account for it, further than that the lad was

clearly of a scrofulous diathesis. Neither of his parents had ever been similarly affected. He had a pale cachectic look; his tongue had a white fur upon it, and its edges were indented; bowels costive, feces lighter coloured than natural; urine scanty; appetite bad; saliva acid. He was ordered wholesome food, regular exercise in the open air, and to be kept from school until better. The following medicines were prescribed:—

℞. Infusi gentianæ, ℥vjss.; liq. potassæ, ʒj.; liq. arsenicalis, ʒss.; sp. eth. nit., ʒij. Misce ft. mist. cujus cap. coch. larga duo ter in die.

℞. Scammonii, pulv. rhei, aa. gr. xxiv; hydr. chloridi, gr. iv. Misce et divide in pulv. vj. ex quibus cap. j. omni mane.

In about a fortnight, there were obvious signs of improvement. The general health was much better, in regard to appetite, strength, and spirits. The eruption was also less—less in its inflammation, and in the amount of its epidermal accumulation. You remember my pointing out these two facts particularly to you. As the biliary and urinary secretions were fully restored, the powders, without the colomel, were ordered, and the following mixture:—

℞. Decoct. dulcamaræ, ℥viij.; liq. potassæ, ʒj.; liq. arsenicalis, ʒss. M. ft. mist. cujus cap. coch. ampla duo ter die.

This treatment suited very well, and the boy continued to improve for the further period of three weeks, when he came crying one morning, and complained of violent pain in his stomach and bowels. It came on in spasms, and was once so violent that I was obliged to give him a dozen drops of laudanum, and a drachm of *sal. volatile*, in camphor mixture, to relieve his sufferings. His tongue was furred, and epigastrium tender on pressure. I felt suspicious that the arsenic was the cause of this stomach disturbance. In large doses, or when long continued, it is very apt to disturb the digestive organs, and produce severe spasmodic pains, vomiting, and purging. His powders were continued, and the following mixture given.

℞. Infusi calumbæ, ℥viij.; ammon. carb., ʒss.; tinct. hyoscy., tinct. opii, aa. ʒj. Misce ft. mist. cujus cap. coch. larg. duo ter die.

In about ten days the stomach had fully recovered, and there was a corresponding improvement in the general health; but the eruption was rather more inflammatory, and the accumulation of epidermal scales more abundant. The powders were continued, and the dulcamara mixture given as before, except that twenty drops of the arsenical liquor were substituted for half a drachm thereof, in the half-pint infusion.

From that time the boy steadily and rapidly improved, both in his general health and in the condition of his skin. When we saw him this morning, his arms were perfectly free from eruption, and only on the knee of one leg was there any irregularity of skin: here the disease showed itself rather like pityriasis—the elevation and redness were scarcely perceptible, and the scales of epiderma were not only much fewer, but much finer, than when first we saw him. I think that in a few days this knee will be quite well. The eruption on his scalp was so much better, more than a week ago, that I advised his mother to have his hair cut short, and his head gently washed, every other day, with white soap and tepid water. To-day we saw very little desquamation, and where the scales had been last detached, the subjacent skin had a natural look and feel, instead of being red and tender. I have no doubt that in course of a fortnight we shall have no need of his further attendance.

Psoriasis is nothing more than a subacute inflammation of the derma. As first manifested, the affected parts are warmer than natural, and there is felt a prickling or tingling sensation. Whether this be dependent upon a change in the nervous or circulatory function of the parts, it is not possible to say: the first change appreciable to the senses of the observer is in the circulation. A blush of bright redness appears, which after a time becomes duller. This is the state of congestion. To this succeeds more sensible heat and coloration, with slight pricking or itching pains. It is difficult to avoid scratching, but this, however slight, is followed by smarting or direct pain. The inflammatory condition has now supervened. In consequence of this, comes a desiccation and destruction of the epiderma; and the vascular action underneath being morbidly vigorous, the epiderma is reproduced at an amazing rate. Several crops are thus furnished in succession, and, accumulating, give the patches the dirty white, rough, and fissured appearance you saw in the case I allude to. The chops or fissures occur as consequences of the scaly epidermal products not being disposed with uniformity. Their size, and the disposition to be more in one place than in another, render it impossible that there shall not be irregularity in the lines of their distribution.

In the process of spontaneous recovery, or of cure—for psoriasis is capable of both—the first change is a lessening of the inflammatory or congestive action. The scaly patches lose their areolar blush, and the coloured ones grow lighter. The epiderma, therefore, becomes more persistent; and when removed, naturally or by accident, the exposed parts have less redness and sensitiveness than in the more active stages of the disease. This improvement by degrees goes on, until at last the circulatory function of the parts becomes perfectly normal, and there is no more desquamation than consists with the ordinary "wear and tear" of the body.

The causes of psoriasis are many. It is often hereditary, and furnishes no clue to its pathological *radicle*. In other cases, its origin is traceable to a scrofulous diathesis or cachexia. These are, perhaps, the foundation of most of the skin diseases that are met with. Innutrition will produce psoriasis: so will indigestion, whether derived from redundant, insufficient, or unsuitable food: it sometimes follows chlorosis, sudden chills, ordinary colds, or exposure to great heat. With some people, it regularly appears in the spring; with others, in the autumn.

The local variety of psoriasis appears amongst those who have certain parts of their bodies exposed to noxious influences. You see it in bakers, millers, shoemakers, washerwomen, and various artisans who have to work metallic substances.

Psoriasis dependent upon constitutional causes can only be treated by general means. No local applications are of any use. If in one place they seem to do good, in another they will do as much or more harm. The great object is to find out the cause of the disease. You sometimes meet with cases where well-regulated or reduced living is your best remedy; in others, nutritive food and change of air will suffice; sometimes purgatives are chiefly wanted; sometimes emmenagogues; and again, tonics of the vegetable class: these are generally best prescribed with alkalis, but acids are occasionally preferable. I once cured an obstinate case of psoriasis by a mixture, the chief ingredient of which was lemon-juice.

To the boy of whom I have just spoken, I first gave aperients with calomel, because his bowels were torpid, and his hepatic and other secretions were more sluggish than natural. I gave him the bitter infusion, because the state of his tongue and his appetite told me that a bitter would probably benefit him. I had two reasons for giving him the *liquor potassæ*: first, because his saliva was acid, and he had acid eructations; and secondly, because this extra alkali enables the arsenical liquor to agree better with the stomach. If the *liquor arsenicalis* meet with much acidity in the *primæ viæ*, it is pretty sure to cause vomiting or purging, or both. Why I gave the arsenic I cannot tell you, more than this, that I have often given it aforetime, as others have, with excellent effects. Of its *modus operandi* in relieving or curing skin diseases, I must plead ignorance, and fall back upon the results of experience. I have so many times employed it with good results, that I continue to employ it. Whether its services are to be considered in the light of a tonic or stomachic, or that mysterious "alterative" we sometimes speak of, or anything else, I am not prepared to say. In giving it, mind not to make the dose too large; give it with an excess of alkali; give aperients at the same time; and stop it directly that gastric or intestinal pains tell you it is becoming mischievous.

Dulcamara possesses slight tonic as well as diaphoretic properties: it is for this reason that I like it in psoriasis, where we generally find a naturally dry skin, and more or less alimentary disorder.

Preparations of iodine, especially the iodine of potassium, of iron, and of sulphur, are often excellent remedies in this disease. So are very small doses of bichloride of mercury.

As I have said, you should avoid topical applications, except of the mildest sort, in psoriasis arising from general causes. The more roughly you disturb the scaly formations, the more obstinately and abundantly will they return. When the itching is intolerable, you may order the parts to be gently bathed with a weak solution of carbonate of soda in tepid water, or tepid camphor mixture. The latter is a very agreeable sedative, and one that I have often found successful. Above all things, caution the patient against scratching the affected parts. If the skin be broken, it is generally difficult of reparation.

Pityriasis is a cutaneous affection very closely allied to psoriasis. In fact it is nothing more than this in a mitigated form. It occurs in the same constitutions, and generally from the same exciting causes. It commences with congestion, and proceeds to subacute inflammation (though more mildly), just as does psoriasis; and, because of the mildness of the abnormal circulation, there is less elevation and redness of the patch; less desiccation, exfoliation, and reproduction of epiderma; the scales are smaller and less numerous; and in consequence, there are no fissures.

Psoriasis is prone to affect the muscular parts of the body; pityriasis chiefly shows itself upon the scalp, forehead, and face. You saw a very good case of both diseases in the person of a man named Hines, who came into the top ward of the hospital on the 28th of November last year. His arms, and hands, and legs were extensively covered with patches of psoriasis: the upper part of his face, his forehead, and scalp were completely dusted with the peculiar dandriff of pityriasis. Both, here, occurred in the same individual, and merely differed in their relative intensity. The man was a brassfounder, and had lately been out of work, and indifferently fed. The disease was of five weeks' duration. He was ordered generous diet, and half a pint of ale daily.

℞. Decocte dulcamaræ, ℥viij.; liq. potassæ, liq. arsenicalis, aa. ʒj. Misce fiat mist. cujus cap. coch. ampla duo ter die.

℞. Pil. coloc. c., ℈ij.; extr. hyoscy., ℈j. Misce et divide in pil. xij. quarum cap. ij. omni nocte.

This was all the general treatment the man had, and on the 23rd of December he left the hospital well. Five days less than a month, he was under medical management, and at the time of his departure there was not a trace of skin disease about him. It is probable that the medicines administered to this patient rendered him some service; but perhaps the greater service was due to his improved mode of living. I am inclined to think thus, from the very obvious change that took place in his general health directly that he came into the hospital.

The only local treatment he had, was a little spermaceti cerate to sundry chops in his hands, that were unusually large and sore. I am not fond of greasy applications in these cases, for they prevent perspiration, and often do more harm than good; but, where the subcutaneous tissue is irritable and unduly exposed, a protection like that afforded by a simple unguent is often valuable. In other cases, again, where the affection is purely local, a very dilute form

of citrine, or any similar ointment, will sometimes change, and finally subdue, the inflammatory character of the ailment.

You have lately seen a case of sycosis treated with success. The subject of it, an out-patient named Price, came under my care about three month ago. The disease had then existed for more than a year, and he had been under various treatment without any relief. When we first saw him, the eruption occupied the entire of the lower jaw, from one angle to the other, and nearly the whole of the upper lip. He had not been able to shave himself for many months, and even the most careful washing of his face aggravated the inflammation, and gave him great pain.

I particularly pointed out to you the characteristics of sycosis, as they were shown in this well-marked case. In one spot we saw the skin tense, bright red, [illegible] tumefied—this was the state of congestion, [illegible] subacute inflammation: in another, this redness was resolved into patches, which finally became dull red conical elevations—these were intumescent or inflamed sebiparous glands, or hair follicles; in another, these elevations were terminated by distinct collections of pus, and this having become exuded, absorbed, or desiccated, gave rise, in other places, to small dark purplish scabs or crusts. When these had fallen off, or been removed, we found the subjacent surface red, shining, and very tender.

The causes of sycosis are various, and are both general and local. The disease often arises from a scrofulous taint, as in the case of our patient. Cachexia, the gouty and rheumatic diathesis, dyspepsia, irregularities of living, exposure to inclemency, &c., will occasion it. Amongst its local causes, the most common are washing the face, whilst heated, with cold water; exposure of the face to strong artificial heat; the use of a bad razor, or of strong soap. One of the severest cases I ever saw, resulted from a profuse scrubbing of the face with soft soap. I do not think that the exciting causes I have mentioned ever produce sycosis except in cases where there is a predisposition to it.

The disease is essentially one of the hairy tissues, which will perhaps chiefly account for its intractableness. What in another spot would be simple inflammation of the derma, or contiguous parts, becomes in this case the more serious, because of the implication of the sebaceous glands and hair bulbs. Baldness of the part is sometimes a consequence of the disease.

Our patient was enjoined regular diet, and abstinence from stimulants. To shave himself was out of the question, but he was directed to be as [illegible] as possible in clipping his beard with scissors; not to use soap in washing; and to dab his face with a soft towel, instead of rubbing it dry. The following lotion was ordered to be applied three times a day:

℞. Hydrarg. [illegible] bichlorid., gr. ij.; acidi muriatici, m. ij.; mist. [illegible], ℥viij. M. ft. lotio.

Additionally he had [illegible] medicines:—

℞. Inf. gentian. [illegible], ℥viij.; liq. potassæ, liq. arsenicalis, aa. ʒ [illegible] M. ft. mist. cujus cap. coch. larg. duo ter die.

℞. Pil. coloc. [illegible], ℈ij.; extr. hyoscy., ℈j.; pil. hydrarg., gr. [illegible] Misce et divide in pil. xiv. quarum cap. ij. omni [illegible]

In less than a fortnight, we had some satisfactory evidences of improvement. The congestive and inflammatory tendency was less, as shown by the external appearance, and the patient's own remark, that he had less heat, pricking, and pain in his chin than previously. Further, there were fewer spots of suppuration, and in one or two places a little furfuraceous material had collected. You remember my dwelling upon this, as one of the best features in the manifestations of amendment, and saying that the fact of epidermal desquamation being successive of suppuration was proof that the local inflammatory action was subsiding. Such proved to be the fact. In this case we had not a solitary drawback. The patient systematically improved from the commencement, and, before two months had elapsed, he was able to shave the lower part of his face without inconvenience. When we last saw him, a week ago, there was nothing of his ailment left, except a spot of hardened cuticle, and darkish desquamation, about the size of a shilling, in the centre of the upper lip. By this time it is probable he is well.

This case, I think, needs no further comment than what I have already given it. It well illustrates the general features, and especially the pathology of sycosis. The treatment I instituted was simple enough, and was very successful; in another case it might be less so, and some other form might be desirable; but you will gather from my observations what are the leading indications to be fulfilled in all such ailments. Look to their immediate and remote causes, and you will have excellent suggestions and guides of practice.

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.

By Professor MATTEUCCI, of Pisa.

Part IV.

ABSORPTION AND EXHALATION IN ANIMALS AND PLANTS.

Considerable difference of opinion prevails respecting the particular set of organs to which the functions of absorption and exhalation are intrusted in the living animal. Some physiologists maintain that the veins alone are charged with the performance of these functions, others assign them exclusively to the lymphatic vessels.

It is difficult to account for this diversity of opinion, when we look at the structure of the various organic tissues, and consider the absolute necessity for absorption and exhalation in a large series of inferior animals which do not possess lymphatic vessels.

Absorption in living animals should be regarded as a twofold function, viz., 1, the imbibition of a liquid by the organic tissue in contact with it; and, 2, the transmission of the imbibed liquid into the bloodvessels of the body.

The correctness of this view may be readily demonstrated by a series of simple experiments.

First Experiment.—Take a frog, and keep its inferior extremities immersed for several hours in a solution of prussiate of potash; withdraw the animal subsequently from the liquid, and wash it carefully with distilled water; cut it into pieces, and test the various parts with solution of protochloride of iron; the appearance of a more or less intensely blue spot, wherever you may happen to apply this test, will at once convince you that the solution of prussiate of potash must have penetrated through every part of the body.

Second Experiment.—Take a living frog and keep its inferior extremities immersed for some time in a solution of prussiate of potash; withdraw the animal from the fluid, kill it, and test the viscera and tissues for prussiate of potash; and you will hardly find traces of this substance in the muscular mass of the legs and thighs, whilst the heart and lungs will give the most marked indications of its presence when touched with solution of protochloride of iron.

Third Experiment.—Take a frog, kill it, and immerse it, a few moments after death, in the same solution of prussiate of potash; leave it in the fluid for the same time as in the second experiment, and test the divers parts subsequently for prussiate of potash, and you will find that the heart and lungs do not contain a more considerable quantity of that substance than any other part of the body.

The conclusions to be drawn from these experiments are self-evident. The solution is introduced into the body of the frog (no matter whether living or dead) by simple imbibition; but, in the living frog, it penetrates subsequently into the bloodvessels, mixes with the blood, and is thus carried to the heart and lungs, the central organs of the circulatory system.

As has already been stated, the question whether the lymphatic vessels alone are endowed with the faculty of absorption, or whether this function is, on the contrary, exclusively assigned to the veins; or, to speak in more distinct and intelligible terms, whether liquids can penetrate *directly* through the walls of the bloodvessels, or whether, to reach the latter, they are obliged to pass first through the lymphatics, has long been a subject of considerable discussion. Now, as we know of no portion of an organized body that is not endowed with the faculty of absorbing, more or less readily, water, saline solutions, serum, &c., it is evident that the first part of absorption may take place equally through the walls of the lymphatics, as through those of the bloodvessels. This conclusion is confirmed by the revelations of microscopic anatomy, regarding the manner in which the bloodvessels and lymphatics terminate. We know of no fact of a nature to demonstrate the existence of independent extremities in the ramifications of the bloodvessels, which ramifications present everywhere the appearance of a very close and continuous reticular texture, the articular network seeming to *merge* into the venous network, which latter generally predominates over the former; nor does the lymphatic system terminate in independent extremities, but presents likewise the appearance of an exceedingly fine and close trellis or network. The revelations of anatomy, in perfect accordance with experience, lead us to the conclusion, that the first part of absorption can be effected only by the aid of the porosities peculiar to the structure of organized bodies. It is through the pores of the organic tissues that the absorbed substances find their way to mix with the blood, chyle, and lymph, and are thus, by the common movement of their humours, distributed over the whole body. The experiments of Magendie, Ségalas, and Panizza (which it would be superfluous to describe here) have proved to evidence that the bloodvessels have the faculty of absorption; moreover, that absorption takes place principally through this channel alone.

The fact that certain substances may be detected in the urine of animals a few minutes after their introduction into the stomach, has frequently been relied on as a valid objection against the admission of venous absorption; but this objection falls to the ground when we look at the rapidity of the circulation of the blood.

That, on the other hand, absorption may likewise be effected by the lymphatic vessels, is a fact too well known and self-evident to require the trouble of actual demonstration. We will, therefore, at once proceed to a brief enunciation and exposition of the laws of absorption, that have been deduced from the facts revealed by experimental physiology.

1. Substances are absorbed the more readily the more soluble and minutely divided they are, and the more disposed to enter into combination with the organic juices, and to become constituent parts of the blood.

2. The respective intensity of the force of absorption of the divers organs is determined principally by the greater or less abundance of their vessels, the greater or less flaccidity of their tissue, and the greater or less conducting power of the parts that cover them.

It is evident that by the terms *flaccidity of tissue* and *conducting power*, &c., we have to understand here simply the greater or less aptness for imbibition inherent in the texture of the organic tissues; *the greater or less abundance of vessels* means simply the greater or less number of points of contact between the body that is to be absorbed and the liquid with which this body is to intermix. Thus we find that the lungs, which are of a structure more eminently adapted for imbibition than that of any other part of the animal economy, and possess a highly-developed vascular system, are endowed with the highest degree of absorbent faculty, and are the first to manifest the presence of the absorbed substance. The cellular tissue, likewise, is very permeable to liquids; but, being less well provided with bloodvessels than the lungs, its absorbent action is of less rapid operation than that of the latter

organ. The skin, on the other hand, covered as it is by the epidermis, which is of very compact texture and has no vessels, possesses no great power of absorption, which may, however, be considerably heightened by the removal of the epidermis.

3. The rapidity of absorption proceeds in inverse ratio to the greater or less amount of liquid existing in the organism.

This law of absorption will be readily understood. A heap of sand, thoroughly saturated with a liquid, ceases to imbibe any more of that liquid; and, on the other hand, it imbibes the liquid the more rapidly the further it is removed from its extreme saturation point. Dutrochet left a plant exposed to the air until it had lost by evaporation 0·15 (about the seventh part) of its weight; immersing it subsequently in water, he found that it absorbed, during the first four hours of the immersion, 1·05 gramme (about 16 grains) per hour, and lost by exhalation during the same period of time 0·4 gramme (about 6 grains); subsequently it absorbed only 0·45 gramme (about 7 grains), and lost the same amount by exhalation. Edwards saw frogs absorb water the more rapidly the more weight they had lost previously by transpiration. Magendie reports that a dog, from which he had taken a considerable quantity of blood, died speedily from the effects of strychnia; whilst another dog, into the veins of which he had introduced a large quantity of water, escaped poisoning by that substance (strychnia).

4. Absorption varies, within certain limits, in proportion to the temperature of the absorbing, and to that of the absorbed, body.

Every one knows that hot potions operate more rapidly than cold ones. We also saw that the rapidity and energy of imbibition varies greatly according to the higher or lower temperature of the fluid to be imbibed. Of course, this variation, according to the higher or lower temperature of the absorbing and absorbed body, ranges only within certain limits, since, beyond these limits, the structure of the organic body would suffer decomposition.

5. According to Fodéra, the electric current promotes absorption.

Even admitting the experiments of this physiologist to be perfectly correct, it is by no means easy to account for this supposed influence of the electric current upon absorption; the less so as no such influence is observed when applying the electric current in cases of imbibition. The only fact that may in some measure tend to support Fodéra's results and deductions, is that observed by Porret, viz., the transition of water from the positive to the negative pole of an electric pile.

6. The rapidity of absorption varies according to the greater or less degree of rapidity of motion possessed by the liquid contained in the absorbing vessel.

The function of exhalation is, generally speaking, performed by the same mechanism, and governed by the same laws, as that of absorption. A portion of the liquid imbibed or absorbed by a vessel is constantly exhaled again through the walls of the latter. The amount which thus escapes again, varies according to the nature of the liquid, or, in other terms, to the greater or less facility with which the tissue of the vessel may imbibe it. The exhalation of a liquid contained in an organic vessel will proceed the more or less briskly, according to the greater or less degree of humidity possessed by the external walls of that vessel. The respective energy of exhalation is likewise influenced by the greater or less degree of pressure which a liquid has to sustain, according to the greater or less amount of it contained in a vessel, and which, on its side, it exerts on the walls of the latter.

Edwards has shown that the cutaneous exhalation of animals is in some cases ten times more considerable in dry than in humid air, and that it doubles in passing from 32° to 68° Fahrenheit. He found, likewise, that agitation of the surrounding air promotes the perspiration of animals.

Some of the phenomena of absorption and exhalation observed in living bodies are attended with the transformation of the absorbed or exhaled substance. This is the case in most instances of exhalation, and principally in the secretions.

It would be idle to expect that the physico-chemical knowledge which we possess at present should supply us with a full [illegible] explanation of the secretory phenomena; the subject of secretion forms as yet one of the most obscure problems presented to us by the animal economy. But, with respect to exhalation, we cannot avoid seeing that a phenomenon analogous to filtration must intervene in its production. If you pour a liquid holding insoluble particles in suspense, upon a filter, the fluid will percolate, whilst the solid matter will remain upon the filter. Anatomical experiments have proved that when arteries or veins are injected with a solution of gelatine, coloured with finely-pounded vermilion, the solution transudes colourless through the vascular walls. Contusions of the skin produce a blackish-blue stain, surrounded by a ring of greenish hue, which is again encircled by a yellow border. This is simply owing to the coagulum of the colouring matter of the blood separating from the serum, which latter fluid is then imbibed by the neighbouring tissues.

It has been stated, in the chapter on Imbibition, that salt water loses a greater or less amount of its salt when filtered through a layer of sand; and that, on the other hand, a solution of carbonate of soda, filtered in the same manner, acquires greater density. Imbibition, capillarity, the simple play of molecular attractions, are, in some instances, capable of overcoming the effects of chemical affinity: why, then, should we entirely disdain the notions of ancient physiologists, who looked upon the secretory organs as simple filtration apparatus?

We shall hereafter have occasion to see that membranes and organized tissues in general permit gaseous substances to pass through them. Fodéra was the first who proved that sulphuretted hydrogen, enclosed in a portion of the intestinal tube, spreads through the whole body of the animal and causes its death.

The existence of absorption in plants may be readily proved by simple experiments with solutions of acetate of iron and prussiate of potash.

All liquids, of whatever nature, are absorbable by plants, with the exception, however, of certain too highly concentrated acid, alkaline or saline solutions, which, by destroying the structure of the plant, of course, annihilate likewise its absorbent faculty.

Saussure's celebrated work, "Chemical Researches on Vegetation," comprises nearly the whole of our knowledge on the important subject of absorption in plants; and this may be summed up in the following propositions:—

1. The roots of plants absorb saline solutions, but in much smaller proportion than water.

2. The introduction of salts into plants is facilitated and promoted by the ablation or alteration of the roots, and, generally speaking, by any fact or circumstance that tends to weaken the force of vegetation.

3. Plants do not absorb in the same proportion all the salts contained in one and the same solution.

The constant presence of certain salts in some plants tends to confirm the correctness of this last proposition; Professor Piria found invariably manganese in the seeds of *lupinus albus*.

We will now proceed to examine whether the absorption of the nutritive juices through the roots, and the subsequent motion of their juice in the plant, are to be looked upon as simple phenomena of capillarity or imbibition, or not.

At the beginning of spring, the sap ascends from the roots to the leaves through the central part of the trunk; whilst, at the same time, a liquid of different composition from that of the sap, and which is called the *proper juice*, moves in the opposite direction—viz., from the leaves to the roots, passing through the cortical tissues. These facts may be readily verified by [illegible] simple experiments which we need not further particularize here. Hales has demonstrated that the amount of liquid absorbed by a growing plant increases in proportion to the super[illegible] its leaves, which fact he attributes to the evaporation operated through the agency of the lat[illegible] The forces of capillary attraction and of [illegible]bibition alone will not enable us to [illegible] [illegible] movement of the juices in [illegible]

[illegible] the cut [illegible] A bent glass tube, [illegible] and pou[illegible] to the unattached arm of the [illegible] liquid rise in the open arm to [illegible]-eight inches above the level of the fluid in the other arm; which shows the amount of pressure from beneath that supported the mercury—a pressure which can be attributed only to the liquid aspirated by the vine, and subsequently expelled through the cut. This *force of impulsion*, and the escape of the sap through a cut, are facts altogether incompatible with the effects of capillarity and imbibition. We saw in the chapter on Capillary Attraction that the same force which raises a liquid in a capillary tube, cannot effect its overflow and escape from the tube. Dutrochet has demonstrated by a simple experiment that the force of impulsion which causes the juice of a plant to ascend from the lower to the upper parts has its seat in the final extremities of the roots. This distinguished physiologist lopped the trunk of a vine, by successive cuttings, even down to the roots, and found the flow of sap continuing; he then removed even part of the deeper roots, and yet the sap continued to flow; and so it did still from some of the smallest radicular filaments that he placed in water. These experiments show that the force of impulsion is seated in the *spongiolæ*. Dutrochet adds that he has discovered in the cortical cells of the spongiola a liquid of greater density than water, and coagulable by nitric acid; whence he argues that the spongiolæ, or rather the cells encircling them (and which contain this fluid of greater density than water), are to be looked upon as a group of endosmometers, and that the phenomenon of the ascension of the liquid in the plant should be considered simply as endosmotic. In the actual state of the science, this view is the least improbable, although it would be highly desirable to have the identity of these phenomena more clearly and conclusively demonstrated than it is as yet by Dutrochet's observations.

How are we to account for the ascension of the sap in a plant from which the roots have been removed, and of which the lower extremity is immersed in water? Are we to consider it as an effect of imbibition or capillary attraction? The great height to which a liquid may rise in the trunk of a tree is altogether opposed to this view, for we know that the action of imbibition and capillary attraction is confined within more narrow limits than the ascension of the sap in the trunk of plants is found to be.

Hales having observed, in the course of his experiments, that the quantity of juice that ascended in a plant was proportional to the superficies of the leaves, inferred from this fact, that the cause of the ascension resides in the leaves. According to his notion the liquid evaporates from the superficial cells of the leaves, which (superficial cells) obtain thereupon a fresh supply of juice from the subjacent cells, simply by the action of capillary attraction; and the same process of suction continues successively through the whole body of the plant down to the cut extremity.

Dutrochet has demonstrated by experiments that the absorption of plants that have been subjected to a process of drying (of course not carried far enough to alter their texture) does not increase in proportion to the respective degree of exsiccation which they have suffered. This shows that the evaporation or transpiration through the leaves is not the cause of the ascension of the liquid in the trunk of a plant.

immersed in water, or, what comes to the same point, it is not the vacuum in the superficial cells of the leaves (supposed to be created by the evaporation of their contents) that occasions the ascension of the sap. Ascension does not take place unless the vegetable tissue contain a certain quantity of water, which acts, perhaps, *per* adhesion upon the fresh water which is to ascend, just as a wet sponge imbibes more rapidly than a dry one. Dutrochet tried likewise to make dried plants reabsorb the water which they had lost by exsiccation. He found, upon immersing them subsequently in water, that no ascension took place except in those plants that had fully regained their original turgescence. Dutrochet ascribes this turgescence of the cells of the leaves to an action of endosmosis, by which the liquid would be *discharged* from the leaves in an *active* manner, and very different from the simple evaporation of a liquid in the air. In conclusion, we have to remark, that Dutrochet has demonstrated, likewise, that the influence of light upon the ascension of the sap in plants is exerted upon the process of respiration and the fixation of oxygen in the vegetable tissue.

All these facts show that the ascension of liquids in plants is not owing simply to imbibition and capillary attraction; the cause of this phenomenon is seated principally in the roots, and likewise, in some measure, in the leaves. It is probable that an endosmotic action takes place in the extremity of the roots. Might not a similar cause occasion the movement of the chyle and lymph in the lymphatics and lacteals of animals—a movement which we know to continue for some time after death?

NEW RENDERING OF THE FRENCH LANGUAGE.

Vide Dr. Goodfellow's translation of the French edition of "Matteucci," *Lancet*, June 26, p. 663.

French.—Le Professeur Piria a toujours trouvé du manganèse dans les graines du *lupinus albus*.

English.—Professor Piria always found grains of manganese in the lupinus albus!

[We will present our readers with other important renderings and discoveries next week.]

ORIGINAL CONTRIBUTIONS.

CASE OF INJURIOUS EFFECTS RESULTING FROM THE USE OF ERGOT OF RYE.

By ROBERT R. NUTTALL, L.R.C.S.I., Fellow of the Royal Botanical and Horticultural Society of Van Diemen's Land, &c.

I regret that want of time must preclude the possibility of my entering on the consideration of the present subject with the attention I feel its merits demand; however, as I contemplate at a future period doing so, I must on this occasion content myself with a cursory survey, glancing as I pass forward at a few of the most striking points of resemblance existing in the present cases, as compared with those recorded as resulting from the use of ergot in other countries. In September last I drew attention to the existence of ergot in very many of our indigenous grasses;(a) and subsequent observation has convinced me that animals grazing on pastures where this state of the herbage exists, and in some localities it is to be found so in the greatest profusion, have suffered from its use. In the year 1810, in Trois Croix, in France, an epizootic abortion amongst the cows was noticed by M. Rodin, as resulting from this cause. That the injurious effects produced on the animal economy by the use of ergot of rye has for many years existed in Ireland, though heretofore no case has been recorded in this or the sister country, will, I think, be rendered apparent.(a)

John Hughes, aged twenty years, was admitted into Dr. Steeven's Hospital, Dublin, on the 17th of June, 1847, under Wm. Collis, M.D., F.R.C.S.I., surgeon to Dr. Steeven's Hospital, &c. &c. His appearance is rather short of good health than otherwise; is of middle height, with light hair, blue eyes, the pupils much dilated; complains of thirst, with occasional cramps in the legs and feet, and a sense of weight and want of tone from the knees down, accompanied with loss of appetite for some days past; tongue slightly creamy on the surface, bowels regular, pulse natural; the sounds over the praecordial region are perfectly normal, but convey an impression of slowness of time-taking action; temperature beneath the tongue, 98° Fahrenheit. On examination it is found that the nails have fallen off his thumbs and all the fingers of both hands, as well as one of the lesser toes of the left foot, the denuded parts being covered with flabby granulations, secreting a fetid discharge.

Such was the state of the patient when he entered the hospital; in a few days, under the treatment adopted, the tongue became clean, the thirst ceased, and the cramps in the legs and feet were no longer complained of; in a few days, however, some degree of redness about the parts surrounding the nails of the greater, and some of the lesser, toes of both feet was observed, with a slight degree of reddish-purple colouration beneath the nail. The patient was of opinion that there was nothing whatever the matter with them; and I mention this in illustration of the manner in which the disease advances. On the 27th it was observed that the redness was increasing; that the colouration was becoming more marked; that the affected nails were becoming soft and thin, and that one, evidently in a more advanced stage than any of the rest, had become yellow, and with the point of a probe a sense of fluctuation could be discerned. The patient now expresses his fears that they are going to fall off as those on his hands had done, for the symptoms present are identical. The nail alluded to was removed on the following day without any pain to the patient, and exit given to a few drops of healthy pus. I may here remark that new nails are being formed; that the pupils still remain dilated, and that the other symptoms of nervous derangement have ceased. The patient states that he resides at Culmullin, in the county of Meath, where he occupies a small farm, on which he lives with his mother and sister, their respective ages being fifty and fifteen years; has always enjoyed good health, with the exception of an attack of fever five years since, and *in December last of bowel complaint*, which lasted five or six days. From the beginning of November last until the latter end of February the family had lived for the most part on bread and tea, the bread being made in (unfermented) cakes, and from ryemeal (amongst which had been mixed a small proportion of wheaten meal—five stones in twenty), of a very bad quality, which had grown on ground of an exceedingly poor, marshy nature, where the crops were always subject to blights—last year's crop producing from this cause but two barrels to the acre, an average produce being ten. About the first week in March the flour from this source became expended, and since that time they have lived on cakes made in the same manner, but of wheaten flour of a good quality. About the beginning of April he was sensible of "stings of cold" at the ends of his fingers, the nails of which became one after the other of a dark purple colour, but at this time unaccompanied by pain; in about a fortnight or three weeks after this "they began to fester, and had a terrible burning pain in them"; the pus then issued from beneath and around the nails, which, in about a month afterwards, together with the greater part of his hair, fell off, the integument in that situation being exceedingly tender at the time. He also observed that when he made a full inspiration darting pains were experienced in the fingers of the right hand. About three years since, after eating the same kind of bread, his nails had fallen off; but this had taken place with little pain or inconvenience, the new nails having formed before the old ones were quite removed; and the process was so gradual as not to interfere with his occupation as a labourer. His aunt lost all her nails from the same cause. His mother and sister are at this moment suffering in the same manner; their hair has likewise fallen off.

The same results have been observed from time immemorial amongst persons residing on contiguous farms, when they eat unsound rye, or that produced on grounds lately reclaimed or broken up from pasture lands. Several of his hens had died some time after the rye was thrashed. Horses and cows grazing on the neighbouring pastures are subject to a lameness, in the course of which they gradually lost their hoofs. Says he has seen a calf, only a few months old, so affected. Had known several men who lost their nails after having eaten the same description of bread: this was by some attributed to cold, as the men had been engaged forming drains. The same thing had been supposed in his case, but his mother and sister, who had never been so exposed, were just as much affected as himself.

I have thus detailed as nearly as I could, and, in some instances, in his own words, the account given by the patient, who is rather an intelligent young man; and I think that his present state, coupled with the foregoing account, can leave little doubt as to the fact of the disease having resulted from the use of ergot of rye. Here we find three persons, living in the same house, and on the same description of food, and for a like period, similarly affected: we also find this to have occurred before, under like circumstances. We learn that the same thing has been observed for years, as resulting from the use of rye, in seasons when it had been "blighted," or when grown on lands lately reclaimed. The latter is strictly in accordance with the experience of the Abbé Tessier (a)—"*Dans une terre nouvellement défrichée, en fit une belle récolte.*" We find that fowls fed on this grain have died, and that animals grazing on contiguous pastures had become foundered, and cast their hoofs. Like effects have been repeatedly observed by others. M. Roulin, when speaking of the effects of ergot of maize—*mais peladero*—says:—"On donne au grain ainsi altéré le nom de mais peladero, c'est-à-dire, qui cause la pelade: il fait, en effet, tomber les cheveux des hommes qui en mangent, et c'est un accident qui se remarque beaucoup dans un pays où la calvitie est presque inconnue, même chez les vieillards." * * *

"Les mules à qui on présente le mais peladero, le mangent comme s'il était sain. Si l'on continue à leur en donner, leur poil tombe, leurs pieds s'engorgent, et quelquefois même le sabot s'en detache. Comme, dans cet état, l'animal n'est plus propre à servir on le reléque communément dans des pâturages éloignés des habitations; en ces lieux, la cause de la maladie ne subsiste plus, la santé se retablit communément, et le pied se recouvre d'un corne nouvelle." In the experience of MM. Dodart, Noel, &c., women appear to have been almost exempt from the deleterious effects of ergot of rye; but it will be perceived by the three cases immediately alluded to, that the Irish ladies have not enjoyed the same immunity extended to their sisters of *la belle France!*

Before concluding these few crude and hastily-thrown-together sentences, I may remark that no symptoms of fever, pain, or inflammation ap-

(a) *Lolium perenne; Holcus mollis, H. lanatus Nardus stricta, Poa annua, P. fluitans, Aira cristata, A. Cæspitosa, A. præcox; Dactylis glomerata; Anthoxanthum odoratum; Melica cærulea Arrhenatherum avenaceum; Festuca duriuscula Agrostis alba, Elymus arenarius*, &c.

(a) The cases alluded to by Dr. C. Woolaston in "The Philosophical Transactions," vol. iv., for 1765, p. 110, had reference to unsound wheat.

(a) "Traité des Maladies des Grains," par M. l'Abbé Tessier, p. 17.

pear to have ushered in the onset of this disease; the sensation of burning pain did not occur until about the period when suppuration commenced, and that this symptom has not accompanied or followed the separation of the nails of the toes. The time occupied in the casting off the nails of the fingers, after suppuration had commenced, extended over a period of four weeks, while that of the nail of the toe removed since his admission was perfected in as many days.

Our knowledge of the laws under which the action of certain deleterious substances received into the system are augmented or modified, rendered active or inert, injurious or harmless, in different constitutions, circumstances, climates, and localities, is as yet in its infancy—as yet amongst Nature's archives unscanned and unravelled; it was not until 1676 (a) that the obvious fact of entire limbs separating from the body in an unaccountable manner, and from no obvious cause, was traced home, and the subtle source of death revealed. Much has been written, many the specious arguments adduced, to support individual opinions; but, after all, what does our knowledge amount to? Do we know what prophylactic means to adopt, what remedial treatment to employ? In truth we do not; and even theory itself, the great wet nurse of all startling wonders—the great rallying point and foundation on which the lighthouse of empiricism rests—has failed us in our hour of need!

FRACTURE OF THE BASE OF THE SKULL.

Reported by W. G. DALGAIRNS, M.R.C.S.L.,
Late Physician's Assistant to King's College Hospital, and Surgeon to the Strangers' Hospital, Graville, Havre, France.

Thomas Gibson, aged twenty-one, mason, single, of intemperate habits; admitted into the Strangers' Hospital, Havre, Monday, October 26, 1846.

His comrades who brought him to the hospital stated, that on the 25th, about seven o'clock P.M., being in a state of intoxication, he fell down stairs, and, as they supposed, hit his head ag the stone steps. He was immediately taken and put to bed quite insensible, in which state he remained the whole night, continually calling out and moaning.

At eight o'clock the next morning, when I first saw him, he presented the following symptoms:—His face was pale; his skin moist and cold; his head cool; tongue moist and furred, protruded straight, but with difficulty; deglutition not affected; sphincters perfect; no impairment of sensibility or motion, but his memory is confused, and he complains of intense pain over the whole head, but cannot refer it to any particular spot; pupils contracted and sluggish, but acting feebly when exposed to a strong light; blood continually oozes from the meatus of the left ear, around which there is tenderness on pressure; he rejects all food, has no appetite, but complains of thirst; breathing natural; he lies on his back, sometimes shifting to his right side, but is unable to lie on the left pulse 00, weak. Ordered head to be shaved, and ice applied.

℞. Hydrargyri chlorid., gr. x.; olei crotoni, gutt., j. statim.

℞. Ol. ricini, ℥j.; ol. terebinthinæ, ℥j.; decoct. hordei oct., j. Fiat enema utend quatuor horis post pil.

Towards the middle of the day his bowels were well opened, but the sickness remained as frequent as ever. He complains for the first time of great pain in his back, but of no tenderness along the vertebral column.

27. Has passed a restless night; sickness less; has retained on his stomach a small quantity of tea; pupils less contracted and acting feebly; the oozing from the ear is less, and not so highly coloured; bowels well opened; his skin is cool; his pulse weak, 60; pain in his back much worse. Ordered dry hot flannels to be applied to the back and loins.

Ten P.M. Skin hot and dry, and especially the head; tongue dry. Curcurbit cruent. ad ℥x nuchæ.

28. Has passed a good night; his head is less painful, and his skin cooler; still complains of thirst, but can only retain the smallest quantity of fluid at a time; oozing from the ear has almost ceased.

Nine P.M. The heat of skin and pain in the head have returned; pulse laboured, 88. V. sectio ad ℥xvj., and sinapisms to the neck. Clot large and firm; blood buffed and cupped.

29. Passed a good night; is free from pain; oozing from the ear in large quantity, but not high coloured; his memory is confused, but he talks rationally, and has asked, for the first time, for something to eat; a small quantity of mutton broth was given, which he retained; bowels open; head cool; tongue moist.

℞. Hydrargyri chloridi, gr. ij., ft pil. 4tis horis sumend.

Ten P.M. Continues much the same; no fever, and no pain, except in the back, to which I applied a hot bran poultice.

30. Continues much the same; has taken a small piece of dry toast and a little tea for breakfast; pulse 60; head cool, but, if anything, *rather* hotter than natural; bowels open; urine copious, high coloured, having a large deposit of pale lithates; oozing from the ear rather less.

Three P.M. Head and skin very hot; tongue dry, deviating to the left side when protruded; speech thick; he wanders a good deal, and moans frequently; pulse labouring, 70; he is continually holding his head with both hands, and turning from one side of the bed to the other; respiration laboured and stertorous; bladder tense. Passed a catheter, and drew off his water. Venæ sectio ad ℥xvj.

Five P.M. Evidently relieved, as the skin cooler, but he still remains insensible; the blood which had ceased to ooze from the left ear begins to flow again.

Ten P.M. Drew off his water; breathing freer, moans less; surface cooler; has passed a motion under him.

31. Considerably better in every respect water still obliged to be drawn off; speaks with ease and sensibly; head cool; tongue moist has taken some broth with apparent relish oozing from the ear scanty; pulse 60.

Eleven A.M. All the bad symptoms have reappeared; pulse so weak as scarcely to be felt; right side paralyzed, as he merely moves the left leg and arm; mouth drawn towards the left side; teeth so firmly closed as to permit of nothing passing; oozing from the ear has ceased; drew off his water, which was ammoniacal. He continued much in the same state until four P.M., when he died.

Post-mortem Examination Eighteen Hours afterwards.—Over the parietal eminence, under the scalp, about half an ounce of coagulated blood. On cutting down through the scalp to the pericranium, a fracture was observed, extending from an inch below the parietal eminence through the squamous and petrous portion of the temporal bone, passing along the meatus auditorius internus, and involving part of the greater wing of the sphenoid. A large clot of blood of some inches in extent was observed under the seat of fracture, which could be separated into layers, as if the hemorrhage had occurred at different periods. The substance of the brain was healthy, as well as the spinal column. The cause of death in this case was undoubtedly the pressure of the clot on the brain, as all the bad symptoms appeared to have been regulated by the flow of blood from the ear: while it continued, the patient was comparatively easy; as soon as it ceased or diminished, the bad symptoms returned. The division of the clot would also tend to support this opinion, as there were three layers, which corresponded to the several attacks he had.

SCURVY OCCURRING AT SEA AND ON LAND.

On the 10th of April, three Danish sailors were admitted into the Strangers' Hospital, Havre. They complained of the following symptoms:—Great weakness, languor, loss of appetite, and pain in the head and limbs. In two of the sailors the left knee-joint was the most affected, so much so as to prevent them from using the limb; in the third all the joints were equally affected, but not severely. Their gums were spongy, and bled on the slightest touch; there was also bleeding from the nose, and blood passed in clots by stool, and a number of purpuric spots, much resembling bruises, were perceived about the legs, arms, and body. It appeared that they had just arrived from Patagonia, having been seven months on the voyage, living *entirely* on biscuits and salt beef. As their cargo was guano, and the stench arising therefrom very offensive, to it was attributed their illness, by the captain, &c. Their spirits were so low that they seemed to take notice of nothing, and it was with difficulty that they could be made to take food; their stomachs so irritable that even the smallest quantity of solid food was rejected. Their thirst was great, the tongue dry and of deep red colour; their stools were of a light colour, but contained clots of pure blood. The urine was phosphatic, soon becoming ammoniacal, but quite free from blood. The skin was dry and almost scaly.

10. For the first day, as their stomachs were very irritable, they were given effervescing lemonade, and towards evening a small quantity of beef-tea, in which potatoes had been boiled.

11. Passed a restless night, talking and starting in their sleep; have more appetite this morning, and have taken more of the beef-tea, prepared as before, and as much lemonade as they pleased. The pains in the joints and head less violent.

12. Have passed a better night, and have eaten with relish a number of potatoes with fresh meat, for dinner. Pains in the joints less, but the stiffness continues much the same; the diarrhœa has entirely ceased, blood being no longer passed by stool; gums less spongy, but still bleeding on pressure; purpuric spots fading.

℞. Ferri citrat., gr. ij.; infus. quassiæ, ℥j. ter die sumend.

They bore this medicine well, and continued to take two lemons apiece daily, and as many potatoes as they pleased. In ten days from their admission one was discharged quite cured, another three days afterwards, but the third was still unable to straighten his knee. A local vapour was ordered every night, and camphor liniment to be rubbed twice or thrice a day; and a week afterwards he also was discharged cured.

A few days afterwards three French railway labourers were admitted into the Strangers' Hospital with much the same symptoms, all having purpuric spots on their legs, and spongy gums, which bled readily on the slightest touch, and one passed clots of blood with his stools. The spots were of a dull red colour in the thighs, and of a deep purple in the legs, here and there intermixed with livid blotches: these were not effaced by pressure, and were tender, particularly the lower spots. The legs were œdematous, pitting on pressure.

On questioning them it was discovered that they had been living on soup made with bread and water, and sometimes a little grease, and had abstained entirely from vegetables.

They were all placed on much the same regimen as the Danish sailors: stimulating liniments being rubbed on the legs and thighs, and bandages applied; and the citrate of iron mixture in the same dose three times a day.

A purpuric spot in one patient was nearly forming an open sore; but it healed kindly on the application of brandy and hot fomentations. In a fortnight they were all discharged cured.

In the first cases, the three usually assigned causes of scurvy were present—impurity of air, the continued use of salt provisions, and the pri-

(a) The description given by the professors of the University of Marpurg in 1597 was, from the use of unsound bread; my memory does not serve me as to what sort of flour it was made from.

vation of succulent vegetables. In the three last there was not only insufficiency of food, but abstinence from all meat as well as vegetables. That the last of these, namely, the privation of vegetables, is the chief and usual cause of scurvy, I have pretty well made up my mind, as I have frequently had similar cases since, but not sufficiently aggravated as to have been admitted into the hospital, and have ordered the patients to lay out a portion of their money in vegetables, chiefly potatoes (their earnings not been sufficient to enable them to get meat), and thus, by living on bread and vegetables, have invariably been cured, and a recurrence of the disease prevented.

Unfortunately at this time, on account of the high price of provisions, numbers of these cases come under my notice, and each tends to prove more strongly the idea that the abstinence of vegetables is the true cause of scurvy. The spots in all the cases resembled each other so perfectly that it was quite impossible to discover any difference between those which had originated at sea and those on land.

June 23.

REMARKS ON THE SCURVY ENDEMIC AT NOTTINGHAM.

By W. PHILLIMORE STIFF, M.B.,
Surgeon to the Nottingham Union Hospital.

The existence in this town of that hitherto rare disease, true scurvy, cannot be doubted; and from the numerous, severe, and even fatal cases which have occurred, it may safely be inferred that it is prevalent to a fearful extent in various parts of the kingdom, not only amongst individuals collected in eleemosynary establishments, but also amongst scattered populations, which have been deprived of the use of fresh vegetables during the past winter. It would be superfluous in this paper, intended only as a brief notice of the disease as it now prevails here, to enter into a history of it at former periods, but I consider the remarks made in the quarterly report of the Registrar-General very appropriate for quotation; and, if these returns were more extensively distributed, they would confer corresponding advantages. In the report of the Health and Mortality of 115 districts in England, published on the 29th of January, 1847, there was announced an anticipation of this disease. The Registrar states that "No mention is made of the potato disease having had any direct connection with the mortality. The potato, in a state of partial disease, has no doubt been extensively consumed, without giving rise to any specific malady in man, or, indeed, having any appreciable connection with the disorders of the bowels and fever, which grew prevalent about the time the last crop came into use. The absurd and unfounded fancy, that the cholera epidemic, so fatal to infants at the breast, and old people as well as others, is caused by fruit, or has any connection with the 'plum season,' derives not the slightest support from the observations of the year, when the supplies of fruit were unprecedentedly scanty. Dr. Baly, the physician to the Milbank Penitentiary, showed, some time ago, that scurvy was very prevalent in prisons from the dietaries of which potatoes were excluded, and did not exist where potatoes were used. The potato contains a small quantity of vegetable acid, in combination with potash (bitartrate of potash or cream of tartar). It is certain that scurvy, which was formerly common, has almost disappeared since the potato has entered largely into the food of the population. If, now that the potato has grown scarce, this disease, characterized among other symptoms by swollen bleeding gums, again become prevalent, its simple prophylactics should be had recourse to." This anticipation of the disease, now become a reality, and the value of the potato as an antiscorbutic being verified, it is to be hoped that these facts will prevent the public from being dissuaded from the culture of this valuable esculent, notwithstanding the violent opposition to its use by a late celebrated political writer, and the more recent attempt to encourage its extinction by the foreboding of its imaginary annihilation by the so-called aphis vastator.

In the same valuable report, examples are given of the ravages which have been caused by this disease. It is stated that "down to the end of the last century the loss of life in our shipping was immense. The first fleet of the East India Company, out of 528, lost 100 men before and 5 after landing, in the voyage of seven months to the Cape of Good Hape. Anson, in three ships, lost 626 men out of 961, in ten months after leaving England. The men had scurvy, dysenteries, putrid fevers; their limbs dropped off; they swooned and died. In the year 1780, the Channel fleet sent 11,732 sick to Haslar Hospital; 1475 had scurvy, 240 dysentery, 5539 fever. At that time Sir James Saumarez said, 'Neither the ships nor men could keep the sea more than two months.' Captain Cook left Deptford in 1772 with 112 men, sailed round the world, and returned in three years with the loss only of four men by accidents, and one by disease."

It is well known that the means which he adopted to preserve the health of his crew were ventilation, good provisions, good water, antiscorbutics, and lemon-juice.

In this town this serious malady has been and is now prevalent amongst the poorer classes, who have suffered much during the last winter from scarcity and dearness of provisions, insufficient clothing, want of employment, and absence of succulent vegetables; but, from observations made on in-door patients at the workhouse, there can be no doubt but that the absence of the potato and swede turnip has been the real cause of the disease, since the other causes enumerated could not obtain where the diet was good and sufficient, ventilation and warmth well provided, and no disadvantageous alteration except the necessary substitution of rice and Indian meal in place of the usual vegetable. In this union potatoes formed an article of diet until Christmas, and on account of the scarcity, swede turnips were substituted with advantage till the 20th of March; for the same reason, at this period, the latter were discontinued, and during the use of both no symptoms of scurvy were manifested. It then became necessary, on account of the failure of both, to use rice and crushed Indian meal, and the following diet of good quantity and quality was made use of:– For breakfast and supper daily, bread with tea, or milk-porridge; for dinner, Sunday, beef seven ounces, and hominy or crushed Indian meal; Monday, bread with meat broth; Tuesday, suet pudding; Wednesday, hominy with treacle and vinegar sauce; Thursday, beef and hominy or rice; Friday, bread and broth; Saturday, bread and pea-soup. For the aged and infirm, bread and cheese with beer twice a week at supper.

From about a month to six weeks after the disuse of the potatoes and swede turnips, symptoms of scorbutus broke out amongst some of those inmates who had resided for a length of time in the union workhouse, characterized by debility, sallowness, and in several instances jaundice, petechiæ, bruise-marks, spongy and bleeding gums, neutral urine of high specific gravity—in some 1·027 at 60° Fah.

The cause of the endemic was apparent, and means were immediately taken to prevent its spread or recurrence. The situation of the workhouse on the new red sandstone, in an elevated position, facing the country; well supplied with water, and well ventilated; dietary sufficient in quantity, no salt provisions of any kind being supplied; the time of year, namely, end of winter and beginning of spring, corresponding with its appearance in other times and countries; the period of a month or six weeks elapsing after the continuous use of farinaceous food; the subsequent dietetic alteration—all tend to strengthen the opinion that the want of a fresh succulent vegetable, containing a vegetable acid, was the sole cause of the malady.

There appeared to me several things worthy of notice: neither children at the breast of those attacked or free from the complaint suffered; nor children of either sex under five years of age; girls were less liable than boys, but boys, adults of both sexes, and especially old men and women, were subject to scurvy; paralytics have been peculiarly obnoxious to it. The disease commences with debility, inactivity, sallowness of the countenance, and flying pains in various parts of the body, before the gums take on their remarkable appearance. At first the margin of the gum is livid for one or two lines, even when the mouth and lips are anemic, and this appearance resembles the lead symptom, but is not so well defined; the gum swells, separates from the tooth or stump, becomes rounded and spongy, secretes more tartar, and bleeds; in some cases the gums have been so enlarged behind and in front of the teeth that these could not be approximated, the teeth loosen, and the blood, putrefying in the mouth, causes a most fetid odour. These marks of the disease are most apparent where the teeth are carious, or where there are bad stumps; and sponginess with bleeding may exist around molars, whilst the gums encircling the teeth in front, if they are sound, may not be at all influenced. In old and edentulous subjects the gum symptoms do not make their appearance, and I am not aware whether this has been noticed by writers on diseases of seamen. Sailors afflicted with scurvy are generally able-bodied men, and few are so old as to be without teeth, so that thus it may have escaped comment.

In boys, petechiæ appear on the legs, but are often absent when the gums are advanced in the spongy state; ecchymoses are infrequent and slight. In adults both exist, the petechiæ appearing generally before the bruise-marks. In old people these effusions of blood take on a different appearance. In most cases there is universal sanguineous effusion, or congestion of the feet and legs, bruise-marks and petechiæ frequently coexisting.

In a medico-legal point of view, the existence of bruise-marks on the extremities, without any external physical cause, is of importance. Ecchymoses certainly occur at this season from scurvy, of various colours in different individuals, and go through the usual course of bruises, passing from lividity through the usual shades of blue, green, and yellow, and in no way to be distinguished from true contusions, except by taking into consideration the time of year, diet, spongy gums (which do not always exist), and other corroborative circumstances. In a scorbutic case which came under my notice, the patient declared the bruise-marks were occasioned by blows which it was known could not have been received for five months previously.

The method adopted to prevent and eradicate the scurvy has been marked with immediate benefit: cabbage instead of Indian meal, green rhubarb with puddings, fresh vegetables to soup, lettuce at supper, and imperial as a diet-drink, were employed, together with citric medicines; but these remedies, so easily procurable and applicable in large establishments, may perhaps with difficulty be procured by a remote poverty-stricken population; and it is thus the more important that this disease, so insidious and protean in its early stages, should be searched for, before its effects become as formidable as those which in former times afflicted the unfortunate seaman.

Nottingham, June 21.

ANOMALIES OF THE CILIARY GANGLION.

By CHARLES HENRY HALLETT, Esq., Demonstrator of Anatomy in the University of Edinburgh.

Whilst executing some dissections of the nervous system in the spring of the year 1846, for Professor Goodsir's lectures on Descriptive Anatomy, I happened to meet with an irregularity in the formation of the ciliary ganglion, which attracted at the time but little attention. Since that period two other irregularities in the ganglion have come under my observation, one of

them resembling that previously mentioned so closely in every essential respect as to leave no doubt that the ciliary ganglion is not only liable to deviate occasionally from the normal state, but also that such deviations are of a determinate nature. This circumstance, combined with the belief that future observation will trace similar irregularities in the rest of the cranial ganglia, and that a series of such observations will tend to throw some light on the exact nature and the functions of these ganglia, has induced me to record the anomalies to which I have just referred.

In two of the three anomalies the ciliary ganglion, properly so called, was wanting in both orbits, the nerves usually entering into its formation uniting in a very peculiar manner so as to fully compensate for its absence. The arrangement of the nerves in the first instance was as follows:—

The nasal branch of the ophthalmic division of the nervus trigeminus, on entering the orbit, gave off three large ciliary twigs, which, running parallel and external to the optic nerve, passed on to and pierced the sclerotic coat of the eyeball. As the nasal nerve was about to cross over the upper surface of the optic nerve, it furnished a filament of some considerable size which coursed under the optic nerve, between it and the inferior rectus muscle, and gained the inner side of the orbit. Immediately to the inner side of the optic nerve this filament united with one from the motor oculi, and another from the sympathetic nerve. The communicating filament from the motor oculi came, as usual, from the branch which proceeds from the lower division of that nerve to the inferior oblique muscle of the eyeball; and that from the sympathetic nerve was traced coursing along the fourth nerve, from which it at first appeared to be derived, to the carotid plexus. The filament from the nasal nerve and that from the motor oculi were so intimately blended and evidently continuous with each other, that no rigid line of demarcation could be drawn between them. They formed an arch, the concavity of which looked backwards, the convexity forwards. The filament from the carotid plexus joined the concavity of the arch, and probably marked the place at which a ganglion should have been found. From the convexity of the arch, several ciliary twigs passed off which pierced the sclerotic coat of the eyeball to the inner side of the optic nerve; the outermost twig being joined by one from the nasal nerve. No evident enlargement and no ganglionic vesicular nervous matter could be detected at the point of union of the three nerves, nor indeed in any part of their coursing: their junction, in fact, closely resembled that which takes place between the descendens and communicans noni nerves in the neck, the only difference between them being the presence of a nerve from the sympathetic system.(a)

The second example presented similar peculiarities. The only difference between it and that just described was in the course taken by the communicating filament of the nasal branch of the first division of the fifth nerve, which, instead of passing under, ran over the optic nerve, and consequently produced a larger arch, the concavity of which embraced the optic nerve. In all other respects the nerves were connected with each other, and were distributed in precisely the same manner as I have detailed at length in the first example.

One circumstance connected with both these anomalies seems worthy of especial notice, namely, that the ciliary twigs from the nasal nerve entered the outer instead of the inner segment of the sclerotic coat of the eyeball, and those derived from the plexus, which was placed on the opposite side of the orbit to that which the ganglion always occupies when present, pierced the sclerotic coat to the inner side of the optic nerve. The usual distribution of the ciliary nerves in these two cases was, therefore, reversed.

In a subject the orbits of which I partially dissected last April, for one of the students in the rooms, I was so fortunate as to meet with the very reverse of the foregoing state of parts. The ciliary ganglion was double in both orbits of this subject. The observation is the only one of the kind I have made, but the interest attached to it, when considered in relation with the other and different anomalies, is a sufficient excuse for my giving a brief description of the arrangement of the nerves and ganglia.

The nasal nerve furnished its usual branch of communication to the ciliary ganglion, which was situated in the usual place, and formed in the normal manner. As it passed over the optic nerve, it furnished another branch which ran parallel to the optic nerve, and united close to the eyeball with two of the ciliary nerves proceeding from the ciliary ganglion. At the point of junction of these three nerves another ganglion was formed. This second ciliary ganglion was similar in shape to the usual one, was as large, and contained a considerable amount of vesicular nervous matter. It distributed five filaments to the eyeball, which pierced the sclerotic coat above and internal to two other filaments coming directly from the posterior ganglion. The nasal nerve also furnished some ciliary nerves which were unconnected with the others. In the right orbit, an extremely fine filament was given off from the lower surface of the anterior ganglion, which broke whilst I was attempting to follow it to its termination. From the course this filament was pursuing, I had little doubt that it communicated with the lower division of the motor oculis.

The first two observations would appear to favour the conclusion that the ganglia seated on certain branches of the cranial nerves perform the functions of a nervous plexus whose action is peculiarly modified by the intermixture of ganglionic vesicular matter. I had no means of determining whether, in the cases I have related, the functions of the ciliary ganglion had been duly performed by the filaments derived from the arch of junction of the nerves which generally unite to form it, but knowing there can be no material deviation of a nerve, or of a part of the nervous system, from the normal state, without a corresponding deviation of function, and finding, in these cases, a complete nervous plexus instead of the ganglion and that plexus connected directly to the sympathetic system, we may, perhaps, be justified in presuming that they were duly performed. Should it be discovered hereafter that the functions of the ganglion are carried on by the plexus, without any appreciable irregularity, then it may be inferred that, although the vesicular nervous matter appears to modify the action of certain branches of the cranial nerves in such a manner as to adapt them to peculiar purposes, its entire absence would not necessarily induce irregularity in their action, provided the nerves had a direct communication with the sympathetic system of nerves. If, on the other hand, the functions were not properly performed, then it becomes a matter of considerable interest to determine what defects of vision, or what derangements of the eyeball, are consequent on the absence of a ganglion on the nerves. These questions may, perhaps, be solved hereafter by connecting the history of the individuals with the anomalies, should such be found.

(a) These peculiarities were pointed out by Professor Goodsir, in the lecture for which the dissection had been made.

SUGAR FOUND IN THE PERSPIRATION, NASAL MUCUS, TEARS, AND CERUMINOUS MATTER OF THE EARS.

By JAMES OGDEN FLETCHER,
Student at the Manchester Royal Infirmary.

The following is a brief report of the patient who was the subject of experiment.

Ralph Duckworth, aged thirty, a power-loom weaver; he is married, and comes from Blackburn; was admitted into the Manchester Royal Infirmary on the 3rd of May, under the care of Dr. Wilkinson. When admitted he presented the usual symptoms of a confirmed case of diabetes, from which disease he had been suffering for near nine months; it appears to have come on whilst he was convalescent from a severe attack of typhus fever. The skin was very dry, he perspired a little during the nights occasionally; was passing seven quarts of urine in the twenty-four hours, of a specific gravity of 1·053.

He was ordered to have generous diet.

℞. Pulvis Doveri gr. iv. in pulv. j. nocte maneque sumend.

Date.	Amount of Urine passed in 24 hours.	Specific Gravity.	Amount of Liquid drunk in 24 hours.	[Sy]mptoms.
May	Quarts		Quarts.	
13		1·050	6 ..	He perspires more during the night; in other respects he continues the same.
17	4 ..	1·035	5 and a pint	Continues to perspire more freely.
18	5	1·034	The same	Perspires much less; no other change.
19	5 ..	1·040		Perspires very little.
20	5 and a pint	1·034		Still perspires very little.
21	and a pint	1·039		Skin generally very dry.
22	The same	1·038		He never perspires now but for a moment or two during the night.
23	The same	1·040		
24	..	1·039	,,	The skin has been constantly dry since the 22nd.
25	4 and a pint	1·038	4 and a pint	Surface dry.
26	The same	1·039	5	
27	3 and 3 gills	1·038	4 and a pint	He has begun to perspire freely during the night.
28	3 and a pint	1·040		Perspiration increased.
29	The same	1·038	. .	He perspires profusely both during the day and night.
30		1·039	The same.	
31		1·040		
June				
1	,,	1·037		The perspiration is still more profuse.
2	3 and 3 gills	1·036		From this time up to the close of the report, he has continued to perspire profusely. His general appearance is not improved, is scarcely any stronger; appetite keeps ferocious.
	The same	1·037	The same.	
	3 .	1·039		
	The same	1·039		

From the 3rd of May, when he was admitted, to the 18th, there was a diminution in the density of the urine of 19°, although he was making two quarts less urine, and drinking the same amount of fluid, without any improvement. And from the 18th to the close of the report the

quantity of fluid drunk was diminished gradually; so also was the amount of urine excreted in the twenty-four hours, and this without any great increase in the density; at the same time the skin was acting very freely, yet any improvement in his general health was not perceptible.

As an increase of the density of the urine in this disease always indicates an increase in the amount of sugar, so a diminution in the density will indicate a diminished amount of sugar in that fluid.

Hence it has been acknowledged that a diminution in the density of the urine, *without* an increased amount being eliminated, is very favourable to the patient's recovery, inasmuch as there is less of the "morbific matter" excreted. Although the density of the urine and the quantity excreted since his admission have very greatly diminished, there was no improvement in his general health.

I have endeavoured to account for this by proving that there was not actually less sugar excreted, but that there was less eliminated by the kidneys. On the 17th I requested him to place a piece of flannel, three inches square, in the left axilla (where he said he perspired most). After the flannel had remained in this place for forty-eight hours it was removed, and from this flannel I obtained six grains and a half of crystallized and amorphous sugar, or one grain and one-twelfth as eliminated from each square inch in twenty-four hours. Dr. Carpenter states the surface of the body of a man of ordinary stature to be 2500 square inches. Now, if for the sake of an estimate we suppose the whole body was perspiring at an equal rate, we should thus have 2705 grains of sugar eliminated by the skin in twenty-four hours. This rough way of making an experiment will serve to show that the amount of sugar excreted by the skin on the 17th was rather more than a third of the whole amount of solid matter contained in the urine of that day. A calculation of the solid matter (contained in the four quarts of urine excreted on the 17th), made from the tables given by Drs. Christison and G. Bird, gives 7167 grains as the amount excreted in the twenty-four hours.

In the action of the skin we have an explanation of the diminution of the density of the urine without any actual improvement, and we may, by attending to its action, explain the reason of the fluctuation in the density and quantity of urine, so constant in diabetic cases. From a second experiment made on Ralph Duckworth, when the skin was acting very freely, I obtained 2 1-18th grains of sugar from one square inch: this showing that there is an increased amount of sugar excreted by the skin at the time that there was *less* eliminated with the urine. And in three cases that I have examined, I have found that this increased excretion by the skin has borne a proportion to a diminished excretion by the kidneys. Hence sudorifics that are used in the treatment of this disease to promote the action of the skin, by so doing afford a larger surface for the elimination of sugar, and diminish the amount required to be excreted by the kidneys, but do not really diminish the amount excreted; hence their good is more apparent than real. The tests I used to ascertain the presence of sugar were Frommherz's, Moor's, fermentation by yeast, and in every instance procured crystals, or amorphous mass of sugar, by the evaporation of an alcoholic solution. Specimens of the sugar I have forwarded to Mr. Lumb, surgeon, of Rochdale, and Mr. Milner, surgeon, of Wakefield, both gentlemen being very excellent microscopists; and they have confirmed me in my opinion of the crystals being sugar.

By the means above mentioned I have obtained evidence of the existence of sugar in the nasal mucus, tears; and from ten grains of cerumin ous matter, which I took from the ears of Ralph Duckworth, I obtained one grain and a quarter of sugar.

The existence of sugar in the perspiration of diabetic patients was pointed out by Nasse, Rhein. Corresp. Blatt., 1842; also by Simon in a case where he could not detect it in the saliva. Dr. Francis proved it to exist in the sputa; and previously it had been proved to exist in the saliva and fæces, vomited matter, and the blood; had it not been detected in the last-named fluid, the existence of it in the various excretions would of itself have been sufficient to have led to the inference of its existence therein.

FOREIGN PRACTICE.

Reported for the MEDICAL TIMES by ALFRED MARKWICK, Esq., Surgeon to the Western German Dispensary, and formerly Externe to the Venereal Hospital, Paris, &c.

CANCER OF THE BREAST; OPERATION CONTRA-INDICATED; COMPARATIVE VALUE OF CAUSTICS.
Clinical Remarks by M. Velpeau.

A country woman about fifty-five years of age, lying at No. 2 in Sainte Rose Ward, has again placed herself under our care for a cancer of the breast. When she first presented herself to our notice the tumour was nearer its origin, well circumscribed, movable in fact, was in a favourable condition for an operation. There was, however, no pain in the tumour, and the patient, not understanding why a swelling which caused her no uneasiness should require the use of the knife, refused to submit to the only efficacious remedy which could be proposed to her, and returned into the country. The tumour is now ulcerated, adherent, and probably extends down to the ribs, and the patient is anxious for what she before was unwilling to undergo.

It is an evil which you will often meet with in practice, to find an operation refused at the proper time, and solicited at a latter period when the progress of the disease has rendered it impossible or of doubtful success, especially when the cancer occasions no pain; and this is of more common occurrence, since females always find medical men who will give them advice more in conformity to their taste, to the total exclusion of an operation, or tending to delay its performance. In this respect, this class of practitioners is subdivided into several categories: some have no other end in view than to give to their patients erroneous ideas of their safety, the result of which is too well known to need any mention they are quacks; others, and these may be conscientious, believe in the radical cure of cancer, at least in certain cases, and thus recommend the employment of internal remedies, before attempting, should that become necessary, the removal of the tumour. It is false to assert that medicine can cause the disappearance of even the smallest cancer, and these pretended cases of cure have been errors in diagnosis; it is only when the nature of the disease is not manifestly malignant that we ought to have recourse to internal remedies. Otherwise, if it be a confirmed cancer, we should be entering a dangerous path, losing valuable time in dissipating or diminishing the swelling of the parts surrounding the tumour, which would have no influence on the ultimate result. This method, therefore, has no advantage, but its objections are these: a cancer is often at first a local affection; this has been contested, but in my opinion it is a well-established fact. By delay, the disease becomes general, and the cancerous cellule, if it really exist, becomes absorbed, afterwards carried into the circulation, and thence to other organs—infection, in short, takes place.

On the hypothesis even that the cancerous principle pre-existed in the economy, and that the tumour was only a manifestation of it, by removing the tumour, if we did not destroy the principle itself, we at least destroy one of its effects, without any unfavourable circumstance with respect to the activity of the diathesis being the result. On the other hand, as a wound, the operation is without danger, if it is performed at the proper time—shortly after the appearance of the morbid growth, when, for instance, it is not larger than a nut. In this case we relieve the patient from it by a small incision that is scarcely followed by any reaction. My opinion is, that as soon as the cancerous nature of the tumour is evident, the operation ought to be performed with as little delay as possible. To wait until it has ulcerated and extended, and the glands have become affected, is to compromise the life of the patient as well as the science of surgery. When the glands are merely enlarged, the result is uncertain; indeed, under these circumstances, as we grow older, an operation is not thought of. Young practitioners impute this conduct to the coldness of age, and, full of confidence in the power of the art they are beginning to exercise, they consider as timidity that which is the result of experience. They persevere in their attempts, notwithstanding one or two failures, but at length they begin to alter their opinion—to grow old in their turn. They no longer submit the patient to useless torture.

In the present case the tumour is ulcerated, adherent, probably comprehends the ribs, and there are large ganglions in the axilla. This lymphatic enlargement, which is almost always cancerous, as I have just stated, would have dissuaded me from an operation, if the patient, seeing the fate that awaits her, had not by her entreaties prevailed on me to try the only means she has left, however uncertain it may be. The state of the tumour, particularly its size and depth, forbids its removal with the knife; caustics likewise are not of easy application, but they give less shock to the economy, cause no fever, and, although more painful, are less terrifying to the patient. Which caustic should be preferred? The chloride of zinc paste, the Vienna paste, or that of frere conca? To the latter there is the danger attached to the poisonous nature of the arsenic of which it is composed; and, although this danger has been exaggerated, still it nevertheless exists, as owned by M. Manée himself, and in this case the extent of the absorbing surface would still more increase it. Moreover, this paste occasions violent pain and inflammation. The Vienna paste causes an oozing of blood, which causes it to run, and its action is too superficial. That of the chloride of zinc only attacks the fungous tissues, or those deprived of their epidermis; you may hold it twelve months in your hand and feel nothing of it; but, if the epidermis is removed by a blister, the whole hand will be burnt: this is a property not less true than strange. We should, therefore, have been obliged to denude a great portion of the tumour, which would have been a very serious inconvenience; besides, this paste occasions the most atrocious suffering during the whole time of its application, notwithstanding its inventor has stated to the contrary.

The black caustic, composed of sulphuric acid and saffron incorporated together so as to form a homogeneous paste (a), appears to me to have an incontestable superiority over all the others. It destroys the whole of the surface with which it comes in contact; occasions no sanguineous oozing even where the skin is ulcerated and fungous; causes but little pain; the tissues attacked dry up, and suppuration commences with the eliminating inflammation. It is true its application is rather difficult, owing to its adhering more to the spatula than to the tissues. As it burns everything, diachylon plaster cannot circumscribe it, and can only be conveniently applied on a horizontal surface; in other situations it would in all probability run. Still these faults, which I am far from wishing to conceal, by no means counterbalance its good qualities. Indeed, I believe the black caustic is better than any other.

(a) This is Velpeau's Ethiopic caustic, or black cauterizing pommade.

ON DYSPEPSIA.

By METCALFE JOHNSON, Esq., Lancaster.

I have had occasion to notice a number of cases of dyspepsia which appear to have origin in a cause often, I think, little suspected, and hence overlooked by practitioners. They con-

stitute a set of cases which often baffle the best-directed efforts at cure. I mean scybalous collections in the colon.

There is a series of symptoms accompanying this affection which may be divided into two sets, primary and secondary.

The primary are the result of mechanical causes, while the secondary are sympathetic.

The primary symptoms are —1st. A sense of pressure from within the abdomen at about two inches above the internal abdominal ring. 2nd. Pain at a spot above the sacro-iliac synchondrosis, called by the patient "pain in the loins." 3rd. Pains in the various branches of the sciatic nerve, most commonly known to the patient as "pain in the legs," but seldom noticed by himself as anything particular, and most frequently felt on the left side.

The secondary symptoms are —1st. A pain (after meals) situate in a spot midway in the sternum between the sterno-clavicular articulation and the ensiform cartilage. 2nd. A sense of distention over the stomach. 3rd. Pain (and soreness on pressure) about an inch to the right of the ensiform cartilage, or in the hollow beneath it: this pain comes on from half to three quarters of an hour after a meal. 4th. Pain under the lower angle of the scapula, or over the coraco-humeral joint, known as connected with hepatic congestion. 5th. A general sense of coldness in the back.

The cause of the primary symptoms seems evident. The pressure of bowel, distended with hardened scybalæ upon the anterior parietes of the abdomen, causing the sense of pressure, and the pressure upon the pelvic nerves giving rise to the pains in the back and legs as described by the patient. This may occur on either side, and seems situated either in the ilio-cœcal pouch, or sygmoid flexure of the colon, or both.

The causes of the secondary or sympathetic symptoms are not so evident, though they may admit of some explanation. The pain in the sternum is often accompanied with acid eructations, and seems to be sympathetic with an irritable state of the stomach, accompanied with excess of acid in the gastric secretion, as alkalis relieve it most speedily. The distention is probably mechanical, from gaseous exhalation. The pain below the ensiform cartilage is apparently referrible to the pylorus. These symptoms I have so often found associated with the accumulation of scybalæ, that I look upon it in great measure as cause and effect.

There is also another source of dyspepsia in females which is much neglected— I mean leucorrhœa. This is mostly accompanied by a sense of pain and weight in the left hypochondrium. The leucorrhœa and dyspeptic symptoms are generally speedily removed by an astringent, either local or internal.

The above remarks refer to cases often but lightly regarded; but in country practice they form three-fourths of a man's practice, and often upon the skilful or unskilful treatment of them his success may rest.

REPORTS ON THE DISEASES OF FEMALES.

By EDWARD RIGBY, M.D.
Fellow of the Royal College of Physicians, Senior Physician to the General Lying-in Hospital, Lecturer on Midwifery at St. Bartholomew's Hospital, Examiner on Midwifery to the University of London, &c.

I propose to offer one more case of fungoid disease, for the purpose of illustrating the occasional efficacy of escharotics in these affections. I say "occasional," because, as with the ligature we only occasionally meet with cases which admit of their application, and still more rarely with cases which are decidedly benefited by such treatment. The following case is therefore, the more interesting, as the local affection was apparently entirely removed, and two years and a half have elapsed without the patient experiencing any indication of its return.

The case has been drawn up solely with a view to illustrate the local treatment and its effects; it is, therefore, imperfect in many details, which I now regret. I must, therefore, give it as it is.

M. P., aged fifty-five, married, mother of eleven children, the youngest of whom is twelve years old; miscarried frequently, once between the birth of almost every two children; ceased to menstruate four years ago.

Feb. 15, 1844. Nearly twelve months since, viz., April, 1843, was attacked with a violent and incessant itching in the vulva, which lasted for three months, unrelieved by remedies, and was followed by a sensation of burning heat and swelling in the vagina, although no perceptible swelling existed. She also suffered from dragging pains in the hips and loins, and shooting pains in the thighs and legs, especially the right; also from pains in the epigastrium, breasts, and vulæ. Had incontinence of urine three months which lasted but for a few days.

Examination per Vaginam.—A livid fungoid growth may be seen and felt on the anterior lip of the os uteri; it is of a conical shape, the diameter of its base being about that of a shilling. It bleeds readily, but not profusely. Argenti nitras has been applied once a week for some little time, but only with the effect of retarding its growth, and not of reducing its size. A thin discharge remains for a few days after the application.

Applicatur argenti nitras ori uteri bis in septimanâ.

The nitrate of silver was applied pretty regularly twice a week until the beginning of April, when, finding that its effects scarcely counterbalanced the rapid growth of the tumour, it was determined to discontinue the caustic for a while, in the hope of being able to cut off the growth by means of a ligature, and then apply it to the surface where the separation had taken place. This plan, however, did not succeed; her general suffered, and the local symptoms increased. The caustic was again resorted to every other day, and with such good success that the fungoid growth gradually disappeared under its effects, leaving a tolerably deep indentation to mark its site, which, on the discontinuance of the application, healed to all appearance in a healthy manner. She has been examined two or three times since, and no trace of the disease beyond a depressed cicatrix can be perceived on the os uteri. Some months after quitting the hospital for women, she was attacked with jaundice, and recovered with some difficulty; since which, her chief complaint has been cough of a bronchiti character.

It is not often that we meet with an isolated tubercle of a malignant character so within the reach of local applications; but I feel confident, from this and other somewhat similar cases, that when occurring under such favourable circumstances much good, if not a complete removal of the disease, may be effected by the use of escharotic applications. A somewhat similar case occurred to me shortly afterwards. A patient sent for me, complaining of darting pains in the centre of the pelvis, and many of the symptoms of inflamed cervix. On examination I found a hard pea-like tubercle imbedded in the structure of the os and cervix, which appeared to be the centre from which her lancinating pains radiated; although not very tender to the touch, examination with the finger brought on a paroxysm of these pains, which lasted for some time afterwards. The cervix, although not inflamed, was in an irritable state, depending apparently on the presence of this morbid growth; a stick of lunar caustic was rubbed upon it for some moments; a thick white slough was produced, and from that moment the lancinating pains ceased entirely, and the tubercle became nearly, if not quite, imperceptible.

CASE OF LARGE ABSCESS OF THE LIVER SUCCESSFULLY TREATED BY PUNCTURE.

By CHARLES CLAY, M.D.

Matthew H., of Stockport, applied to m in September of last year, in consequence of fixed pain and fulness in the right and superior corner of the umbilical region; for which he had been purged, bled, and blistered, but without obtaining any relief. His bowels were inclined to be constipated, and the excretions very light coloured; countenance yellow, spirits low, appetite bad, thirst, occasional sickness; pulse 90, not very full; difficulty of lying on either side, particularly the right. There was evident enlargement of the liver, little or no bile secreting. I ordered him the following:—

℞. Fel. bov. inspiss., ℥ij.; hydr. chloridi, gr. x.; div. in pil. xxii. capt. j. ter die; together with an acidulated quinine mixture, and occasional mustard cataplasms over the region of the liver.

By a steady use of these means the case soon assumed a different aspect, the pain left his side, the countenance improved, bowels regular, appetite returned; in fact, he so far recovered as to leave home for the seaside, where I had advised him to go; whilst there he felt tempted to bathe, but communicated by letter with me. I desired him not to bathe, but to content himself with change of air and scene; but the weather became so hot that he risked bathing. In the evening of the day he took the bath, the former fixed pain again came on with great violence. Bleeding and blistering were again resorted to, but little relieved, and he returned to place himself under my treatment. The same plan, with calomel and ox-gall, soon restored him to health, and for some time I saw nothing more of him. It appears, however, at the close of the year he visited some relations in Dublin, and whilst there suffered a severe relapse; the pain was acutely violent; the swelling large, very tense, and circumscribed, hard to the touch; all the accompanying symptoms were much aggravated, with the addition of great difficulty in breathing. He was taken to one of the principal hospitals in Dublin, and every active treatment prescribed, but with little or no relief; the swelling increased, but no tendency to fluctuation. *It must be remarked, that he had never had any shivering, or any symptom indicating formation of pus;* still, about two inches above the umbilicus, and about one inch and a half to the right side, a point presented itself, very much resembling a male nipple, but larger, tense or rather elastic to the feel, and of a bluish tinge. Two or three consultations were held upon the case, and it was thought the point might be advantageously punctured; but no one offered to do it, although the time was more than once fixed for the operation. Eventually the case became stationary, and it was sent from the hospital as one in which little could be done. The patient now returned home and consulted me. My first impression was that of surprise, that it had not been punctured, and my only hesitation now arose from the opinion given by a combined staff of a large hospital. I saw plainly treatment by medicine was now out of the question, I therefore took a plaster cast of the external surface, and fixed a time for opening. On the 2nd of December I passed a fine grooved needle into the most prominent point, and discovered a small drop of pus; on which I penetrated the part with a moderately-sized trocar, and obtained four pounds of pus, having a most nauseous effluvia. When entirely emptied, a long strip of lint was introduced into the cavity. For four days it discharged a pound of pus at each dressing, and for four more days about half a pound; these gradually decreased to a mere trifle; it was, however, full three months before it entirely ceased, during which time the constitution suffered severely from its debilitating influence, and it was only by powerful tonic mixtures of quinine, with occasional doses of the inspissated ox-gall and calomel to rouse the liver to healthy secretion, that the system eventually improved gradually; the function of that organ was restored, and as that took place the countenance and general health followed step by step, the bowels became regular, and the motions bilious. From the moment the chalky character left the excretions the man began to fatten; he is now stouter-looking than perhaps he ever was, and

has been for some time at his employment, enjoying the best of health. The amount of pus parted with in this case could not be less than from fourteen to sixteen pounds. Perhaps there are few cases where so extensive an affection of the structure of the liver was followed by so complete a restoration of its functions.

101, Piccadilly, Manchester.

MENSTRUAL DISCHARGE IN THE MALE.

By THOMAS BROWN, Esq., Castle Donnington.

John Pegg, aged forty-one, a sawyer by trade, requested my advice relative to a profuse discharge of blood (*per anum*) which periodically returned once a month. The man is father of a family, and suffers no interruption of good health. He has no recollection of hearing that any other male branches of his family had ever been similarly affected. The periodic discharge has continued since the year 1839, and for several years previous to this period he was a frequent sufferer from epistaxis and hæmoptisis.

N.B.—Lumbar pains always accompany the discharge.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of June 28; M. Brongniart in the Chair.

Experimental Physiology—Functions of the Spinal Chord.—M. Magendie read, on this subject, a short paper, the principal object of which was to defend the opinions expressed by himself on the difference of function between the anterior and posterior divisions of the medulla spinalis. If, says M. Magendie, a pair of rachidian nerves be carefully laid bare, both roots are found to be endowed with sensibility, but in a very different manner. In the posterior, the origin of sensibility is in the spinal chord; in the anterior roots, the sensibility is propagated from the surface. Thus, when the anterior roots are divided, the distal portion only retains its sensibility, and loses it, also, when the posterior roots are divided in their turn. In these, on the contrary, the spinal extremity remains sensitive; whereas the distal portion is perfectly insensible. Therefore, sensation is propagated from the spinal chord through the posterior roots, and reflected back again to the spine through the anterior—a result already established in 1839 by M. Magendie, and now fully confirmed by further experiment. The posterior roots are constantly sensitive; but it sometimes happens that, when the dissection has been attended with considerable hemorrhage, the anterior roots are found to be deprived of sensibility; after a few minutes, sensation is always restored—an interruption in the accomplishment of a function deserving of notice, and never to be observed in the posterior roots of the spinal nerves.

CONDITION OF THE BLOOD IN SCURVY.

M. Andral reported a case in which the analysis of the blood confirmed the results of the researches of MM. Becquerel and Rodier, published in our last number. A man, aged sixty-one, had, for several years, suffered from the gradual progress of general debility. Numerous petechiæ and broad patches of ecchymosis existed in various parts of the body, blood flowed almost continually from the nares, the gums were tumefied, &c. When the patient was admitted into hospital he was labouring under pulmonary congestion and evident febrile excitement. A small quantity of blood was removed from the arm, and M. Andral embraced that opportunity of examining the chemical composition of the circulating fluid. The clot was small, but dense and covered with a thick fibrinous crust. The chemical analysis gave the following results:—Fibrin, 4·420; globules, 44·400; solid elements of serum, 76·554; water, 874·6. Diminution of the fibrin was not, therefore, a necessary condition of the existence of scurvy, but a secondary alteration referrible to the intensity or duration of the disease.

M. Magendie remarked that it was not impossible that the fibrin, although unchanged in its quantity, might have undergone in its composition modifications by which its coagulation might be prevented. The same might likewise be observed with regard to the globules; hence the very great difficulty of drawing any important pathogenic conclusions from similar researches.

Diseases of the Larynx.—M. Segonet forwarded a memoir relative to the ossification of the laryngeal cartilages. From his researches the author was led to the conviction, that this ossification always begins in the neighbourhood of muscular attachments, is first observed in the cricoid, and lastly in the arytenoid, cartilages. When completely ossified, the cricoidian ring can no more be received under the thyroid cartilage, hence the impossibility of producing the higher notes from the chest.

ACADEMY OF MEDICINE.

Meeting of June 29; M. Begin in the Chair.

Sparkling Synchisis.—A letter was read from M. Torvignot, in which that gentleman presented a new explanation of the singular phenomena observed in sparkling synchisis. The bright specks noticed in the eye are, in his opinion, the result of the presence in the humours of floating particles of the crystalline capsule, or of a morbid secretion of the same membrane.

Obliteration of the Spermatic Tubes.—M. Gosselin read an anatomical memoir on this subject. The vas deferens, the globus major and minor of the epidydimis, the small seminiferous ducts of the testis, had all been found completely obliterated. In one instance only had the author found the vas deferens closed up. The vesicula seminalis was distended with fluid, but contained no spermatozoa. These animalculæ were, on the contrary, found to exist in abundance in the testis. M. Gosselin was of opinion that these anatomical alterations were often not detected during life, and caused no morbid symptoms: in the first place, because the seminal secretion might be absorbed; and secondly, because, when the disease occupied the globus major of the epidydimis, the great number of ducts prevented the circulation of semen from being interfered with in a material manner.

CHEMICAL RESEARCHES ON POISONING BY ARSENIC, BY PROFESSOR ORFILA. (SECOND PART.)

The illustrious Dean first examined the question of the extraction of arsenic from the remains of poisoned subjects. Two methods had been hitherto proposed: carbonization with sulphuric acid, and incineration with nitrate of potass. The Institute had preferred the former. The Academy of Medicine had placed both these methods on the same line. M. Orfila now proposed another mode of decomposition, viz., by chlorine in a gaseous state; the arsenic thus obtained was more abundant, and its characters better defined.

With regard to the possibility of the introduction of arsenic into bodies deposited in arsenical soils, M. Orfila had made fresh experiments. Having obtained some earth from a cemetery in which the presence of arsenic had been positively ascertained, he had interred in it a full grown fœtus, a human liver, and other remains; after three months' sojourn, it was impossible to detect in these organs the faintest trace of the metal.

Turning to the important question of antidotes, and particularly to the protochloride of tin, M. Orfila remarked that the Italian school, headed by Giacomini, was absolutely opposed to the exhibition of chemical antidotes. There was no doubt, however, that in poisoning by nitrate of silver, chloride of sodium was pre-eminently useful: after the ingestion of poisonous salts of mercury, copper, lead, &c., albuminous warm water was evidently more efficient than warm water alone; and, in opposition with the Italian doctrines, it was clear that intoxication by salts of lead, or baryta, would be more properly met by the ingestion of a solution of sulphate of soda, than by mere aqueous draughts. The reactions were instantaneous, and took place in the stomach exactly as they would in a glass retort. As to the protochloride of tin—the antidote recommended by M. Poumet against corrosive sublimate—it was not easy to obtain, nor was its exhibition without disadvantages. It was not always easy to ascertain in a short time the exact nature of the poison which had been taken; and in any other intoxication but that produced by corrosive sublimate, the protochloride of tin would be injurious. An antidote, in order to be deserving of confidence, should present the following properties:—It should be a substance readily obtained, and innocent even when exhibited in large doses; it should act chemically on the poison, so as to form with the latter an inert compound, or at least a compound less injurious than the poison itself; further, an antidote should, in order to be eligible, tend to produce vomiting. In these various respects, albumen was particularly deserving of notice; it was always at hand, promoted sickness, and formed with mercurial salts a compound less injurious than these salts themselves. In fact, the salutary action of albumen, in cases of poisoning by mineral substances and acids, was such that the following precept would, doubtless, be universally admitted. In all cases of poisoning, even before the nature of the poison had been clearly ascertained, it was proper to exhibit tepid albuminous water, because it was easily obtained, promoted sickness, diminished the toxic action of numerous mineral substances, and, at any rate, was never injurious.

LITHOTOMY AND LITHOTRITY. (ADJOURNED DEBATE.)

M. Roux stated, that one of the patients whom he had operated for stone (see our last communication) had died, since the last meeting of the academy, from the progress of collapse.

M. Civiale endeavoured, in a long speech, to defend the method of crushing vesical calculi from the imputations which had been brought against it. Without entering on this occasion into the question of statistical results, M. Civiale endeavoured to establish the superiority of lithotrity over cystotomy, and stated that many of the unfortunate results observed in consequence of the application of the former mode of operation were referrible in a great measure to the inability of the surgeon or to the errors of diagnosis, by which patients to whom lithotrity was inapplicable, from the volume of the concretions, or other circumstances, had still been submitted to the process.

Meeting adjourned at five o'clock P.M.

Intermittent Fever and Thoracic Affections.—We have already, on various occasions, had opportunity of speaking of the alleged antagonism of phthisis and ague. The question does not yet appear to be decided: *à priori*, it would not be unreasonable to admit that the liver and lungs performing the same functions by different means, viz., the separation of carbon and hydrogen from the blood, the vital activity and, consequently, the frequence of disease in the respiratory viscera must be in inverse ratio with the vitality and frequence of morbid manifestations in the chylo-poietic organs. This is, no doubt, correct; and we find in India, for instance, a contrast between hepatic and pulmonary affections. With regard to the intermittent fever, the same chain of reasoning cannot be adopted. The spleen, the organ constantly diseased—a mere *diverticulum sanguinis*—does not perform any function which can be compared with that of the lung and liver, and as it affords no physiological we do not well see why it should present a pathological contrast with the organs contained in the chest. Statistical returns have, indeed, hitherto been unfavourable to the alleged antagonism of tubercular disease and ague; M. Salvagnoli now publishes, however, in the "An-

nali Universali," numerical statements which have a contrary tendency. The province of Grosseto contains a population of from 75,000 to 80,000 souls, from the year 1840 to 1846, exclusively. It may, therefore, be represented by 461,995. 149,673 individuals were during that space of time affected with various diseases, &c.; 65,879 (nearly one half of the whole) were attacked with intermittent fever; only 227 cases of tubercular consumption, and 242 of scrofula, were observed; cancer was noticed in sixty one instances; but acute diseases of the lung were observed in 11,482 patients.

The Medical Bill.—The new bill has received the sanction of the Chamber of Peers, and has only satisfied partly the friends of medical reform. The abolition of the second order of practitioners is a measure which has long been called for, and which is established by the bill; it does away with the election of professors by competition, and we would regret deeply that this guarantee should be removed from the professorship. We are well aware of the nature of the objections which can be raised against the institution, but we do not consider the "Chambre des Pairs" competent to decide in the matter. It must be acknowledged that, after a competition, the nomination of the most deserving is not always certain to take place. But still that mode of election excludes mediocrity. One of the most serious arguments against the institution of public competition for chairs is certainly the excessive labour of a barren and unprofitable nature which it renders necessary, and to that degree that the successful candidate is often incapacitated from any future exertion. Perhaps it is to the *concours* that we must attribute the following singular fact to be referrible, viz., the Faculty of Medicine of Paris is composed of professors, each of undoubted and several of transcendent merit: but still the faculty, as a body, takes but little share in the progress of science. Amussat, Louis, Joubert, Rayer, do not belong to the School of Medicine; Lisfranc had been rejected; and Gendrin was unsuccessful in the only contest he ever was engaged in. Another point on which we believe the judgment of the Chamber of Peers to have been misled, is the free permission granted to nunneries and clergymen to give gratuitous assistance in the shape of advice and medicine. Now, we believe that it is only the members of the medical profession who ought to have the right to give gratuitous assistance and advice, because they alone can do so judiciously. No respectable practitioner ever refused his assistance to the poor, and many have injured their own health and prospects by continual sacrifices of their time and money. To be of service as a medical adviser, the will alone is not sufficient, and the dispensing nunneries of Paris, with the best intentions, often commit most *uncharitable* acts of gratuitous surgery. We have seen cases of gonorrhœal ophthalmia treated by most excellent but most ignorant nuns, and terminating in the loss of both eyes; we have seen an amputation of the arm rendered necessary by maltreatment of a whitlow, &c. Fortunately the bill has not yet passed through the narrow gates of the Chamber of Deputies, where, we have no doubt, many of these errors will be corrected; and the recent return of M. Malgaigne for the fourth arrondissement of Paris permits us to hope that liberal ideas and intelligent measures will at last prevail.

TÆNIA SOLIUM.—ETHEREAL OIL OF FERN.

In answer to the inquiries of a correspondent, we will say that in the case of tænia, related in our communication of June 12, the eth. oil of fern was exhibited in pills; 72 drops divided into 12: six taken in the morning and six in the evening. Two hours after the ingestion of the last pill, one ounce and a half of castor oil was also given, for the purpose of hastening the action of the pills.

In the case which has fallen under the observation of our correspondent, various remedies, and even the oil of fern, have been used, and unsuccessfully. In Paris, also, the ethereal oil, prepared from the buds (*bourgeon*) of the male fern, is generally *inert*; but the oil extracted at *Geneva*, from buds collected in the mountains, is as constantly efficient. In the neighbourhood of the Lake of Geneva, tænia is an extremely common disorder; and there the ethereal oil has superseded all other methods of treatment. One dose is usually sufficient. We would, therefore, recommend our correspondent to endeavour to obtain some of the oil from Geneva, where it is not only extracted from the buds, but also from the root. M. Guibourt, of Paris, receives it directly from Geneva, and an application to him would be immediately attended to.

D. M'Carthy, D.M.P.

Symptoms which followed the Ingestion of Large Doses of Quinine in the Stomach of Dogs.—The experiments were performed by Dr. W. C. Baldwin, of Montgomery, Alabama, U. S., and yielded the following results:—Restlessness generally preceded all other symptoms, as was indicated by the animal changing its position often, and constantly moving from place to place; vomiting, or, when the œsophagus was tied, efforts to vomit, succeeded; purging was noticed occasionally, but in no instance except when the medicine was taken by the stomach; then came on a muscular agitation, with a constant motion of the head. In attempting to walk, the dog would totter from side to side and fall, or, if he maintained his feet, would walk in a direction different from the one which he seemed to desire. When under the full operation of the poison, the power of moving or standing was lost, and the extremities seemed paralyzed. The pulse rose from 110 to 160, and in one instance even as high as 240, per minute; great oppression of breathing was present, and sometimes frothing at the mouth; dyspnœa excessive, sometimes panting, at others slow and laboured; countenance expressive of great anxiety; the pupils of the eyes were invariably dilated, and generally to an enormous extent, leaving but a small ring of the iris perceptible, and vision seemed entirely lost; convulsions were observed in every case except one; furious delirium was present in one case, as was manifested by the dog barking and biting at everything about him; sometimes a profound coma would ensue, accompanied with slight muscular agitation, slow and heavy breathing, terminating in death in a very few minutes after the poison had been taken. Its effects upon puppies seemed to be *proportionally* much greater than upon dogs fully grown.

Secretion of Tears in Infants.—Very young infants never shed tears when they cry. When once this secretion is established, it may cease during the course of a disease, and children then cry without shedding any tears. Trousseau regards this circumstance, when it occurs, as one of bad omen.

The best Mode of administering Quinine.—Its poisonous effects, says Dr. Baldwin, may generally be avoided by proper attention to the mode of administration. Of all the forms of giving it, that of the pills seems most objectionable, as they may become entangled in flakes of mucus, and pass off undissolved, or, meeting with some obstruction, may be retained. A large quantity may in this way collect, until, suddenly meeting with a solvent, its whole force is spent upon the system at once, and then causes serious mischief. Solution by some acid, and largely diluted with water, possesses a most decided preference over every other mode, and in this way be given in heroic doses, at one, two, or three hours' inervals, and persisted in with safety.

Poisonous Effects of Sulphate of Quinine.—Dr. Baldwin relates in "The American Journal of Medical Sciences" some cases where the exhibition of this medicine was followed by *blindness*, *convulsions*, and *death*; and remarks, "From all that I can gather, I am disposed to think from fifty to eighty grains of a pure article of quinine, given in solution at one dose, will produce death nine times out of ten, in healthy adults, and occasionally even smaller quantities. How far its operation may be modified by morbid action is a matter for consideration at the bedside."

Fracture of the Spine.—Dr. Harrison relates the case of a man, thirty-three years of age, of intemperate habits, admitted into the Cincinnati Hospital, in consequence of having fallen into a sawpit, while in a state of intoxication, and was there found cold, senseless, and nearly dead. There was no external contusion—no apparent injury to the spine. There was distention of bladder from urine, the bronchii were filled with mucus, and the expectoration difficult. The stools were involuntary. Cold applications were applied to the head, external warmth to the body, and diffusible stimuli administered internally. There was entire paralysis of motion and sensation from about the middle of the dorsal vertebræ around the body; the lower half of the trunk and the inferior extremities were insensible and motionless. Five days after the accident, bedsores about the hips made their appearance, and in a fortnight he died, extensive sloughing having occurred in the soft parts covering the sacrum and hips; the delirium, three days before his death, having greatly increased. The *post-mortem* examination revealed the following appearances:—The fifth and sixth dorsal vertebræ, through its body, was fractured, with but little displacement of the fractured parts. The spinal cord was apparently uninjured; the kidneys were softened and ulcerated; the bladder was thickened, and the internal coat abraded of its mucous tissue, purulent matter adhering to it. The case is one of singular interest, from several considerations. First, the fractured dorsal vertebra was not detected till after death, though the symptoms pointed most significantly to such a lesion. The paraplegia, the character of the respiration, and the tendency to gangrene, so early exhibited in consequence of the decubitus, were pointedly evincive of such a grave lesion. Secondly, the complication of the more profound pathological state of the spinal marrow with a strong proclivity towards temulent mania, arising from the previous and long-indulged habit of spirituous potations. And, lastly, the lesion of the kidneys, and of the bladder, no doubt consecutive and dependent upon the loss of innervation occasioned by the state of the spinal column. The molecular integrity of the cord was evidently most seriously deranged; this may have partaken essentially of the nature of a contusion, destructive to its vitality, without any very signal proofs of structural alteration.

Rupture of the Extensor Tendon of the Leg.—Dr. G. C. Blackman, of Newburg, Orange County, N.Y., relates the case of an old lady, sixty years of age, who, in endeavouring to avoid coming in contact with her daughter at the top of the stairs, fell, her right foot remaining fixed while the whole weight of the body was thrown backwards. When lifted up she could not raise her leg. She stated that, when leaning her head against the wall, she could move the whole limb freely, so far as rotation was concerned, but could not lift the leg in an upward direction. The patella was loose, and admitted of extensive lateral motion. There was considerable uneasiness in the region of the knee. A physician was called in, who thought the old lady a little nervous, and prescribed accordingly. Three months afterwards, Dr. Blackman was called in, who, upon examining the knee, found a considerable depression just above the patella, which the patient thought was less than it was shortly after the accident, and the motions of the patella also less. A straight concave splint was applied with a pad over the knee, to approximate the divided ends. This was worn with decided benefit for a month, and she could raise her leg from the chair several inches. She afterwards placed herself under the care of a "natural bone-setter," who, treating it as a dislocated hip-joint, employed severe manipulations, and, in consequence, produced severe pain, and prevented her from walking but very little, which is only accomplished by the aid of a crutch.

Malformation of the Penis.—This occurred in a child, which was first brought, under surgical

treatment when eight months old. The penis bore a striking resemblance to the clitoris, being imbedded in an oval depression in the adipose substance covering the pubis, beyond the level of which it did not protrude. Throughout the whole length of its inferior border it was united to the scrotum, the surface of which was constantly irritated and excoriated by the urine, which escaped from a very small opening close to the junction of the parts. The prepuce was ample, but the glans, so far as it could be detected, appeared to be very small. Whether the latter was imperforate or not, it was difficult to say, though hypospadias was suspected. The cure was effected by the following operation:—A small sound was introduced into the urethra, and, while the penis was elongated as much as possible, that portion of the apex beneath the bridle was divided, after which the dissection was continued through the skin and cellular substance in a semilunar direction on each side of the penis, embracing about two-thirds of the circumference of this organ. Following the urethra, the lower border of which was necessarily exposed, a cut was made in the direction of the canal for nearly an inch. The glans was then found to be imperforate, the urethra terminating just behind. A transverse incision through the integuments on each side of the penis was then made, commencing at the upper extremities of those which had previously been made in a lateral direction; and the portions thus detached were drawn together by several sutures, and united in the median line under the penis. A small leaden tube was then introduced into the urethra, and the penis was thrust into the finger of a glove of a suitable size, which was fastened with tapes around the body. In a month the wounds had healed, and no contraction had taken place.

Case of Hydrops Pericardii suddenly formed.—Dr. S. Jackson, of Philadelphia, United States, was called to a lady in a dying state, who had been delivered of her first child six hours previously, after a severe labour. The placenta did not come away by the natural efforts; and upon introducing the hand, after waiting several hours, there was found an hour-glass contraction, to overcome which, considerable exertion was used. After this she appeared to be going on well, complaining only of drowsiness and some little debility. She then became suddenly pale and faint, and in a short time expired. Upon a *post-mortem* examination, the uterus was found well contracted and perfectly normal; the abdomen and its viscera entirely sound; the cut muscles looked very pale; *the pericardium contained two quarts of water, almost limpid*; no inflammation in the organ. The lungs were perfectly healthy. This effusion could not have existed in any appreciable degree in the morning, for the patient had walked up a long staircase, and had gone through a painful labour without any anhelation. This case, says Dr. Jackson, appears to be analogous to those suddenly-formed hydroceles which are sometimes met with in practice.

Tubercles in the Pericardium, Vena Cava, Columnæ Carneæ, &c.—Dr. J. D. Task, of Brooklyn, New York, attended a negro boy, fifteen years of age, who had frequently suffered for several months with palpitation of the heart, pain in the head, with drowsiness and unwillingness to exert himself. No scrofulous taint had ever been noticed in his family. About a month before his death he was laid up, complaining of pain in the foot and knee, cough, and dyspnœa, which, till the close of his life, prevented his assuming a recumbent position. Expectoration of a green tenacious mucus; diarrhœa for two or three days before death; partially comatose, during the last twelve hours; at no no time was there any disturbance from light or sound. On examining the body after death, the dura mater was found adherent to the arachnoid by numerous points and patches along the whole course of the longitudinal sinuses. No tubercles in the meninges or substance. The pleura of both lungs adherent almost throughout, except the anterior portion of the right, in the cavity of which there was a pint of serum. The trachea, œsophagus, and base of the heart consolidated into one mass, by adhesions formed between bronchial glands that were immensely hypertrophied, and filled with tuberculous matter. Both lungs loaded with tubercles; the superficial portions of each much congested. The large bronchial tubes, as far as observed, all filled with green tenacious mucus, so as completely to destroy the functions of the lungs. The pericardium and surface of the heart, after removal from the body, presented extensive deposits of tubercles, which increased in size and in number from the apex to the base. Here the subserous cellular tissue was almost entirely occupied by them, especially that below the portion of pericardium which is reflected for some distance over the origin of the blood-vessels. The anterior surface of the heart presented very considerable roughness from effusion of lymph, as well as from tubercles which occurred in isolated granules. The diaphragm loaded with tuberculous matter infiltrated among the muscular fibres, and there were similar deposits in the muscular structure of the œsophagus. There was a tubercle two lines in diameter upon one of the columnæ carneæ, and another of about the same size in the descending cava at its junction with the vena innominata of the left side. Fibrous polypi, firm and large, among the meshes of the chordæ tendineæ of the right ventricle, and others in the aorta at the seat of its valves, and at the mouth of the pulmonary veins, extending some distance along the vessels. These, under the microscope, presented no trace of vessels, so that their formation could not have preceded death for any considerable time. Serum in the abdominal cavity, and tubercles the size of a pea in the liver.

On Letting Blood from the Jugular in Diseases of Children.—"I would," says Dr. Chas. Hildreth, of Zanesville, Ohio, U.S., "make this operation the rule, instead of the exception, in many of the acute affections of children under two or three years of age. The following method, in order to fix the head and chest immovably, I have found to answer effectually, and to be very convenient in practice. The nurse having exposed the right shoulder of the child, and seated herself on a low chair, and, in holding the child across her knees, carefully confines the arms. The surgeon, seated at her side, receives and secures its head between his knees. With the thumb of the left hand he now compresses the jugular where it crosses the first rib; while the remaining part of the same hand is employed in fixing the chest of the child against the nurse. With the right hand the operator makes a free opening into the vein with whatever form of lancet he is accustomed to use. The blood is received into a cup, the edge of which, applied a little below the orifice, likewise serves to compress the vein. From a robust child blood escapes with astonishing rapidity, particularly when the child cries or struggles. The quantity of blood desired having been lost, a compress is applied to the orifice, and the pressure taken off the vein below. After the child becomes quiet, the compress is removed, and the wound is closed by a piece of adhesive plaster. The bandage and compress usually advised is very objectionable, as it not only obstructs the free return of blood from the head, but its presence irritates the patient. In clearly marked acute inflammations of the brain and its membranes, lungs, pleura, and trachea, accompanied by high fever, the bold and rapid abstraction of blood from the jugular is preferable to the use of leeches, &c."

Anatomical Anomaly.—Dr. Samuel Parkman, demonstrator of anatomy, medical department, Harvard University, states that, while examining a subject with a remarkably well-developed muscular system, he noticed the following anomaly, which is not without practical importance. It is well known to anatomists that it is not uncommon to find traversing the axilla a muscular band, extending from the external border of the latissimus dorsi muscle to the corresponding one of the pectoralis major. In the case in question, the strip was about one inch and a half in length, and the size of the little finger; it left the latissimus at the point where its muscular fibres cease and the tendinous commence, and was attached to the pectoralis tendon just at its humeral insertion. Consequently, the bundle composed of the artery surrounded by the brachial nerves, where it lay between the anterior and posterior tendons, just as it emerges from the axilla, and where we should select to tie it in case of need, was crossed by a muscular bridge, lying between it and the fascia and integuments. Such a band would, of course, require division before the artery could be attained, and might seriously embarrass an operator who was not prepared for it. The anomaly existed on both sides. Malgaigne, in his "Surgical Economy," mentions that, while demonstrating to his class the ligatures of the arteries, he encountered a muscular band, which he at first took for the coraco-brachialis muscle, but recognised his error by not finding the nerves, &c., to its side. This evidently was a different condition from the above, probably a variety of the usual anomaly; he has neglected to mention exactly what it was.

Effects of Mercury on Children.—Dr. John B. Beck shows, in an interesting paper, that children are salivated with great difficulty, and that, notwithstanding this, the effects of it are frequently more energetic and uncertain than they are in the adult. And, taking these as the basis, he makes the following remarks:—1. If salivation occurs so rarely in children under a certain age, then it is evident that it can never be made a criterion by which to judge of its influence on their systems. To attempt, therefore, to produce this effect, as we do in adults, is manifestly improper. 2. The fact that mercury may prostrate and destroy a young child, even though it does not cause salivation, it is to be feared is not sufficiently appreciated. A single dose of calomel, though large, may be well borne by children of ordinary strength of constitution, yet even this is not entirely safe in all cases. 3. The use of mercury in young subjects, as an alterative, should in all cases be conducted with great caution. 4. Great care should be exercised in ascertaining, as far as possible, constitutional peculiarities. Whenever parents show indications of scrofula, or where there is a hereditary predisposition to consumption, great caution ought to be exercised in the use of mercury in their offspring. 5. It should be exhibited with great caution when a child has been sick for a considerable length of time, and when the strength has been very much reduced. In this state of constitutional depression, a single cathartic dose of calomel sometimes proves fatal. 6. The too common practice of giving calomel as an ordinary purge, on all occasions, is certainly unjustifiable. In a great majority of cases milder carthartics are decidedly to be preferred.

Vicarious Menstruation from an Ulcer in the Right Mamma.—The patient was a girl, twenty years of age, under the care of Dr. E. C. Barker, of Abbeville, U. S., who had been suffering for a length of time from an affection of the breast, supposed to be cancer. The patient was anemic and chlorotic, and presented the usual symptoms attendant on those conditions. Had never menstruated regularly or freely, and for the last six months nothing but a thin, pale-yellowish, glairy discharge took place at each monthly period, sometimes slightly coloured with blood. The breast was more perfectly developed than could have been expected from her general appearance; was somewhat flaccid; the nipple prominent, the superficial veins running to it larger and more tortuous than natural; the whole having the appearance of a mother's breast from which the milk had just been drawn. She said it was sometimes larger than at others. About a quarter of an inch from the outer edge of the areola, and immediately under the nipple, was an ulcer with slightly elevated edges, measuring across the base 1¼ inch, with an opening in the centre a quarter of an inch in diameter, covered with a thin scab,

which on being removed, and a gentle pressure applied, a few drops of thick muco-purulent matter were discharged, not very offensive to the smell. The ulcer appeared to be of an indolent fistulous nature, with callous edges, the size of a hen's egg, not painful to the touch, and slightly movable. A probe passed upwards and backwards 2¼ inches, terminating in a *cul de sac*. It was stated that every month the breast enlarged, the ulcer inflamed, and a discharge of sanious purulent matter took place, which lasted for a few days and then dried up. At these times she suffered from giddiness, severe pains in the lower parts of the abdomen, and sickness of stomach. The ulcer was produced by the point of a leaf of palmetto-royal piercing her breast while stooping forwards, about the time the menses were making their appearance; since then she has been very irregular, with but little discharge from the uterus. The ulcer was injected twice a day with warm water, in which was a small quantity of Castile soap, and dressing of cerate afterwards applied to it, the bowels being kept regular with, occasionally, doses of calomel and colocynth, with frictions to the spine; afterwards syrup of iodide of iron was given. This treatment was continued for six months, the health generally improving; the uterine discharge gradually increasing in quantity, and becoming more natural in quality. The ulcer was finally dressed with a lotion containing three grains of iodine, twelve grains of chloride of soda in a pint of water, twice a day, when it gradually healed, and the induration disappeared.

Empyema, in which the Operation for Paracentesis Thoracis failed from a Cause not generally noticed.—Dr. J. A. Sweet, New York, mentions the cause of failure in evacuating the pus in this case was the existence of a false membrane lining the pleura costalis, and so loosely attached to it as to be pushed before the point of the instrument, so that the cavity containing the pus was not opened. The possibility of this source of failure is important to be borne in mind, and its occurrence should be guarded against by using a very sharp instrument.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

J. M. Arnott, Esq., F.R.S., President.

ON THE INFLAMMATORY DISEASES OF THE KIDNEY.

By George Johnson, M.D.,
Medical Tutor in King's College, and Physician to the Public Dispensary, Lincoln's-inn.
[Presented by R. B. Todd, M.D., F.R.S., &c.]

The author arranged the inflammatory disease of the kidney into two classes: the first class including those diseases which result from some local cause, such as the mechanical irritation of a calculus, &c.; and the second class including the diseases which originate in some abnormal condition of the blood. The present communication refers to the latter class only. The form of disease first treated of was that which occurs in connection with scarlatina. The anatomical changes occur chiefly in the convoluted portions of the urinary tubes, and consist in an abundant formation of epithelial cells. The Malpighian bodies and the straight tubes of the pyramids are primarily unaffected. The author proposed to call this form of disease "acute desquamative nephritis," the reported cases of the same form of disease occurring unconnected with scarlatina. He next spoke of the same disease occurring in a chronic form—"chronic desquamative nephritis." He described minutely the changes which the epithelial cells and the tubes undergo, and mentioned several facts which appear to him abundantly sufficient to prove that the cysts which are often observed in these cases are dilatations of the basement membrane of the tubes. The anatomy of this form of disease affords a satisfactory explanation of two remarkable phenomena:—1st, the great wasting and contraction of the kidney; and 2nd, the copious secretion of pale urine, of low specific gravity, which is frequently observed in these cases. The author next spoke of the condition of kidney produced by such substances as oil of turpentine or cantharides. In these cases the irritation appears to be confined to the Malpighian bodies, and produces hemorrhage from their delicate vessels. The epithelial cells of the tubes are unaffected, and the author proposes the term "hemorrhagic nephritis," to distinguish this form of disease from cases of "desquamative nephritis." The disease next spoken of was "suppurative nephritis." The author reported a case in which this disease appeared to have been produced by an unhealthy carbuncular inflammation of the cellular tissue of the neck being determined to the kidneys by the intemperate use of alcoholic drinks. The author then spoke of fatty degeneration of the kidney, and described two forms of the disease, the one being simple fatty degeneration, and the other being complicated with a nephritic condition. All the forms of disease alluded to may be detected and distinguished with ease and certainty by a microscopical examination of the urine; and the information thus acquired is of as much importance, with reference to prognosis and treatment, as any information derived from a physical examination of the chest in cases of pulmonary and cardiac disease. The author gave directions as to the best mode of making a microscopical examination of the urine, and concluded by some observations tending to show the inutility and danger of administering diuretic medicines in most cases of renal disease.

ON SUBACUTE INFLAMMATION OF THE KIDNEY.

By John Simon, F.R.S.,
Assistant-Surgeon to King's College Hospital, and Demonstrator of Anatomy in King's College, London.

The chief points in Mr. Simon's paper were the following:—He first gave an exact definition of the nature of glandular inflammation generally, showing how often no interstitial deposit of organizable material attends it, and, on the contrary, how much more constantly it evinces itself in modifying the physical properties of the secretion, by admixture of albuminous material, or otherwise. He stated, that in the more complicated glands, many of the most obvious structural changes followed, and were caused by the lowest amount of inflammatory action; the secretion becoming first disordered, and then reacting, often mechanically, on the structure of the organ. He illustrated this in the kidney, showing its subacute inflammation to commence as an epithelial disease, and to produce the final destruction of the organ, in a great degree, mechanically. After citing the causes of the disease (among which he mentioned various fevers besides scarlatina), he proceeded to describe the overabundant formation of modified epithelium, which is the first stage of the disease; stating that the tubes were bunged by it so as to be totally impervious, and were often so distended that their limitary membrane would give way, and suffer its contents to be effused amid the surrounding blood-vessels. The microscopical examination of the urine would often show the specific cause of the disease—biliary matter, or oxalate of lime, or lithic acid, or fat, entangled or included by those well-known fibrinous casts of the tubules discovered by Dr. Franz Simon. These casts, and the more or less modified epithelium, were signs of renal irritation simply, the specific diagnosis being in each case furnished by additional matters which accompany their escape. He described the final shrinking and atrophy of the kidney as dependent on the gradual absorption of spoiled tissues—not to the contraction of effused lymph; and explained away the appearances which had led many observers to ascribe an unreal influence to the latter cause. He reviewed the subject of "Bright's disease," and stated his opinion, that, in all instances of disease to which that name is applied, subacute inflammation plays an important part, and produces its characteristic symptoms. It had appeared to him, that this inflammation was always grafted on the fatty degeneration, so well described by Dr. Johnson. He recommended that the name of "Bright's disease" should be discontinued; that the term "scrofulous degeneration" should be used for one form, and the common one of inflammation for the other. The former had not appeared to him to lead to contraction of the kidney, which he had found mainly in the other class of cases. In tracing the inflammatory changes, he gave an account of the formation of renal cysts, believing their development to be an almost essential part of the inflammatory process; his theory of them being, that, when the tubes have been ruptured, these cysts are developed from the effused epithelial germs which (by the destruction of the limitary membrane) are brought into unnatural circumstances. They had appeared to him an extravagant overgrowth of common nucleated cells, down to the size of which he had repeatedly traced them. From this remarkable smallness in which they commence, it seemed impossible that they could arise from the tubes; nor had he ever seen any such connection. In a few remarks on treatment, he expressed a strong opinion against diuretics, and much reliance in the sweating-bath. He spoke of the disease as one of almost incredible frequency, and said, that in a vast majority of cases the disease had been overlooked during life, while its traces in the dead body were such as might easily elude observation.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.*

A Medical Pupil.—*Glycerine is prepared in the following manner:—Digest equal parts of ground litharge and olive-oil with a little boiling water, stirring and keeping up the water as it evaporates. When of the consistence of a plaister, wash it well with hot water; decant the latter, and filter; pass sulphuretted hydrogen to throw down the lead, and then filter, and evaporate to a syrup in a water-bath.*

A College Member, of thirty years' standing.—*The Registration Bill would perpetuate the abuses of the College of Surgeons, and would afford no guarantee to the profession of a more rigid examination for the diploma.*

Mr. T. Savory.—*The amount of the bill can be recovered in the County Court, with but little trouble and expense.*

Galen.—*The letter was written by Mr. Thomas Wakley, and addressed to himself. We wish that his suggestion may be speedily carried into execution.*

A Candidate.—*The work is not held in much repute. We would advise our correspondent to frequent the dissecting-room, and acquire his knowledge by a diligent use of the scalpel.*

Beta.—*Most of the continental universities require residence, in order for the candidate to obtain a degree. Giessen, we believe, has now given up selling its diploma without requiring an examination. Its possession confers no privileges.*

An Inquirer.—*The vicarious discharge seldom resembles the healthy function, although cases are recorded where the menstrual period has been exactly observed. The work is published by Highley, Fleet-street.*

M.D., Liverpool.—*The fee cannot be recovered unless there be some proof of a contract to pay. The loss had better be quietly sustained.*

A Bristolian.—*We have no space for the communication, and at the present time the subject has lost much of its interest.*

A Young Navy Surgeon.—*The matter is under discussion. If he were to lay his case before Sir William Burnett, we have no doubt he would give it*

every attention, and would probably help our correspondent out of his difficulty.

An Invalid.—1. *The insurance-office is bound to pay.* 2. *A medical examination is necessary, and according to the report will be the decision of the office.* 3. *It is a respectable concern.* 4. *The medical gentleman is certainly entitled to his fee, which ought to be promptly handed over to him.*

An Edinburgh M.D.—*There will be no difficulty in procuring an examination at the London College of Physicians, which is necessary, if our correspondent thinks of practising in London.*

A Retired Practitioner *will find the general subject of his note anticipated. We will publish the case of endo-pericarditis at an early opportunity.*

J. B. C., City.—*The nuisance of which our correspondent complains ought immediately to be removed. It must be a prolific source of disease. The City authorities ought to be memorialized. The graveyard nuisances are sources of profit to those who are placing obstacles in the way of their removal. The facts stated should be made public. We only want the permission of our correspondent to do so.*

A Subscriber and Occasional Correspondent.—*The papers have not yet been received. The suggestion shall be attended to.*

Mr. Banks *is thanked for his communication. It will appear in an early number.*

A Looker-on.—*The case of "bungling operation" cannot be published without being authenticated. It is a much easier part to* look on *than to operate.*

Senex.—*There is some doubt as regards the efficacy of the test. Consult the volume mentioned, and seek the assistance of some practical chemist.*

An Assistant.—*An advertisement in the* Medical Times, *or an application to some respectable medical agent, is the best way which can be adopted.*

Dr. Ryott's *communication has been received.*

Mr. Brooks.—*We will make the inquiry, and transmit a private note.*

A Dublin Surgeon.—*The work is now complete, and can be had of any bookseller.*

Mr. H. J. Browse, Paington.—*The work is a valuable addition to the library, and is published by Longman and Co; also, Re[illegible] and Churchill.*

J. J. M.—*The book debts can[illegible] legally recovered, if within the statute of limitation.*

A. Z.—*The general rule is to pay, in a manner agreed upon, the average of one year's income. Great circumspection is required.*

Mr. Smith's *communication can only be inserted as an advertisement.*

M.R.C.S., London.—*Application must be made to Sir W. Burnett, Director-General of the Medical Department of the Navy. The qualifications, we think, will do.*

A Surgeon, *who informs us that he is desirous of joining the National Institute, had better address Mr. Ross, Hanover-square.*

Letters and communications have also been received from Mr. R. N. West, Lincolnshire; A Subscriber and Occasional Correspondent; Mr. Banks; A Looker-on; Senex; An Assistant; Dr. Ryott; Mr. Brooks; A Dublin Surgeon; Mr. H. J. Browse, Paington; J. J. M., A. Z.; Mr. Smith; M.R.C.S., London, A Surgeon; J. B. L., City; A Retired Practitioner; An Edinburgh M.D.; An Invalid; A Young Navy Surgeon, A Bristolian; M.D., Liverpool; An Inquirer, Beta; A Candidate; Galen; Mr. T. Savory; A College Member, of Thirty Years' Standing; A Medical Pupil.

☞ *Dr. Guy, on his New Test for Arsenic, in our next.*

THE MEDICAL TIMES.

SATURDAY, JULY 10, 1847.

THE MEDICAL PROFESSION AND THE FUTURE—ITS POWER OVER MORALS.

Amid the miseries of all kinds—privations domestic, anxieties professional—that each day strike at the heart of so many of our medical brethren, we can offer them the consolatory reflection, that whatever the position of our profession now, it is one that must hourly improve. Slowly, perhaps, but surely, our time is coming. The flood-tide of social improvement so fast and widely-spreading bears on its beneficent bosom the ark, alike of our augmenting appreciation and utility. The coming age will be as emphatically ours as its predecessors were those of war or religion. Just as their gorgeous pageantries fade into the ceremonies of life does our profession vindicate the realities of improved social existence. As they sink—a name in history—we rise—a potency in action. The depression of a thousand bad agencies, the neglect and contumely of fifty centuries of ignorance, disappear with the advance of that civilization to which, once placed in our true position, we are destined to be the surest heralds—the wisest aids and best guarantee!

Civilization is not a mere matter of abstract information, still less is it the highest kind of information if limited to a section of the community. It is an affair of *conduct*, more even than of science—of truths applied more than of truths discovered. The Greece that produced Solon was less informed than that which mirrored every ignominy and weakness of the Asiatics in the time of the Cæsars; yet how different the quality of the two ages, and how dissimilar the elements and hopes of a real civilization! The true basis of amelioration is a sound and widely-diffused knowledge, in which the heart participates as fully as the brain, and which, forming a practical use rather than an amusing luxury, is a matter of character more even than of memory or understanding. It is the union of the Athenian's *knowledge*, to the Lacedemonian's *doing*, of what, in the largest sense, is right. It is not the existence but the royalty of Science that makes the only true civilization.

Now it is our distinction and hope that, to secure this kind of larger practical amelioration, society must look mainly *to us*. Our range of duty being the whole organization of man in health as in disease—psychically as well as physically—we alone offer that wider field of new action that an advanced society now requires. All that gives happiness, estranges pain, prevents disease, lengthens life, betters the individual, or improves the race—these, the greatest concerns of living humanity, and carrying with them the principal morals of society, belong to our care. On them we are the only teachers that can speak with authority, or that will by-and-by be listened to with conviction. We alone can make theory on them give way to demonstration, speculation to ascertained fact, doubt to certitude; and outside our pale there is no teaching nor knowledge that is secular beyond what forms a fraudulent empiricism on one side, and a perilous credulity on the other.

The neglected science of practical ethics—abandoned by the clergyman for the more seductive controversies of speculative faith—must be ours. It will be less his mission than that of the physician to undo uncleanliness, indolence, bad temper, profligacy, hate, avarice, and intemperance. He is the man who, in the nineteenth century, will have to preach down—in every relation, domestic, mercantile, or public—the insane luxuries of lords, the mischievous or sordid prejudices of burgesses, and the fatal excesses of serfs, and to inspire through all classes and persons a healthful, a moderate, and fertilizing activity: for we are alone the people who to the remote teachings of verbal revelation can add the visible, the proximate sanctions of natural religion—sanctions that blaze out as from another Mount Sinai in those striking facts of physiology that admit neither dubitation nor dispute. While far from displacing the sacred functions of the priest, it is yet our mission to piece out his imperfections, and add force to his contested authority. In fine, it is the great tendency of the age to give us, and it is our duty to be prepared to accept, the whole ministering of public health and its dependencies; and to perform *our* part of the responsibility, and lead the way to that desirable improvement, we shall touch in successive articles of this journal on the physiological ethics applicable to the different social classes.

It is a droll fact, sadly confirmatory of the opinion we have expressed on the non-identity of knowledge and civilization, that there is no section of our fellow-citizens more in need of whatever medicine can do for them in the way of ethical improvement than that of our wealthiest and best-bred aristocracy. The extent of their means is the very measure of their perversion; and there is no more active instrument in the misuse than the items of their information.

To offer with the Roman emperors rewards for new pleasure—which are almost uniformly new wrongs to nature—is the epitome of a great portion of their existence; and as if to illustrate the great natural law, that all happiness is usefulness, the absorbing passion of their lives—enjoyment—although aided by ample means and incessant attention, is less gratified than is, probably, any other portion of the community! If we take up the case of the woman of fashion—viewing her in the relations of wife, mother, and citizen;—but the illustration is too worthy in itself of a complete article to be broached at the fag-end of this. We shall discuss it, then, in our next.

ASSISTANT-SURGEONS OF THE ROYAL NAVY.

We last week directed the attention of our readers to the neglect which the members of the medical profession in the army—a body of gentlemen whose education entitles them to respect, and whose services to honour—experience from the Government. The other meritorious officers of the army are about to be rewarded with stars and ribbons, those pretty toys which are pleasing to every one, yet the medical profession in this service is to be passed over in silence; and we suppose that to some other Administration than the present will be awarded the praise of doing justice to their medical servants. We have heard of no remonstrance from them to their rulers, and we were at first struck with astonishment that men, whose intelligence, honour, and courage were never questioned, should so quietly submit to be contemptuously treated. There may be two causes, however, which either singly or unitedly have prevented them from offering a respectful memorial to the Government: the one is a very deep sense of the injustice practised towards them, and the other an exalted state of mind which leads them to hold with a light hand those rewards which consist in the bestowment of an empty title or of a brilliant toy. Their avocations, perhaps, of all others, would lead them thus to feel, though we can hardly imagine that Philosophy has yet attained such an authority over the minds of her children as to make them entirely regardless of things which, though

possessing no inherent value, are yet attractive from the veneration they are held in by every nation. The avocations of the surgeon compel him to deal more with realities than fictions—bring him into closer contact with his race—admit him behind the scenes when, in the great drama of human life, he beholds the actors unmasked and stripped, having nothing more than the common attributes of our race. He is compelled to go where the world is oftentimes not permitted to follow—to behold men sick, and mangled, and oppressed, and in these circumstances ready to lay at the feet of medical science all that is valued by the world, if they can only procure the inestimable blessing—health. It may be, perhaps, that an intelligent consideration of these things has led the medical officers of the army to be silent under their wrongs; yet this does not remove their right to worldly distinctions, or the obligations of a Government to bestow these upon them.

As we have particularly called attention to this subject, it is not our intention now to extend our remarks, but we propose to bring under notice the treatment of Assistant-Surgeons in the Navy. The Government, in choosing medical officers, seek for those who have obtained the highest academical honours, and whose moral and physical endowments eminently fit them for the important functions which they are called to perform. They are entitled, therefore, to that consideration which is due to gentlemen and scholars. Yet, when they first enter the navy, they do not receive it. The Government considers it necessary that they should undergo a little further schooling, not in medical knowledge, but in the important science of humility—in order, we suppose, that, as they will have [illegible] of the honours bestowed upon them which [illegible] given to the other officers in the service, they may be so disciplined as never openly to aspire to them. Their character as men appears to be forgotten, and they are compelled to associate with boys just emancipated from school, who are engaged in acquiring the first rudiments of a nautical education—that of boxing the compass and of reefing a topsail. We are totally at a loss to conjecture why the gun-room is selected as the best place for the surgeon, when he first enters the navy, unless it is at once to humble him. This, however, is the only way for him to gain the superior privileges of the ward-room; and in his progress thither it is no wonder if, like Bunyan's pilgrim, before he gains the wicket-gate, he tumbles into the slough of despond, from which he finds it no easy matter to extricate himself. Without a cabin, without congenial society, without the means of increasing that stock of knowledge which he already possesses (for he has neither the opportunity of keeping a library, a chest being all that he is allowed to contain his books and wearing apparel, or of retirement, to contemplate those scientific truths, the acquisition of which is essential to the welfare of those confided to his care), he is a being alone in the midst of numbers, and a sufferer from the unjust regulations of an honourable service. The present race of assistant-surgeons are only experiencing, however, what their predecessors have done before them; but, instead of this being an excuse for inflicting upon them unmerited and unnecessary hardship, it is a cogent reason why they should at once be translated from the gun-room to the ward-room. Time can never make that right which is essentially wrong; and precedent goes for nothing when cited to support an unjust act; but rather favours its immediate condemnation.

Government is right in seeing that their medical officers have had the best education: hence it requires that a candidate shall possess a diploma from one of the Colleges of Surgeons in the United Kingdom; and, in addition to this, shall be examined by the Inspector-General of Naval Hospitals and Fleets. Moreover, the regulations inform us that a favourable consideration will be given to the cases of those who have obtained the degree of M.D. at either of the Universities of Oxford, Cambridge, London, Edinburgh, Dublin, or Glasgow; or who, by possessing a knowledge of diseases of the eye, and of any branch of science connected with the profession—such as medical jurisprudence, natural history, natural philosophy, &c.—appear to be more peculiarly eligible for admission into the service; and the bait which is held out to allure a gentleman, with a university education and a doctor's degree, is—seven shillings and sixpence a day, a chest three feet six in length for his traps, and the society of boys.

We are glad to find that the attention of the profession and the public is beginning to be directed to this matter, which is certainly a disgrace to the service and dishonourable to the profession. It becomes the superior medical officers of the navy, especially, to use all their influence to bring about a change. We cannot imagine that any Government would be displeased at their remonstrance, or so stupid as to disregard it. Something is expected from them by the members of the profession, and to disappoint them would be to lower themselves greatly from that high position which they now occupy in the estimation of the entire body of medical practitioners.

It will be, moreover, greatly for the interest of the service to dispense at once with this gun-room penance of the naval assistant-surgeons. The discipline is evil in its tendency, and the men upon whom it is exercised are quite undeserving of it. Their removal to better quarters will afford more space for the stripling midshipmen to indulge in the freaks of youth when enjoying relaxation from official engagements; while it will prove an incentive to young medical men suitable for the service to enter it, which they will now be unwilling to do with a thorough knowledge of the degradation to which they must submit. The matter cannot be permitted any longer to remain at rest; and the members of the profession, in seeking to obtain an act of justice for their brethren in the service of the Government, will assert their own dignity, while they will show that they are no longer to be insulted with impunity.

ELECTION OF A PHYSICIAN TO THE BEDFORD GENERAL INFIRMARY.

It is not many years ago that the College of Physicians was so exclusive as to admit none to the privileges of the fellowship who had not enjoyed a university education. As a natural consequence, many who were celebrated for their professional abilities attained no higher rank than licentiates of the corporation. The College was forced eventually to adopt a more liberal policy, because nearly all the talent was found to be possessed by the licentiates, and it was necessary that the fellowship should be prevented from falling into contempt. The innovation was brought about by the spirit of the times, and the College has become so far liberal as to admit general practitioners to examination for their diploma. Science recognises no distinctions, except those which mind confers; and institutions established for the honour and interests of science must, to a certain extent, feel the influence of this principle, though they may be slow to act upon it. But if a college, founded in a dark age and fostered by an exclusive spirit, has given way to the influence of the times, can we wonder that other institutions, erected ostensibly for good purposes, but oftentimes badly managed, like many of our hospitals, should be found occasionally manifesting a liberality of disposition as surprising as the opening of the College of Physicians to the licentiates of the Apothecaries' Company? Hospitals have been the hotbeds of nepotism—places where family or corporate interest has been employed for the worst purposes. To find the governors of these institutions exhibiting anything like a spirit of liberality is a wonder even in the nineteenth century. The Bedford Infirmary has set an example which other similar places may be disposed to follow, without the most energetic resistance from conservative governors. Dr. Hedley, a general practitioner of the town, has been elected a physician to the hospital, having only obtained his doctor's degree a fortnight before from the University of St. Andrew's. His election was sanctioned by the other medical officers of the hospital, and was carried without any opposition from any rival candidate. We cannot tell, of course, what motives were in operation, but we look at the circumstance as the recognition of a great principle, that sound professional knowledge and extensive experience constitute the physician. This has been recognised by universities and colleges, as their regulations now testify; and the doctrine has been instilled into the public mind not, we are sorry to say, in too many instances, with a view to benefit the people, but to promote the interests of a class. We are advocates for a university education for every member of the medical profession; but while we believe this is always desirable, it is not always possible; hence the general practitioner who has not been brought up under the fostering care of a chartered *alma mater*, but whose professional attainments are of a high order, should ever find a ready and cordial admission into the rank and privileges of a doctor of medicine. He is in every respect a *bonâ fide* physician, and one well calculated to discharge in the most efficient manner the responsible duties of a hospital functionary.

It seems, from the report of the proceedings at the election of Dr. Hedley, that he is not disposed to lay aside in cases of necessity the use of the lancet or the knife; and this circumstance appeared to operate unfavourably upon the minds of some of the governors. It is a false notion of honour, however, which confines the office of physician to the treatment of internal diseases, and simply prescribing for them; and there are circumstances in which he may be imperatively called to undertake manual operations, the prompt performance of which may, instead of lowering his dignity, materially increase it. Life and limb are blessings of too great a value to be endangered by a rigid adherence to professional etiquette, and we shall be glad to see every false notion of honour permanently excommunicated from the minds of medical practitioners.

The new physician of the Bedford Infirmary is doubtless a man of education, of talent, and of experience; and it is to be regretted that he

was compelled just before the election to post down to St. Andrew's to obtain a doctor's diploma. The circumstance is calculated to offend the respectable body of practitioners into whose order he was entered, and to make them look with a more unfavourable eye upon those universities which grant degrees without insisting upon residence.

[To the Editor of the Medical Times.]

SIR,—I am happy to have to append a pleasing response, alike creditable to the heart and to the head of the writer, to my simple announcement of the death of Mr. Walker, in the *Medical Times* of the 19th ult.

"To A. W. CLOSE, ESQ.

"DEAR SIR,—Your letter in the *Medical Times* of the 19th inst., announcing the death of Mr. Walker, of Manchester, attracted my attention a few days since. The simplicity of truth is often the most powerful appeal to the heart, and I trust that your 'unvarnished tale' may obtain a respectable subscription for the widow and family of the amiable and talented man whose career on earth has been so suddenly (let us hope not untimely) arrested.

I knew nothing of Mr. Walker but as the author of "The Oculist's Vade Mecum;" and I regret to find such a man dying in such poor circumstances.

"I am, Sir, your very obedient,

"Ipswich, June 28. "GEORGE BULLEN.

"P.S.—Be so good as to acknowledge the recept of the post-office order for £2."

The writer of the above concludes his excellent letter with a classical quotation which is illegible, but which I take very aptly to express the position of our late friend:—"He possessed not much of this world's good, but he was blessed with a high and noble character." He also alludes to that which gives the family of Mr. Walker a special claim upon the sympathies and benevolence of his professional brethren. Much of his earlier resources were expended in the very slowly remunerating work of an author. Whilst his "Oculist's Vade Mecum" has tended in no small degree to raise the character of provincial ophthalmic surgery, the actual outlay of its production, I believe, was only just realized during the last year of his life.

Subscriptions on behalf of his family will be gladly received if sent to any of the following persons:—

Elkanah Amitage, Mayor of Manchester,
John Windsor, Esq., Piccadilly, Manchester,
Daniel Noble, Esq., Piccadilly, Manchester;
or to

Your most obedient servant,
ANTHONY WILLIAM CLOSE.

20, Grosvenor-street, Manchester, July 1.

PROFESSIONAL EDUCATION AND RESPECTABILITY.

[To the Editor of the Medical Times.]

SIR,—The only true way to make the medical profession really respectable, is for all those in power to keep ignorant, uneducated, and ungentlemanly persons out of its pale.

Every court of examiners should be more particular in their investigations, whether for degrees or diplomas. They should "take nothing for granted;" there should be no favour; and rigid, and strict, and searching inquiry should be instituted before any student or candidate should be admitted to the honours, or receive the authority he may aspire to.

It matters very little where a man may acquire his knowledge, provided he really has it: for it is as possible for him to be competent to give satisfactory proofs of his ability and acquirements without having been at the more celebrated schools of medicine, as for others to have apparently gone through all the required ordeal and courses of study, and still be wholly unfit to practise our

The general practitioner should be subject to severe censure and animadversion, at least, if he gives up an indenture to his apprentice, unless he has actually *served* with him the stipulated time expressed. The lecturer or professor should give no certificates unless he is quite convinced that the student had duly attended his courses. If the class were so numerous that the professor could not recollect all the pupils, he should require from them their solemn declaration and word of honour that they had only been absent occasionally, and rarely, and then only from absolute necessity or indisposition.

The shameful degrees conferred by *certain* universities, only for the sake of the money paid for them, are a disgrace, instead of an honour, to those who give, as well as those who take them, merely from documents and certificates, which, at least with regard to time and duration of study, often are absolutely false.

I fear, too, from recent instances, and the amazing number of young men poured forth upon the world as surgeons and medical practitioners, that our own authorities in this metropolis are not by any means so particular as they ought to be in their examination, before they give their *fiat* to the tyro, and license him to inflict suffering and death upon his fellow-creatures with impunity.

It is very easy, Sir, to ascertain if a candidate be well grounded in principles, or merely *ground* by a grinder; and mere tickets of attendance or certificates should have no influence whatever, if the student upon absolutely necessary points be found ignorant.

I have the honour to be respectfully, Sir, your obedient servant, SENEX.

THE DRUGGISTS AND GENERAL PRACTITIONERS.

[To the Editor of the Medical Times.]

SIR,—Your number of the 19th of June contains a letter from Mr. Ebsworth which merits some notice on your part. The encroachments of druggists upon the privileges of the licentiates of the Hall has been, and is, an evil important not only to them, but to the general practitioner; and, as you profess to use your abilities for the benefit of the medical profession, I expected something more from you than the publishing of Mr. Ebsworth's letter.

I think that that letter ought to be republished every month, as long as the injustice remains, and injury inflicted upon any member of the Hall; and I should hope that even the number of subscribers to the *Pharmaceutical Times* would not be diminished by your energetic advocacy of the privileges of the licentiates. Would you obtain the rules of the Apothecaries' Hall, and publish them; also the laws granting these privileges, with the pains and penalties annexed, also any cases and decisions.

Yours respectfully, an old subscriber,
J. POOL.

YORKSHIRE MEDICAL LITERATURE.

(Copy) Dated Sept. 7, 1815.

I being Called upon to answer the greevenses of the said Ch. Mills bellong to is fut and harm and hand that honcley being a Inflamatiton very deep sitiated on the nirv or bon part witch is the caus of the greevances of is Complaint more like a gangreen than a blast as for the greevences that Peeple lais to is Charge I am quite Ignorant of for I never Examinated im nor never saw Is Privarts In all my lifetime so I have made none as far as I am hable so fairwil this is the truth and no more Edmund Travis.

"The original of the above splendid specimen of the learning of a Yorkshire practitioner," says our correspondent, by whom it was forwarded, "was handed over to me by an Independent minister, who knows the writer. He is a practitioner of ancient fame; in practice before 1815."—ED. *Medical Times.*

ELECTION OF A PHYSICIAN TO THE BEDFORD GENERAL INFIRMARY.

A meeting of the governors of this institution was held on Monday week, for the election of a physician in the room of the late Dr. Mesham.

The chair was taken at twelve o'clock by W. H. Whitbread, Esq., the perpetual president. The attendance of governors was not so large as usual at the election of officers, probably from the circumstance of there being but one candidate.

The President having announced the object of the meting,

Mr. C. L. Higgins, of Turvey Abbey, rose and nominated Dr. George Dixon Hedley, of Bedford, for the office of physician to the infirmary, rendered vacant by the death of Dr. Mesham. He then proceeded to give a description of the progress of the candidate in his profession, stated, that after he had passed through a course of studies, he went to Paris, and had constant intercourse with the most eminent men in the profession. On his return to England, he commenced his medical career at Birmingham, and there received the appointment of lecturer on medical jurisprudence. He did not long remain there, for a highly-respectable practitioner in Bedford, Mr. Woolridge, offered Mr. Hedley a portion of his practice. This offer was accepted, and Mr. Hedley had continued his medical career in Bedford with very great success. Last week he took the degree of Doctor of Medicine at St. Andrew's. There were twenty-eight candidates for the degree, and it was announced that of that number two had acquitted themselves in the most distinguished manner: one of those gentlemen, of whom such honourable mention was made, was the candidate he (Mr. Higgins) now ventured to propose. These things spoke well for the ability of Dr. Hedley, and his character was well known by all the governors present; and in making choice of him as one of the physicians to the Bedford Infirmary, he was quite sure that the governors would make an appointment most conducive to the interests of the institution.

Mr. T. A. Green seconded the nomination.

Mr. President said, as there was no other candidate, it became his duty to put the proposition to the governors; but, before he did so, he considered it also his duty to put the case clearly before them as regarded the qualifications of Dr. Hedley. He had not one word to say against Dr. Hedley himself, for he believed him to be a gentleman of great talent and high character; but he wished the governors to bear in mind that it had hitherto been the practice at this institution to appoint a *bonâ fide* physician. There should be two classes of professional gentlemen there—two physicians and two surgeons; he, therefore, submitted to the meeting whether it would not be desirable to ascertain from Dr. Hedley what were his intentions as to his practice for the future. He was not aiming anything at Dr. Hedley personally, but he deemed it his duty, as president, to put the question.

Mr. C. L. Higgins said he would ask Dr. Hedley that question, if the governors thought fit. He believed that it was the intention of Dr. Hedley to give up dispensing medicines, but he could not answer for anything further until he had spoken to him. The governors all knew that he had practised surgery with great success; and there must be a mixture of practice. He thought, if Dr. Hedley was willing to act as physician to the infirmary, it would be all that the governors required.

(Mr. Higgins then left the room to speak to Dr. Hedley.)

Mr. W. B. Higgins, of Picts-hill, inquired what was the rule in that respect?

The President said the rule required that the candidate should have taken the degree of Doctor of Medicine: that was the letter of the rule; but the spirit of it, and the practice of this institution, had been that the candidate should also be a *bonâ fide* physician in practice; and he believed Dr. Witt would bear him out

in saying that was the case when he received the appointment.

Mr. Barnard said it was the feeling of the surgeons to the infirmary that it should be so. If those gentlemen now took an interest in the election of Dr. Hedley, and were satisfied with his qualifications, he (Mr. Barnard) thought it was of little matter to the governors.

Mr. Palgrave agreed with the president in the view he took of the matter, and thought there was great point in his remarks.

The Rev. C. C. Beaty Pownall said he conceived that in this institution the duties of physician and surgeon were kept entirely

[illegible]r. Hurst said, such had hitherto been the [illegible] and he ventured to add, they would be so [illegible] future, as long as he was one of the officers. Of Dr. Hedley, personally, he had the highest opinion.

Mr. [illegible] L. Higgins returned to the board-room and stated, that he had communicated with Dr. Hedley, who said he would give up dispensing, but as regarded the other part of his practice he wished to be left free. He wished to be left free to practise surgery when called in to cases.

Mr. Hurst said, he understood that Dr. Hedley would not seek for practice in surgery.

Mr. C. L. Higgins said, such was the case; he would not seek for it, but would aim chiefly at physician's practice. Of course, in a case of emergency, he would give his services as a surgeon in his own practice.

The President thought that explanation affected the case materially.

Mr. Lindsell thought, if the candidate undertook to give up dispensing, that would meet the case. He understood that he held out for practice as a physician.

The President then put the question, whether the governors considered Dr. Hedley eligible to be a candidate?

The question having been carried in the affirmative.

[illegible] then proceeded to put the question [illegible] Dr. Hedley should be appointed

[illegible] ggins wished to make one remark [illegible] question was put. He hoped the governors understood the case exactly. Dr. Hedley would practise as a physician, but would hold himself free to attend to surgical cases.

Mr. T. A. Green understood that it was not Dr. Hedley's intention to seek for surgical practice, but that he did not wish to be shackled.

Mr. Harris said that the governors required a man to do justice to the patients, and they could not get a pure physician in all cases. In a short time it would be found that they would have to merge the two branches of the profession.

Mr. S. L. Whitbread said, the chief matter for their consideration was, whether the surgeons approved of this appointment; and it appeared they [illegible] approve of it.

Mr. Weale considered that there could be no objection to the candidate, as the dispensing portion of the practice had been given up.

Mr. Barker begged to make one remark on a point which had been overlooked. If Dr. Hedley did away with dispensing, he did all that the College of Physicians required, to enable them to grant a license to practise as a physician. He appealed to Dr. Witt whether such was not the case.

Dr. Witt had determined to take no part in this election, but he had no objection to reply to a question: It was quite true what Mr. Barker had stated. In his own case, when he applied to the College, he was required to sign a certificate that he would not dispense medicines.

Mr. W. B. Higgins was sorry to differ with gentlemen upon any question, but he really thought Dr. Hedley was not strictly within the intention of the rule of this institution, yet he had just held up his hand for him in consequence of his high character and reputation. He could do no less than wish to see him elected, yet, as an honest man, he (Mr. Higgins) felt bound to state his opinion, that the framers of the rule did not contemplate its including precisely such a case as this.

The proposition was then put, and carried unanimously. Dr. Hedley was called in, and

The President said he had the pleasure and satisfaction to announce that he had been elected physician to the Bedford General Infirmary; and in making this appointment he was confident the governors had secured very valuable services. As president he had felt it his duty to call attention to one point, and, as a satisfactory answer had been given, he felt great pleasure in seeing him elected, well knowing his high character and reputation.

Dr. Hedley returned thanks for the appointment. He felt greatly obliged to the governors for electing him to the office; and he did not know that he could say anything further, except that it would be his endeavour to discharge the duties of the office in such a manner that the governors should not regret having appointed him.

The thanks of the meeting were then given to the president, and the meeting broke up.

QUEEN'S COLLEGE, BIRMINGHAM.

A meeting of the Council of Queen's College was held on Saturday last, the Rev. and Worshipful Chancellor James T. Law, Vice-Principal, in the chair. The new Charter of Incorporation was submitted to the members by William Sands Cox, Esq., the Dean of the Faculty, and warmly received. Her Majesty has been graciously pleased to confer on the college most extensive privileges. Full powers have been given to "the Principal and Council" to embrace, in their system of education, laws, literature, science, and the arts.

Also to be able and capable in law to take, purchase, and hold for the use of the Queen's College and the Queen's College Hospital, any goods, chattels, or personal property whatsoever; and also to be able and capable in law, notwithstanding the statutes of mortmain, to take, purchase, and hold to them and their successors not only all such lands, buildings, hereditaments, and possessions, as may be from time to time exclusively used for the sites and immediate purposes of the college and hospital respectively, but also, for the use and maintenance of the college, any other lands, tenements, hereditaments, and possessions whatsoever, not exceeding the annual value of £2500; and also, for the use and maintenance of the hospital, any other lands, tenements, hereditaments, and possessions whatsoever, not exceeding the annual value of £2500.

Also, to have power to accept, on behalf of the college or hospital, gifts and endowments for promoting particular objects of education, or otherwise in aid of the general purposes of the college or hospital, on such terms and conditions as may be agreed upon for the purpose between the said college and the person bestowing such gifts and endowments.

With respect to the mode of electing the professors it provides:—"That whenever a vacancy shall occur in any professorship, the names of the candidates shall, in the first instance, be referred by the council to the professors, who shall make a special report to the council of the names of such candidates as, in their judgment, shall be qualified and eligible, professionally and otherwise, to fill the vacant professorship; and that the council shall then recommend to the governors, from the candidates included in such report, one whom they think best qualified to fill the vacant professorship."

It also provides—"That whenever, in the opinion of the council, any professor ought to be removed, by reason of neglect of duty, incapacity from permanent illness, infirmity, or other sufficient cause, a report to that effect shall be laid by the council before a special general meeting of the governors, to be called for that purpose; two-thirds of whom shall have power to remove such professors; the votes of such meeting to be taken by ballot."

It also enables the council to confer on its distinguished students an honorary distinction. The council shall have power from time to time to elect such members of the college holding a diploma in medicine or surgery, or being graduates in medicine, law, or arts, or such members of the "late Birmingham Royal School of Medicine and Surgery," as the council may by their by-laws determine to be "Fellows of Queen's College at Birmingham," with powers to vote at all special and general meetings of the governors, and with such other powers and privileges as may be determined upon from time to time by the council.

It also provides—"That all fees from students for attendance on the medical and surgical practice of the Queen's Hospital shall be paid to the treasurer of the college, for the use and purposes of the hospital; provided, nevertheless, that it shall be lawful for the council of the college, from time to time, to pay over such proportion of the fees as they shall think fit to such medical and surgical officers as are engaged in the actual duties of professors of the college and of medical and surgical officers of the hospital."

A sub-committee, consisting of the Rev. Chancellor Law, Dr. Eccles, Dr. Best Davies, and William Sands Cox, Esq., was appointed to draw up a dutiful and loyal address, praying her Majesty to be pleased to accept the most respectful and grateful acknowledgments of the college for her Majesty's great kindness in granting to the college such important privileges, to be presented at an adjourned meeting to be held on the 28th instant.

TO THE HONOURABLE THE COMMONS OF GREAT BRITAIN AND IRELAND IN PARLIAMENT ASSEMBLED:

THE HUMBLE MEMORIAL OF THE UNDERSIGNED COLLEGIATE SURGEONS AND PHYSICIANS, RESIDENT IN THE ISLE OF MAN,

Showeth—

That your memorialists perceive with deep anxiety that a "New Medical Bill" has been recently introduced into your Honourable House which, instead of embodying those great staple measures that must ever constitute the groundwork of a truly liberal and comprehensive enactment for the medical practitioners of these realms, is, on the contrary, at direct variance with their highest interests, by insidiously cloaking, under the semblance of equitable registration, details most banefully pernicious to the profession and obnoxious to the public.

That your memorialists very respectfully beg leave to urge upon the grave consideration of your Honourable House that no statutory measure can possibly meet the exigences of the medical practitioners of these realms that does not comprise the following provisions of reform, viz.:—

1.—The thorough legal recognition of perfect equality of estate between the three great divisions of the profession,—surgery, physic, and general practice, by amplifying and equalizing their respective *curricula* of education, both classical and medical, and by conferring upon each division identity of privilege, immunity, and collegiate rank.

2.—The incorporation of the great body of general practitioners by the erection of a National Institute.

3.—The extension of a vote to all practitioners in the government of their respective colleges.

4.—The establishment of a strict registration of all practitioners.

5.—The establishment of a Central Board of Health, by which the profession may at all [illegible] maintain a position to communicate with executive.

6.—The considerable diminution of the [illegible] number of existing licensing medical bodies, [illegible] there are no less than seventeen.

7.—The total suppression of empiricism began [illegible] summary penal measures. [illegible] and her stre[illegible]

That your memorialists do, they [illegible] Coincident to emphatically express [illegible] lessening

House their unqualified repudiation of the aforesaid measure, as directly tending to the retardation of medical science, and consequently as at once subversive of the best interests of their profession and immediately hostile to the public welfare.

That your memorialists do, therefore, implore your Honourable House that the aforesaid "New Medical Bill" may not pass into a law.

And your memorialists will ever pray, &c.

Robert Edward Craine.	George S. C. Butler.
Thomas M. Teare.	William A. Hubert.
Thomas christian.	Thomas Nelson.
John Teare.	W. H. Montford.
John Quillin.	A. Quathough.
Philip Elliot.	J. Stubbs.

June 23.

GOSSIP OF THE WEEK.

Royal College of Surgeons.—The annual election of three Fellows into the Council took place on Thursday week, when Mr. Edward Cutler, Surgeon to the St. George's and Lock Hospitals; Mr. Charles Aston Key, Senior Surgeon to Guy's Hospital; and Mr. Cæsar Henry Hawkins, Surgeon to St. George's Hospital, were duly re-elected. After the election the Fellows adjourned to their annual dinner at the Freemasons' Tavern.

Army Medical Service of the United States.—It is prescribed by law that no person shall receive the appointment of assistant-surgeon in the army of the United States unless he shall have been examined and approved by an army medical board, consisting of not less than three surgeons or assistant-surgeons, who are designated for that purpose by the Secretary of War. The medical board of examiners rigidly scrutinizes the pretensions of each candidate, taking into consideration his physical qualifications and moral habits, as well as his professional acquirements; and reports favourably upon no case admitting of a reasonable doubt.

The Inhalation of Ether.—By a decree of the Government of the grand duchy of Hesse Darmstadt, *officiers de santé*, dentists, and midwives are forbidden to use the vapour of ether in their operations.

French Midwives.—The annual distribution of prizes to the female pupils of the Ecole d'Accouchement, Paris, recently took place in the amphitheatre of that establishment. M. le Comte Hector Lepeletier d'Aulnay presided, in consequence of the absence of his colleague, M. Edmond Halphen, from illness.

Procuring of Abortion.—A trial has recently taken place in the state of Massachusetts, in which a woman of the name of Luceta Parker was charged with having thrust into the womb of a married woman, then pregnant with child, a sharp metallic instrument with the intent to cause marriage, and that in consequence the child was born dead. On the trial it appeared in evidence that the acts alleged were done with consent of the woman. The jury found a verdict of guilty, and her counsel moved an arrest of judgment, because it was not set forth that the woman was quick with child at the time the operation was performed. The judge instructed the jury that it was not necessary to prove this fact, but he deemed the question involved so important that he reported it to the Supreme Court. After argument, the Chief Justice, in delivering the opinion of the court, stated that, at common law, the court were of opinion that no indictment would lie for attemps to procure abortion with the consent of the mother until she is quick with child. It is mentioned in a note to this case, that the Legislature of Massachusetts subsequently made provision for the punishment of the offence with which the defendant was charged in a satisfactory phase.

A German journal assures us that shambles are to be established in Berlin for the sale of horseflesh. The same journal ... banquet has taken place in the ... where seventy persons have ... seven years old.

Awful Consequences of Imperfect Sepulture.—In the neighbourhood of Castle Island and Ballylongford, from the imperfect covering thrown on the dead victims of famine, troops of dogs prey from day to day on the bodies. This is not all: violent madness is the result, which has led these rabid animals not only to attack one another, but the cattle in the fields. The authorities and the gentlemen of the county should at once look to this.

Obituary.—On Sunday the 4th inst., at his house in Camden-town, deeply lamented, Joseph Curtis, surgeon, aged 47.

MORTALITY TABLE.

For the Week ending Saturday, July 3, 1847.

Causes of Death.	Total.	Average of 5 Summers.
All Causes	933	940
Specified Causes	931	935
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	190	226
Sporadic Diseases.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	125	103
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	115	157
Diseases of the Lungs, and of the other Organs of Respiration	239	226
Diseases of the Heart and Blood-vessels	34	25
Diseases of the Stomach, Liver, and other organs of Digestion	86	94
Diseases of the Kidneys, &c.	9	8
Childbirth, Diseases of the Uterus, &c.	7	10
Rheumatism, Diseases of the Bones, Joints, &c.	3	7
Diseases of the Skin, Cellular Tissue, &c.	8	2
Old Age	42	50
Violence, Privation, Cold, and Intemperance	73	28

COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the THEATRE of QUEEN'S COLLEGE, Birmingham.

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Amenorrhœa, two varieties of; circumstances affecting the advent of the menstrual period, effects of its absence before the age of twenty and after, examination of the patient, particularities to be observed; symptoms usually attendant upon amenorrhœa emansionis, treatment of this in its simple forms with sympathetic fever—with debility; amenorrhœa emansionis arising from a scrofulous constitution, amenorrhœa suppressionis, causes of it, precautions to be observed in treating it; routinism not available; treatment by iron and aloes; exceptions to the use of these, cases in the hospital; treatment of amenorrhœa arising from dyspepsia; from plethora, from rheumatism, from debility; from cold, treatment of symptoms under particular circumstances, chlorosis.

GENTLEMEN,—I have a few observations to offer upon the subject of amenorrhœa, several cases of which you have lately seen treated in the hospital. Nosologically speaking, amenorrhœa is of two kinds, which are respectively denominated, *amenorrhœa emansionis*, and *amenorrhœa suppressionis*. Practically speaking, they differ little, either in the symptoms which they present, or the treatment which they require. In the former case, the menses have not as yet appeared; in the latter, their periodical occurrence has been arrested.

The advent of the menstrual period is very much regulated by climate, temperament, and mode of life. In hot countries, this period happens to early youth; in cold countries, to later; in mild climates like our own, the age is midway between those opposites—from fourteen to fifteen is the age, as a rule, with us. To this rule, however, there are various exceptions. Females of a sanguine, excitable, plethoric temperament, and those who are engaged in outdoor active occupations, and are well nourished, sometimes menstruate as early as at twelve years, and even sooner than this. For opposite reasons, also, the commencement of this important discharge is often delayed beyond the average time. You occasionally meet with instances in which the catamenia have not once made their appearance through even a protracted lifetime; and this, without the general health having suffered, except at the particular periods when the function ought to have been established. From the fourteenth to the eighteenth year, and perhaps later than this, sympathetic disorder is chiefly soon to be consequent upon the non-occurrence of the menses. If the patient get beyond the twentieth year without having menstruated, the constitutional and local symptoms generally subside, provided there be no structural or other definite organic causes to account for the anomaly. If, in *amenorrhœa emansionis* continuing past the age of twenty, there be much suffering, general or local, you may be suspicious of some physical condition of the uterus being the source of the trouble. Malposition of the organ, or imperforation of the hymen, may be its cause.

It is chiefly in the early stages of the amenorrhœa I speak of, that those of you who may hereafter practise physic exclusively, will be consulted. In the more advanced forms, the cases will generally require to come under the care of the surgeon, because of the mechanical assistance then needed.

When a patient so situated comes before you, the leading object to be had in view is, of course, to find out the cause of the suffering. In searching for this, always let your questioning and manner comport with the true dignity and delicacy of gentlemen: there are certain queries to be put—consider their seriousness, and the proper gravity becoming you, when putting them. And let no condition in life prompt an exception to this most necessary rule. Mothers, or adult female friends, generally companion invalids of this class; direct your more particular inquiries to them, as you have observed me do at the hospital. You will mostly find them fully prepared for all your leading interrogatories.

In the majority of cases of this class that you meet with, there is nothing more the matter than simply those local pains, with their various sympathies, which precede by a few weeks, or a few months, the advent of menstruation. A dull, heavy, dragging pain in the loins, and something similar in the lower part of the bowels; shooting pains down the thighs, cramps of the legs, and coldness of the feet; headache, loss of appetite, and flatulence; waywardness and irritability of temper; feverishness, and many other such like things, are the protean concomitants of *amenorrhœa emansionis*.

In these instances it is better to do nothing more than relieve the more urgent symptoms, and leave Nature to do (as she is promising) the remainder unassisted. If the bowels be costive, give three grains of blue pill, and the same of camphor or hyoscyamus, at bedtime, and a black draught, or a dose of rhubarb and magnesia, the next morning. Every alternate or every third night, let the feet and legs be immersed in hot salt water. Give twice or thrice daily from five to ten grains each of carbonate of soda and nitrate of potash, if there be much fever; and, if the stomach need it and will bear it, make the vehicle of those substances a bitter infusion say gentian or calumba. Prescribe regular out-door exercise, and judicious diet. These are two most important points in the treatment of the ailments I speak of. There is generally a great disinclination to walk; the patient likes the semi-recumbent posture, and perhaps falls asleep half a dozen times a day. The consequence of this is, an increasing disinclination for fresh air and exercise, and sleeplessness at night-time. The more they sit and doze, the more they desire to do so; if they wander about the house, they consider that walking enough; and they will eat all kinds of indigestible things, and imagine they are doing the stomach a service. Be particular in your directions and inquiries concerning these matters. Let your patient's exercise be regularly taken in the open air, where there is some salubrious oxygen to breathe; let her eat only at stated times, and of what is nutritive and easily digestible.

Other cases you meet with, in which, along with the pains I have mentioned, there is great nervous debility, with constant chilliness of the surface, instead of sympathetic fever. Here, your object should be to rouse by diffusive stimulants, and sustain by tonics and good food. You saw an example, some months' back, in the person of an out-patient named Hayes. She was sixteen years of age, had never menstruated, and, along with some local suffering, laboured under considerable general debility. She had an exsanguined look; tongue pale and trembling; scarcely any appetite; pulse 98, small and feeble; bowels costive and very flatulent.

Milk agreed with her, and she was ordered to take it for breakfast and tea; beef or mutton, with old bread, for dinner, additionally to any light pudding, and a glass of port wine half an hour afterwards; sago or arrowroot for supper. The following were her medicines:—

℞. Infusi cuspariæ, ℥viij.; ammon. carb., ℈ij.; sp. eth. nit., ʒij. Misce fiat mist. cujus cap coch. ampla duo ter die.

℞. Pil. coloc. comp., ℈ij.; assafœtidæ, ℈j. Misce et divide in pil. xij. quarum cap. ij. omni nocte.

Under this treatment the girl quickly began to improve; her spirits rallied, and her strength and appetite increased daily. Coincident with this change was a corresponding lessening of

various pains that had troubled her: the circulation became regular and well balanced, and nervous vigour and action pretty equally distributed. At length there were no local pains or congestions, and shortly afterwards (within a month of commencing her treatment) the menses appeared, and she was quite free from complaint. She was to call upon us again if these did not return in due course; but, not seeing her, I conclude that their periodical visits were regular.

You meet with other instances, again, in which the non-appearance of the menstrual secretion is due to a scrofulous diathesis or cachexia. You saw a case at the hospital, at about the same time as the one above mentioned. We ordered her nutritive food, change of air, warm aperients, and three-grain doses, thrice daily, of hydriodate of potash, with carbonate of soda in bitter infusion. She benefited by this plan, and menstruated in about seven weeks, and continued to do so; but the discharge was scanty and light coloured. You generally find it so in such cases. In the worst of them, they rather resemble periodical leucorrhœa than genuine menstruation. These patients are apt to get into an anæmic state, and in consequence to suffer from local or general dropsy. It is when the blood is not in due quantity, or when the quality of it is impoverished, that the great services of chalybeate medicines are shown. In such cases, they are often invaluable; but, if their best effects are to be obtained, they must be administered with discrimination.

Amenorrhœa suppressionis is an ailment with which you will frequently meet in your career of practice. Often you will be able to relieve it without much trouble; but oftener, perhaps you will find it intractable in the extreme. It is especially so with strumous subjects.

Suppressed menstruation owns a variety of causes. Amongst the most common, are exposure to cold, especially exposure of the feet whilst the catamenia are present (one of the worst cases I ever saw, arose from a young lady putting her feet into cold water to arrest the discharge that she might go to a ball); acute diseases; excessive exertion, or anxiety; profuse bleeding, or mercurialization; sedentary pursuits, dissipation, impoverishment, &c.

In treating this, as in treating the other variety of amenorrhœa, make it your first object to discover the cause of the irregularity, and your second to comprehend all the symptoms which accompany it. You will thus, and only thus, get a right clue to an efficient mode of treatment. In doing so, you will find that there is no such thing as uniformity or routinism to be observed, but that almost every case presents some peculiarity in which it differs from every other, and which requires that its treatment shall differ accordingly. Age, temperament, mode of life, climate, and various other things, give a singular diversity to the symptoms accompanying amenorrhœa.

If you let routinism rule in such cases, you will make one half of your patients worse, and not cure the other. It was the fashion, many years ago, to believe certain preparations of iron to be specifics in amenorrhœa. That very doubtful, and certainly very dirty, commodity, known by the name of carbonate of iron (a peroxide for the most part), used to be administered in drachm doses, disguised in treacle, to excite uterine action. You may readily imagine in how far several such doses daily would operate to the cloying of any ordinary appetite. Then that nauseous nastiness, compounded of opposites, called Griffith's mixture, became a regular routine potation for amenorrhœa, no matter what the causes from which this might have sprung, or the symptoms which might attend it. What mischief was done by this blindfold sin against therapeutics, happily for the perpetrators, lives only in conjecture; but we were very near having some evidence of it the other day in the person of a very feverish patient, for whom a subordinate, in my absence, prescribed the dirty draught alluded to.

Aloes, again, either alone or conjoined with various aromatics, was once thought a *sine qua non* to the efficient treatment of amenorrhœa. No matter what the cause, or the characteristics of the case, amenorrhœa *was* amenorrhœa, and aloes *was* aloes—and so the practice ran. How many abortions occurred in thus treating cases in particular, and how often hemorrhoids were produced in thus treating them in general, pathological history does not inform us. I have seen more than one pitiable example of the latter, in the case of plethoric females, whom depletives or febrifuges would have better served. In another case, somewhat similar, the abuse of the drastic purge caused a most distressing prolapsus uteri. Mind, I am not condemning aloes, rightly combined, as a remedy in amenorrhœa—in certain forms thereof it is most valuable: the condemnation applies to the indiscriminate and unguarded use of so potent a remedy.

Let me again tell you that there is no specific form of treatment applicable to amenorrhœa: you must study each case of it separately, and treat it accordingly, or you will never treat it aright.

Now, to mention a few of the cases you have seen treated in and at the hospital.

Mary Hackett, aged twenty-three, was admitted, under my care, on the 5th of November last year, the subject of amenorrhœa. It was of four months' duration, and had supervened upon dyspepsia. We learned that, for upwards of two months prior to the cessation of the menses, she had been dyspeptic: appetite bad; frequent eructation or vomiting; bowels costive. This state, as at first manifest, became aggravated when the uterine function ceased. At the time of her admission it was somewhat severe: tongue covered with a thick brownish fur; urine scanty, thick, and high-coloured; fæces lighter coloured than natural. With ordinary diet, she was ordered the following:—

℞. Infusi gentianæ comp., ℥viij.; sodæ bicarb., ʒij.; sp. eth. nit., ʒiij. Misce fiat mist. cujus cap. coch. ampla duo ter die.

℞. Pil. coloc. comp., ℨij.; pil. hydrarg. ℈j. Misce et divide in pil. xij. quarum cap. ij. omni nocte.

This treatment suited the girl perfectly well for the space of a week, at the end of which time, the hepatic secretion having become restored, it was thought advisable to discontinue the blue pill. Five grains of compound colocynth were given every night, and the mixture as before. After the lapse of three weeks, the catamenia appeared; and before five weeks had passed the girl left the hospital well.

In this case, as I have said, stomach and bowel disorder was the source of amenorrhœa: the history of it clearly told us so. Dyspepsia first made its appearance, and cessation of the menstrual function came as a consequence. What better, then, could we do than treat as in usual gastro-intestinal disorder? We did so. This disorder gradually disappeared, and its exit was marked by a return of the menses.

Contrast this case with one which happened in my practice, five years ago, at the dispensary. A girl of sanguineous temperament, aged twenty-two, came under my care for excessive swelling of the right leg. Mr. Carter, the house-surgeon, chanced to come into the room as I made my first query, which was concerning the uterine function. I found that she had not menstruated for upwards of six months. The swelling in question had existed for rather more than a fortnight. The leg was enormously swollen, and the opposite leg very slightly. For some time past she had grown fat, owing to a sedentary occupation; and upon this obesity amenorrhœa had supervened. She had had itching, and shooting pains, about the uterus and lower part of the rectum, accompanied with tenesmus, and straining on micturition. She was ordered a saline purgative immediately, to be followed by twelve leeches to the right groin. The purgative acted profusely, and the leeches bled so well that pressure had to be used to arrest the hemorrhage they caused. She needed no more treatment. Within three days the swelling of the leg had disappeared, and within a fortnight the patient menstruated.

Here, it was evident that constitutional plethora was the remote cause of the ailment. The immediate cause was probably congestion of the uterus, and of its contiguous structures. The symptoms would warrant this belief, and so would the results of the treatment. What would have been the issue of this case had we given aloes, or some stimulating iron mixture?

The case of Frances Child I mentioned to you when treating of rheumatism, for which affection she came into the hospital. Her menses ceased when her rheumatic seizure became established. She was treated exclusively with soda, an aperient excepted. Under this treatment her rheumatism subsided, and before she left the hospital her catamenia had returned.

Elizabeth Matthews, aged twenty, came into the top ward on the 23rd of April, this year. She was the subject of amenorrhœa, apparently from a defect of the *vis vitæ*. She was reduced in her physical powers, but how or why we could not learn. She was not emaciated, but from her exsanguined appearance I was led to suspect an impoverished state of blood, therefore ordered her the following:—

℞. Infusi quassiæ, ℥viij.; tinct. ferri sesquichloridi, ʒij. M. ft. mist. cujus cap. coch. ampla duo ter die.

℞. Pil. coloc. c., assafœtidæ, ext. hoscy., aa. ʒj. Misce et divide in pil. xij. quarum cap. ij. omni nocte.

This girl occupied the top ward, and you remember she interested us from a curious tingling and pricking sensation of which she complained in both mammæ. I told you that, *cæteris paribus*, this was a suspicious feature, but not necessarily so, because it was sometimes found connected with amenorrhœa arising from general causes; so it seemed to be in this case. As the girl improved through the chalybeate treatment, this particular sensation declined, and altogether disappeared as menstruation became established, which was within three weeks of her admission. She staid in the hospital more than another fortnight, and then left in good health. This was a case that seemingly called for a chalybeate: such was prescribed, and it answered well. I preferred, as I always do, a light iron tonic; if this do not serve, I am not aware that the heavier class will be of any avail. I am fond of the sesquichloride, or the ammonio-chloride, or the citrate, or the ammonio-tartrate, or some such compound, which combines the advantages of solubility with comparative decency of taste.

Amenorrhœa often arises from cold. In many instances these cases are quickly curable; that is, the cold removed, the uterine action is restored in consequence. Diaphoretic and febrifuge treatment is often all that is necessary. I have lately had a case of this kind at the dispensary. The girl had been sitting on some wet grass playing with children. She became cold and shivering, and went home with considerable feelings of languor. Her menstrual period was approaching: she passed over it, labouring under simple fever, that was much aggravated at the time the catamenia ought to have appeared. Febrifuges, with gentle mercurials, and cautious living, improved her state, and she afterwards menstruated regularly.

Perhaps if her cold had been taken immediately, or shortly after menstruation, instead of just as it was expected, no irregularity would have been the consequence, had she been properly treated.

We had a similar case in the hospital three months ago. The girl got her feet wet, and suffered from influenza, for which she came under treatment. She had not menstruated since taking cold, five weeks previously. She was ordered salines and aperients, and her feet to be put into hot water every other night. She improved in a very short time, and was then given a chalybeate tonic, which she took for the further period of three weeks, but without any return of the catamenia. This girl was very lazy, you remember, and, thinking she was not likely to be

much better by lolling on a bed in the hospital, I ordered her dismissal. I have no doubt good exercise at home would go far towards re-establishing her health. We had three or four such cases all in at once, you know. I do not think one of them would have ever got well by good hospital living and idleness. So I dismissed them one by one, and have no doubt that domestic and other labour would go far towards completing their restoration.

Under certain circumstances, you are obliged to treat first the symptoms of amenorrhœa. This is particularly the case when there is a vicarious discharge. This may happen from an organ from which hemorrhage is of consequence, as from the lungs. It may first be merely vicarious, but the discharge may become established and end fatally. It is much more serious to have hemorrhage from the lungs than the uterus, though the quantity of blood lost be the same. Hematemesis, again, you often have, vicarious of menstruation. You had better look to this at once, or the habit may become established. I have known more than one instance of the vicarious action having become permanent, even though the function of which it was the representative had been restored. This was through neglect. It was formerly the fashion to encourage the periodical discharge of blood, no matter what the source of it. Let me tell you, it is much better to have it from the proper source than from any other; and further, that it had better be retained altogether than have such organs as the lungs and stomach for its opportunity of exit.

Always treat first the symptoms of amenorrhœa when they appear to be paramount. These subdued, proceed to treat the original ailment according to the indications which it may furnish. But have no crotchets or prejudices about it: act according to rational suggestions, the result of well-weighed and well-sought evidence.

Chlorosis is a sort of cachectic condition to which females are reduced through a continuance of amenorrhœa. It is characterized by a peculiar greenish-yellow hue of skin, pearliness of conjunctiva, and extreme debility. There is generally, in such cases, a capricious appetite, or a total loathing of food; irritability, and peculiarity of temper; irregularity of bowels, and flatulence; urine scanty, and loaded with lithates, or profuse and as pale as water; hysterical symptoms; perhaps anasarca, from the laxity of tissue and impoverishment of blood; quick, weak, irritable pulse; palpitation of the heart frequently; and other of the various symptoms which are characteristic of debility. Some of these cases acquire an extraordinary character, and often to the inexperienced practitioner suggest fearful suspicions of most formidable ailments. Into these they are apt to degenerate if neglected, and into none more commonly than into phthisis. Continued chlorosis often begets a cachexia that ends in tuberculosis.

You have seen one case of chlorosis in the hospital under my care during the last six months. It was in the person of Mary Griffiths, aged nineteen, who was admitted Jan. 28. It had existed about two months, and she had not menstruated for six. She was ordered infusion of gentian and carbonate of ammonia, thrice daily, and colocynth pill at night, with full diet. At the end of a week, her circulation having improved, as also the tone of her stomach, sesquichloride of iron was substituted for the ammonia in her mixture. Whilst taking the latter her menses appeared, but the iron subsequently disagreeing with her, quinine was given in its stead. This suited her excellently, and on the 20th of March she left the hospital well.

It is often advisable to let ruling symptoms be your first guide in the treatment of chlorosis, but the main plan of treatment is the stimulating and sustaining. Look to the general secretions, but look also to the strength!

Dr. Aldis has been appointed one of the physicians to the Metropolitan Free Hospital.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), M.R.S., Physician to the Royal Infirmary for Children, &c.

(Continued from p. 368.)

In my lecture to-day, gentlemen, I have to continue the subject of *Hydrocephalus*. You will remember that when I last addressed you I spoke to you of the usual symptoms indicative of the existence of the disorder I called *tuberculous meningitis*, and which I said constituted the greater number of cases of what we see in large towns as "water in the brain." This disorder, although distinctly and sufficiently well marked as it is by these symptoms in most cases, yet in others is by no means so easy of diagnosis: for brain disease may exist in children, and present an anomalous series of symptomatic phenomena. I have already told you that the disease may be so masked by the *secondary* gastro-intestinal complications, such as vomiting and constipation, that its real nature may be overlooked; sometimes the disease runs its course without any full exhibition of its peculiar symptoms—no other signs appearing save those which show themselves at the beginning of the attack, until, as life begins to fail, when various signs of constitutional distress announce the impending dissolution. In other cases no usual first stage is evident—the malady runs its course so rapidly that it appears to begin with the second. You will find some good remarks connected with this point in the works of MM. Berton and Trousseau. A child was admitted into the hospital which seemed rather disinclined to move, but continued to suck; it had no convulsions until the day before it died, when its head was thrown somewhat back. On inspection after death, tuberculous deposit was found on the pia mater, with softening of the superficial layers of the brain.

Guersent has shown the *possibility* of a complete suspension of all the morbid phenomena at the begining of the second period. When I speak of *latent* tuberculous meningitis, I shall dilate more fully upon these points.

I do not think, from my own experience, that *sex* has much influence on the production of the malady; my proportions are nearly equal, a little in favour of the male sex as to frequency, but by no means sufficiently so as to lead me to attach importance to it.

With respect to *age*, I should say the disease is more frequent at from two to five years of age than at any other time, but much earlier and later, also, you will meet with it.

Some think *season of the year* has an influence on its production. Guersent considers it more frequent in "spring;" Piet, in March and July; and Rilliet, in March. I can state nothing decisive on this point.

The main cause of the disorder is the existence of the scrofulous diathesis—it is a manifestation of the same. All such causes as dentition, anger, fright, &c., as are given by different authors, are far too vague to require comment. Like all other affections, the outbreak may owe its *immediate* origin or exciting cause to various disturbing circumstances apart from the *general* affection, but this latter must always be kept in view.

The *prognosis* of tuberculous meningitis is bad in the extreme, so bad that Rilliet asserts he has never seen a single case terminate favourably; and Rufz and Piet confirm this opinion.

I must differ, however, with these writers, great as they are, for I believe that the affection in some few cases, when not prolonged beyond the commencement of the second period, may be brought to a happy issue. Rare, indeed, the cases are, and determinate and persevering must be the treatment, the true nature of the malady being diagnosed at once. I have had under my care three cases, which have been averted from a fatal termination after the second stage has been attained; and have had others in which being warned by vomiting, constipation, and convex fontanelles, I have acted so strenuously that the disorder has not gone to any further extent. Of course it will be in such instances always resolvable into a question of *diagnosis*, and in the latter class of cases a doubt in the minds of some may exist as to how far these symptoms really indicated the meningitic affection, or were, on the other hand, evidences of cerebral congestion alone.

I have now to draw your attention to the morbid appearances observed on inspection after death. In the greater number of cases you will always find that at the base of the brain there exist evidences of inflammation in the form of an effusion of whitish, rather thick or concrete lymph, or concrete yellowish, purulent-like matter, having *granulations* mixed up with it. Sometimes these granulations are surrounded or imbedded in but very little indeed of these kinds of effusion, the granulations themselves being almost the only deposit. On looking at the convexities or the tops of the hemispheres you will find nearly the same appearances as at the base. Sometimes they are very evident at the base and not on the hemispheres; but I have met with but one case in which they were present at the latter, and not at all in the former spot; but I have, two or three times, seen them at the base and not on the hemispheres. These granulations are generally seen in the condition of minute whitish, or greyish-yellow little bodies, having a greater degree of hardness the greyer they are. Sometimes, from their minute size, and the very slight protuberance they form, they are not readily perceptible, unless the membrane be held against the light, when they become at once visible, or if, as advised by Rilliet, the layer be placed upon a slip of glass. The number or quantity of them varies considerably, from two or three to a number too numerous to count. Their immediate locality is beneath the arachnoid, or on the pia mater. But they have been found on or in almost every portion of the contents of the cranium. When the deposit either of effusion or granulation is considerable, it often follows the course of the greater veins. Although isolation, comparatively speaking, of the granulations, or of the semi-confluent yellow masses sometimes found, is generally observed, in other cases the granules or masses become connected together so as to form a continuous plate or patch. But you must recollect that, although extra-vascularity, infiltration, or effusion of more or less gelatiniform lymph or concrete yellow matter is frequent, yet that the essence of the disorder lies in the *granular* tuberculous deposit which may exist with very slight if any vascularity or effusions.

The next most frequent phenomenon observed in my experience is *effusion into the ventricles* of a limpid colourless fluid. The quantity varies sometimes, being but slight, at others, when the case has been of slow progress, very considerable: about eight ounces is the largest amount I have seen. Sometimes the effusion is turbid or flocculent, even coloured, and presenting floating particles, resembling albuminous or purulent matter, and, in all likelihood, owing to the breaking down and admixture of the ventricular parieties with the effused blood.

Next to the *effusion* comes *softening* of the central white portions of the brain. This *ramollissement* varies in intensity and extent: the cerebral tissue may be only a little less firm than natural, and involved but to a limited extent, or the corpus callosum, the fornix, septum lucidum, and other parts forming the walls of the ventricles, may be so softened and broken down as to present no trace of their natural form and structure.

Now, gentlemen, think of these three grand phenomena as the lesions constituting the common form of hydrocephalus: tubercular granulations at the base or hemispheres, with meningitic inflammation there; effusion of fluid into the ventricles; softening of the central portions of the brain. Remember that you will *almost always* find evidences of the former, which is the primary lesion in the disease; the others are secondary phenomena. Sometimes you will

find much effusion, and very little or no softening, or much softening and no effusion. They bear no definite or constant relation to each other, so far as intensity goes. There occur also a limited number of cases in which there are seen evidences of inflammation of the pia mater at the base, sometimes at the convex surfaces of the brain, too, in which the effusion is always *concrete*; but yet no distinct tuberculous matter or granulations are to be detected by the most careful observation. These cases, accompanied often by effusions into the ventricles, run the same course, present the same category of symptoms as do the others, and occur in a like scrofulous constitution. These cases are ones of scrofulous meningitis, unaccompanied by the deposit of tubercle—at least, I regard them as such. Some French pathologists call this peculiar concrete effusion *tuberculous infiltration*, and endeavour to establish its identity with *tuberculous meningitis*; but much further research and observation are necessary before this identity can be established. There occurs another class of cases, also, in which the effusion into the ventricles is very considerable, and any other lesion scarcely to be appreciated. In these examples the granular deposit exists notwithstanding, slight though it be, and constantly overlooked; but I have always been able to detect the presence of yellowish lenticular discs at the base of the brain. It is in such cases as these, however, that stress should be laid upon the ventricular effusion, as the lesion giving rise to the more important symptoms or fatal event.

A less common lesion, or more unfrequent complication, you will now and then meet with, is the extension of the granular or tuberculous deposit down the medulla oblongata. Deposit of tuberculous matter in the substance of the brain or cerebellum, or upper part of the spinal cord, is also now and then seen. In four cases I have seen this complication: in one, a girl of ten years of age, there existed a tubercle, about the size of a pea, in the white matter of each hemisphere, in a state of rather softish calcareousness; in another, a boy, on tracing the crus cerebri downwards on the right side, a tuberculous heap, of the size of a marble, hard and corrugated at the circumference, was found; a third occurred in a case which Mr. Barlow and myself examined the other day. In these instances there was no softening at all of the cerebral matter adjacent to the morbid deposit; but other persons have found in such cases *red softening* present. Not only this, but true *cerebral apoplexy* has been observed in like instances. Whilst *cerebral congestion*, you must know, is one of the more common affections of infantile life, *cerebral hæmorrhage* is an event of rarity: still, rare as it is, it is met with more frequently connected with tuberculous deposit than as a simple affection. You must not confound the *red softening* I spoke of just now with the effusion of blood in the softened cerebral substance around the tuberculous matter, and which constitutes the *apoplexy*.

One of the most interesting cases I have had at this infirmary, and which some of you had an opportunity of seeing, Mr. Dendy, Mr. Barlow, and myself examined last Thursday (June 10th). This patient, a boy, who had previously been in St. Thomas's Hospital, came under my care for what I considered scrofulous disease of the cervical vertebræ, with involvement of the upper part of the spinal cord; and it gratifies me to say the diagnosis was right, although the signs and symptoms were very obscure. Still it was very evident the case was a complicated one, and the disease of the bones was not all that was the matter. This boy had complete loss of power from the shoulders downwards, with great diminution of sensation; the stools passed involuntarily, and the catheter was obliged to be resorted to; now and then there was some slight delirium during sleep, and slight convulsions towards the last, with great distortion of the features just before the fatal event. The head was never moved but by the aid of his mother, and he often complained of great pain in the head, saying it "burnt." But the intellectual faculties were very acute and perfect until the stupor supervened, about eighteen hours before death. There were other interesting symptoms I cannot speak of now; and suffice it to say, that we found after death the following lesions: I give them to you as I noted them down at the time:—

Emaciation extreme; capillary development very considerable over the extremities, &c.; eyelashes long; spinal column straight; abnormal quantity of fluid in spinal theca; spinal cord at top softened; anterior portion softer than the posterior; yellow lardaceous or scrofulous deposit existing plentifully beneath the lining membrane of the anterior portion of the upper part of spinal canal; second, third, and fourth vertebræ affected with scrofulous disease; skull much and densely ossified, but symmetrical; much congestion of meningeal vessels; brain somewhat compressed; convolutions not so rounded as usual; sulci less evident than common; granular deposit on the edges of the hemispheres, particularly on the margin of right; slight milky effusion there, with some along the course of the larger veins; ventricles largely dilated, containing from 5℥ to 6℥ of clear fluid; no softening of central parts; choroid plexus rather paler than natural; granular deposit at the base of the brain, abundant between the corpora pyramidalia.

With regard to this case, I would just call your attention to the great development of hair over the body, and to the tuberculous deposit; next, to the very great amount of cerebral disorder, and yet the almost complete want of the usual symptoms during life, for those which did exist were chiefly referrible to the spinal complication.

In the greater number of cases you will find that, besides on the meninges or in the brain, tuberculous deposit will be met with in some other organs or structures of the body. Often the child is in a state of incipient tuberculosis of most organs; sometimes, however, you will not be able satisfactorily to decide that the morbid product exists elsewhere—at least, such has happened to me in two cases. In many I have only examined the contents of the cranium, and, therefore, cannot say what elsewhere existed; but, when I have had time and opportunity to examine the bronchial glands, &c., I have usually found it. Some French writers establish the *rule*, that the deposit is *general*.

There is a lesion stated by Rufz, Rilliet, and Barthez, and more lately, I see, by Dr. Budd, his "Croonian Lectures," to occur very commonly in infants dying of "hydrocephalus," viz., semi-transparent or gelatiniform softening of the stomach. I cannot speak from my own experience of the immediate connection of the one with the other.

Sometimes you will find irregular ossification of the cranium, parts not ossified you might expected would have been, or the skull very unsymmetrical in development around its *imaginary axis*.

The general aspect of the child is always that indicative of a debilitated or naturally weak constitution, mostly scrofulous, often intensely so. I have now told you of the more important and essential lesions of the "*acute hydrocephalus*," at least, such as I see it. I might have mentioned some other, and minor ones, such as enlargement of the glands of Pacchioni, an opaline condition of the arachnoid, &c. &c.; but for these I must refer you to the more minute morbid anatomists of France, especially MM. Rilliet and Barthez.

You might ask me the question, Can definite, distinct, and constant relations be traced between the more important lesions observed after death and the symptoms which have occurred during the life of the patient? In the present state of the physiology of the nervous centres, both of the sick and of the sound child, I must confess we can only be sure of the more general relations, for as to predicating a particular lesion from a particular symptom, it is out of the question. We cannot say, that if the child has been blind, or has suffered irregular dilatation of the pupils, that here we certainly shall have the thalami, or corpora quadrigemina, or geniculata, suffering pressure from fluid in the ventricles, or from much effusion at the base of the brain, because we know that these symptoms may be sympathetic, the result of an injurious influence radiating from other parts. In fact, we may have simply softening of the ventricles. We cannot be sure that, if paralysis of the upper extremities has ensued, there shall be found pressure on the thalami, or if of the lower, on the corpora striata. We cannot affirm that, if there has been much disturbance of the mental functions, there shall be found deposit pressing on the grey matter of the cerebral substance; or, if the coma has been but slight, the periphery will be more affected than the base; or, if the coma has been early and profound, there will be more effusion or exudation at the base than on the margins of the hemispheres. I cannot tell you the symptoms more surely indicative of softening than of effusion, or those more evidently pointing out the want of either, but proving the existence of much concrete deposit or granulation, either at the base or on the convex surface of the brain. I cannot indicate those symptoms which would surely prove to you the existence of tuberculous matter in the substance of the brain itself.

We may venture to say, generally, that the deeper and more early has been the coma, the greater the quantity and the sooner the effusion or exudation has taken place. But it may be either in the ventricles or at the base. We may hint that such symptoms as stupor and coma are indicative of compression, yet we know that they exist in hydrencephaloid disease where there is no such thing. We may say, also, that vomiting, increased sensibilty of the special senses, and delirium, are indicative of irritation, and that cerebral respiration is indicative of exudation or effusion having ensued somewhere. But how vague is all this!

Dr. Abercrombie and others have proved that all the symptoms of pressure may exist, and yet only a degree of softening of the central parts, without any effusion, be found. Andral has shown that softening and complete disorganization of the same parts may exist not only without any symptoms of pressure. but without any direct cerebral symptoms in the adult. Schweninger has stated that the ordinary symptoms may be wanting, and yet the usual morbid lesions be seen after death—the transit to which shall commence with coma. Dr. Bennet has seen flinging back of the head and opisthotonos, with a rigid state of the muscles of the upper extremities, exist in a very marked degree, and yet not a trace of inflammation in any part of the brain or its membranes was found after death, not even at the base, where some might have supposed it to have occurred. I have seen this inflammation exist, yet without convulsions or rigidity. I have seen slight delirium, and then profound coma, with no effusion in the ventricles. The case, also, which I have given you the morbid appearances of to-day, did not at all exemplify the symptoms we might have expected, had we been aware of what was going on in the brain.

In conclusion, I may remark that the fluctuations and variability in the symptoms of any one case will show you how difficult must be the satisfactorily connecting these variable symptoms with special and permanent lesions. As Dr. Bennet remarks, "the cerebral, the spinal, the circulatory, the respiratory, and the muscular systems all present the most remarkable fluctuations in their functions. The children are in a deep coma one day, and the next are easily roused, and perfectly conscious. The vomiting at one time is perpetually occurring, and at another the stomach shows no evidence of morbid irritability; the limbs are now convulsed, and now paralysed; the pulse for a few hours quick and intermitting; the face flushed one moment and pale the next, and so of all the more important functions."

A COURSE OF LECTURES ON SURGERY,

BY

SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London; Consulting Surgeon to London University Hospital, &c.

LECTURE XII.

In the *treatment* of mortification, three primary indications are concerned—1. To stop the progress of mortification. 2. To promote the separation of the dead part from the living. 3. To heal the wound, if an operation has been necessary, or otherwise the ulcer resulting from loss of substance.—These indications are common to all species of mortification. In fulfilling the first of these—in endeavouring to arrest the progress of mortification, supposing it to be acute—you will seek to remove the exciting cause. As I have already had occasion to dwell upon this point, I only mention it, important as it is here, as, indeed, in all other parts of surgery. But this exciting cause in a great number of cases has already ceased, and the surgeon has to deal with its results; under these circumstances the question arises—how far should you have recourse to antiphlogistic treatment?

Where mortification is evidently the result of inflammation—where inflammatory fever and an excited action of the bloodvessels surrounding the mortified part exist—a moderate antiphlogistic treatment is indicated. The excessive action of the sanguiferous system should be cautiously reduced by leeching, purgative, diaphoretic, diluent medicines, and abstinence from animal diet; but this treatment is only to be continued so long as the local inflammation and inflammatory fever exist concurrently with mortification, since by the mortification of any large portion of the body the system itself is greatly shocked, and rendered unable to stand against violent treatment. In such cases too much circumspection cannot be employed, since frequently, immediately upon the subsidence of the inflammatory fever, the patient sinks into a state of prostration and nervous agitation; and in every case there is more or less of weakness, and, if the system has been too much reduced, the consequences are likely to be disastrous.

After the abatement of the inflammatory or symptomatic fever, which usually takes place in the transition from gangrene to sphacelus, the opposite system of treatment must be pursued: stimulants, anodynes, and a more generous diet are to be given.

At one time, bark was regarded by the surgeons of this country as almost a specific in resisting the progress of this disorder; without denying, however, its usefulness in particular cases, this opinion is altogether untenable, and is now rejected by men of experience. So far from being valuable in all cases, its exhibition would frequently be very injurious. After the first stage of mortification, when the inflammation surrounding the mortified part has abated, it will often be advisable to employ it as a tonic, especially if the appetite is bad and the patient low: it should then be administered with wine and light diet. Also, where the constitutional disturbance is of the typhoid kind, bark and quinine may be useful. As stimulants, however, ammonia and wines—those of Spain or Madeira—are far preferable. Opium is, also, very serviceable where severe pain or nervous symptoms are present; the best forms of it are the muriate and acetate of morphia; and they should be given frequently in the day, in order to keep the constitution under their influence during the whole of the twenty-four hours.

Then, what local treatment is to be adopted for stopping the progress of mortification? You may hear of many applications which were resorted to thirty years ago, but which are scarcely at all used at the present day—as, for instance, the fermenting poultice, praised in its day for its supposed antiseptic properties. Surgeons trust now more to common means, such as linseed poultices and fermentations. The French surgeons even now, I believe, use bark locally; our system, however, is more simple. Formerly it was the custom to make cuts in the sloughs, to allow the passage of turpentine and other strong preparations, not only into them, but through them to the healthy parts beneath; but, as it is obvious that as no application can restore the vitality and healthy condition of the slough, so also nothing but injury can come of irritation of the living flesh beneath and around. Of course, there can be no objection to the application of turpentine or chloruret of soda, with the view of checking the fetor which exhales from the slough; but beyond this use such applications can be of no benefit. Where sanious matter is lodging in or below a slough, a careful incision may be useful, to allow of its exit; but such incision should be through the dead part only. I attended a gentleman but a short time since, suffering from mortification, who complained of great pain, and imagined that there must be some fluid in the slough. I excised it, and a great quantity of ichorous matter escaped, to his great relief.

The second indication I named was to promote the separation of the slough. The means by which nature accomplishes this is a vital process, not to be explained on either chemical or mechanical principles, but depending on the increased action of the absorbent vessels. Although the slough is dead, and may be cut, pricked, or scratched, without pain and no functional connection exists, there remains the attachment of cohesion, from which it cannot forcibly be wrested without both pain and danger. As the vital action necessary to the separation of the dead and living parts can only exist in a degree proportioned to the vigour of the whole system, it is necessary that this should be maintained, as well as that local treatment should be resorted to. Where amputation is not strictly indicated, the parts should be left as much as possible to nature, only applying moist and emollient applications. In the derangement and prostration of the system always implied in mortification, a little violence will bring on an extension of the evil; and therefore, besides the use of the emollient poultice, with or without a solution of chloruret of soda, or with a small proportion of finely-powdered charcoal, it is to a general treatment that we are to look as the most efficient method of expediting the removal of the slough. Let the patient have the benefit of the fresh air; let his linen be frequently changed, and his chamber be well sprinkled with chloride of lime, and his constitution be supported in the manner I have described, and he will then be in the most favourable circumstances for losing the slough. Sometimes you will find one half of the slough healing much better after the other half has been cut away; and, as this proceeding involves no injury of living textures, it is, under some circumstances, advisable to adopt it. I ought to mention that when a slough separates no hemorrhage generally takes place; the bloodvessels are loaded with coagulum; and this will explain why, when amputation in mortification is performed a little above the line of separation, there is often no hemorrhage of importance.

The third indication—to heal the ulcer, or wound if amputation has been necessary—need not be dwelt on, as it will be considered when we come to speak of the treatment of ulcers, wounds, and amputations.

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.

By Professor MATTEUCCI, of Pisa.

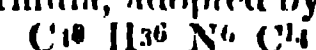
PART V.

DIGESTION.

The existence and preservation of an animal are dependent upon the condition that certain substances, called *food* or *aliments*, be constantly introduced into its body. These substances, mostly solid, undergo, in the digestive apparatus, a series of modifications, by means of which they are ultimately divided into excrementitious matter, which is expelled from the body, and nutritive matter, which intermixes with the blood, and is finally assimilated to this fluid. The ultimate end and purpose of digestion is the preservation of the integrity of the organism, by resupplying the blood constantly with those elements which it loses incessantly in the act of nutrition.

All alimentary substances may be divided, with respect to their chemical composition, into three most distinctly characterized classes: the first class comprises the neutral nitrogenous substances, viz., albumine, fibrine, caseine; the second contains the fatty matters; and the third, gum, starch, and sugar, substances the composition of which may be represented by water and carbon. Experience has proved that the alimentary substances of the second and third category do not in themselves suffice for the nutrition of animals, but that it is indispensable to adjoin to them those belonging to the first class.

With regard to the substances of the first class, we must briefly notice here the important discoveries of Mulder and Liebig. Albumine, fibrine, and caseine are of identical composition—all three contain eight equivalents of carbon to one of nitrogen, and seem to differ simply in the small quantity of phosphorus and sulphur which they respectively contain; after the removal of the two latter elements, there remains a principle in common to the three, to which Mulder has assigned the name "*proteine*," and of which the formula, adopted by Liebig, is



$C^{48} H^{36} N^{6} O^{14}$

We may, therefore, consider these substances, although differing greatly in their respective physical properties, as isomeric, and as simple modifications of proteine. Dumas and Liebig have discovered, besides, that *vegetable albumen* is identical with *animal albumen*; that there exists in the flour of the cereals a substance analogous to caseine; and that a substance similar to animal fibrine is found in the *gluten*. Thus, there is no essential difference between the food of the herbivorous and that of the carnivorous animals, except that the former draw the elements of nutrition from plants, and the latter from other animals.

Now, as the composition of the blood, as well as of the greater number of animal tissues and fluids, is analogous to that of the neutral organic substances which we have just now mentioned, and as these substances, in becoming part of the animal organism, suffer no change of chemical composition, but undergo simply changes of form in the process of nutrition, it seems perfectly natural and correct to assume that the neutral nitrogenous substances are simply dissolved, in the act of digestion, to permit their passage to the blood, and that they join this fluid unaltered in every other respect.

The isomerism of these substances is likewise demonstrated by the fine discovery of Denis, viz., that fibrine is converted into albumen when dissolved in a solution of nitrate of potass. This fact is the more curious as this conversion occurs only with the fibrine of the venous blood; whilst that of the arterial blood does not dissolve in solution of nitre, nor change to albumen. Scherer kept the fibrine of venous blood exposed to the action of oxygen, and found that the latter element was converted into carbonic acid, and that the fibrine lost thus the property of changing to albumen with solution of nitre.

Physiological experiments have proved long ago that the digestion of the alimentary substances of the first class is a purely physical act, and independent of the living organism. Every one knows the celebrated experiments of Spallanzani: flesh, gluten, coagulated albumen, were enclosed by that experimentalist in small perforated metallic tubes, which latter were then introduced into the stomach of an animal; it was subsequently found that these substances thus enclosed had been dissolved, just as they would

have been if introduced into the stomach in the usual manner. We shall see hereafter that this solution is effected by one of those catalytical actions mentioned in Part I.

The recent experiments of Melsens, and more particularly those of Bernard and Barreswil, have shown that the gastric juice contains a free acid (according to them, lactic acid), and that it holds in solution a peculiar substance called *pepsine*, which chemists have succeeded to isolate in a sufficiently pure state; it is this same substance that Payen has lately studied, and to which he has given the name *gasterase*. The acidity of the gastric juice is greater or less according to the nature of the aliments: in the empty stomach the acidity is less pronounced, but it becomes more marked upon the introduction of food, and is most decided if this food happens to consist of fibrine, albumen, &c. Pepsine effects the solution of fibrine, albumen, &c., by catalysis. This may be readily demonstrated. Take an infusion of pepsine, acidulate it with a few drops of hydrochloric acid, and expose fibrine or coagulated albumen to its action for about twelve hours at a temperature of 30° (86° Fahrenheit), complete solution will ensue. By neutralizing the acid and evaporating the solution, you may subsequently reproduce the fibrine and albumen unaltered. The acid solution of pepsine (or the gastric juice) is secreted in the stomach alone, or by certain glands situated in the mucous membrane of that organ. The catalytic property with which pepsine is endowed requires, for its manifestation, invariably the presence of a free acid, mineral or organic. We shall hereafter see how much the catalytic action of this substance is modified by its solution in an alkaline fluid. Pepsine loses its properties, and becomes insoluble, if heated beyond 50° (122° Fahrenheit).

The neutral nitrogenous substances dissolved in the stomach by the acid fluid, or by the catalytic action of the pepsine, find their way to the blood by the simple imbibition of the wall of the capillary bloodvessels of the stomach; coloured water, and coloured alcoholic drinks, introduced into the stomach, are likewise absorbed by the capillaries of this organ: they do not pass beyond it, are not found in the chyle and yet arrive in the blood. Bouchardat and Sandras fed animals with fibrine coloured with saffron or cochineal; the chyle was subsequently examined, but the colouring matter was not found in it. These physiologists have made a still more conclusive experiment: they fed some animals upon fibrine, and kept some others altogether without food for some time; the whole of the animals were then killed. The chyle are found to be identical in all, nor did the matter found in the intestines present any differences; a portion of the fibrine was found imperfectly dissolved in the stomach of those animals that had been fed upon this substance. The celebrated experiments of Tiedemann and Gmelin have likewise proved that the amount of fibrine found in the lymph and chyle, after a long fast, is not smaller than that found in these fluids after digestion. Coagulated albumen, gluten, or caseous matter yield the same results in this respect as fibrine.

The motion of the walls of the stomach promotes the action of the pepsine upon the food, as all agitation tends to aid the action of two liquids upon one another, or the solution of a solid in a liquid. This motion facilitates, moreover, the absorption of the liquid portion of the contents of the stomach, by changing incessantly the points of contact between them and the internal surface of the organ. The disorders in the digestive process, supervening upon the section of the nerves of the eighth pair, are to be partly attributed to the cessation of these movements, which most certainly are subject to the action of these nerves; their section carries, moreover, great perturbation into other functions that are indispensable for the integrity of the animal economy.

We come now to the digestion of amylaceous matter. Sandras and Bouchardat's experiments have considerably enlightened us upon this subject. These physiologists found that a few drops of pancreatic juice (of alkaline reaction), added to a certain quantity of starch paste, at a temperature of 35° to 40° (95° to 104° Fahrenheit), dissolve the paste speedily. The liquid becomes transparent, and it is subsequently found that every trace of starch has disappeared (this substance being converted into dextrine, or sugar).

The same effect is produced if some portion of the pancreas of the pigeon or of some other animal is used, instead of the pancreatic juice. Thus it would appear that the pancreatic juice and, perhaps, saliva likewise, as Magendie pretends) contains a substance which acts upon starch like diastase.

It is singular that this action should require for its manifestation the presence of a free alkali. If the pancreatic juice is made acid, it ceases to act upon starch, and, according to Bernard and Barreswil, acquires the property of acting upon neutral nitrogenous substances.

Do the dextrine and sugar, into which the starch has been thus converted by the action of the saliva and the pancreatic juice, pass directly to the blood, or are they first converted into lactic acid?

It is only in the blood of some diabetics that sugar has been found; the supposition that there is a further conversion into lactic acid seems to be more in accordance with facts. We must not forget here the important discovery made by Fremy, that certain animal membranes, when kept in water for some time, acquire the property of converting large quantities of sugar into lactic acid.

These same nitrogenous substances, which in a certain state possess the faculty to excite lactic fermentation, lose this property in another state, which may be termed "a state of more advanced transformation" (although we are as yet utterly in the dark regarding its nature); in this state their action is found to promote the conversion of sugar into carbonic acid and alcohol. We know, moreover, that a solution of sugar injected into the veins of an animal is speedily discovered in the urine.

We may, therefore, in accordance with the known facts of organic chemistry, and, resting upon the well-known results of the simple play of catalytic action, conclude that starch may be converted in the intestines into lactic acid, passing most probably first through the intermediate state of dextrine and sugar.

It would not be by any means absurd, nor in opposition to what is known at present regarding the process of digestion, to imagine that a portion of the sugar into which the starch has been converted, not simply undergoes lactic fermentation in the intestines, but suffers, besides, some other transformation analogous to that in which the infusory animals originate.

The recent experiments of Gruby and Delafond have proved beyond doubt that great numbers of these animalcules are found more especially in the stomach of the herbivorous animals.

A few words on the cause of diabetes, and the remedies employed against that disease, will not be out of place here.

Bouchardat was the first who gave it as his opinion that, in diabetes, starch is converted into sugar in the intestines, and passes in this state into the blood, and finally into the urine. This opinion has since been generally adopted.

Total abstinence from amylaceous food was consequently resorted to as the most efficacious means to effect the cure of this disease; the food of the patient was made to consist principally of neutral nitrogenous substances. There are some cases on record which would show that this treatment proved successful.

But, on the other hand, we have the numerous experiments of Dr. Capezzuoli, tending to prove that the quantity of sugar found in the urine of diabetic patients keeps no proportion whatever with that of the starch in the aliments; and that, even under the influence of an alimentation entirely consisting of neutral nitrogenous substances, the urine was found to contain the same quantity of sugar as during a farinaceous alimentation.

Dr. Capezzuoli found sugar in the fæces of diabetic patients, and in the matters vomited by them, but only after a repast composed of amylaceous substances; the quantity of sugar found in these matters, however, was the same in the case of a healthy individual as in that of a patient labouring under diabetes. The fact thus revealed by Dr. Capezzuoli's researches is, at all events, of great importance for the theory of digestion, since it proves experimentally the *actual* transformation of the starch into sugar, supposed to take place in the intestines.

Finally, Dr. Capezzuoli has detected traces of sugar in the blood, and the purulent matter of an abscess, of a diabetic patient. It remains still to be explained, therefore, whence arise these abundant productions of grape-sugar in certain diseases that are attended with great emaciation.

We come now, finally, to the digestion of the fatty matters which arrive in such considerable quantity in the stomach of the carnivora, and are carried almost unaltered to the adipose tissue of these animals. A few words on the important question of the origin of fat in the herbivora, which has been considerably agitated of late by several distinguished chemists, will not be out of place here. Liebig maintains that the fat owes its origin to a transformation of the starch, this substance losing a portion of its oxygen, which is expelled from the organism in combination with carbon. Dumas, Boussingault, and Payen, on the contrary, maintain that the amount of fatty matter that exists in hay, beetroot, and straw, suffices to account for that which is found in animals fed upon these substances. Boussingault has demonstrated the correctness of this assertion by actual observation and experiment. He found 1113 grammes of fatty matter in the milk of a cow (placed in conditions suitable for the purposes of the experiment) during a certain period of time, whilst the fatty matter contained in the food taken by the animal in the same period of time amounted to 1614 grammes—leaving thus an excess of 201 grammes in favour of the food.

But the same physiologist has, on the other hand, proved, by experiments upon pigs and geese, that a larger quantity of fatty matter is generated in these animals than is contained in their food. Persoz has arrived at the same result.

It cannot be denied, therefore, that the animal economy possesses the faculty of transforming into fat a portion of the alimentary substances. Our chemical knowledge does not enable us to account for this transformation.

On the other hand, we have a great number of physiological observations tending to prove that animals fed upon fatty substances yield a chyle more abundant and milky than is usually the case, and from which the same matters may be extracted again upon which the animals have been fed; microscopic examination of these matters detects the presence of minute globules of fat.

The experiments of Sandras and Bouchardat have removed all doubt upon this point. These chemists fed animals upon sweet-almond oil, which was subsequently found in the chyle: the same result was obtained with suet. With bees' wax, the result was less complete, only a small quantity of that substance being detected in the chyle; this quantity became more considerable, however, upon introducing the wax dissolved in oil.

The same chemists have examined the matters contained in the stomach and intestines of animals fed exclusively upon fat: they found in the stomach a considerable portion of fat, solid at a low temperature, floating in the midst of a highly acid fluid, and in the intestines (both the large and the small) a species of thick pap which yielded a considerable quantity of fat upon being subjected to the action of ether.

From these facts, which the author also has verified by actual experiment, it seems to result that the fatty matters undergo no modi-

fication in the stomach, and pass into the intestines unaltered, except inasmuch as they are liquefied, or nearly so, by the heat of the stomach; the correctness of this view is, moreover, confirmed by the circumstance that gastric juice, when made to act upon a fatty substance out of the stomach, seems to operate no change whatever. The alkali of the bile and pancreatic juice saturates in the intestines the free acid of the gastric juice: this is another proof that the dissolving action upon neutral nitrogenous substances ceases in the intestines. It is not so easy to trace with precision, with the aid of analogies deduced from chemical facts, what becomes of the fatty matters after their exit from the stomach. This much is certain, however that they are absorbed in the intestines, and that the chyliferous vessels or lacteals may be considered as almost exclusively charged with this function.

The author has made some experiments with a view to dispel the obscurity that reigns upon this branch of digestion. In one of these experiments, he heated a solution of 1·30 gramme (about 20 or 21 grains) of caustic potass in 300 grammes of distilled water, (a) in the sand-bath, to 35° to 40° (95° to 104° Fahrenheit); he then added a few drops of olive-oil to a portion of this solution, and agitated the mixture, which thereupon turned immediately milky—indeed, so much so that it might readily have been mistaken for real milk. Left to itself, the fluid continued to preserve this analogy with milk: it separated into two layers, of which the upper one was more opaque than the lower, and contained evidently minute globules of fatty matter. The author then filled a piece of intestine with this species of emulsion, and immersed it in the potass solution, maintaining the latter at a temperature of from 95° to 104° Fahrenheit. After the lapse of some time, the solution began to exhibit the characteristics of the emulsion within the intestine, and it seemed evident that a portion of the latter had passed through the membrane and mixed with the solution.

In another experiment, the author seems to have obtained still more conclusive results, tending to prove the existence of an endosmotic action between the emulsion and the alkaline solution.

The lacteals, terminating in close extremities, enveloped by the mucous membranes of the intestines, are filled (more particularly before feeding) with an alkaline fluid very analogous to lymph. After digestion (especially when the animal has been fed upon fatty substances), the liquid in the lacteals is found to have undergone no change, except inasmuch as it contains more fatty corpuscles, which impart to it a milky appearance. It is perfectly natural to assume that the same chemical affinity which produces the milky liquid in the mixture of the alkaline solution and the oil, acts likewise through the membrane of the lacteals.

The phenomenon of endosmosis, just now described, may be admitted among the causes of the absorption operated by the lacteals. This much is certain, that this absorption, *physically*, could not take place if the internal walls of the intestines were not bathed by a liquid possessing affinity for the fatty substances. How much the alkaline state of the liquid bathing the walls of the intestines promotes this absorption of a fatty substance may be readily demonstrated by the following simple experiment:—Fill two funnels with an equal amount of sand; pour pure water upon the sand in the one, and an alkaline solution upon that in the other; allow the liquids to run off, and pour afterwards an equal amount of oil upon the sand in the two funnels, and you will see the oil remaining for several hours on the surface of the sand imbibed with water, whilst, on the contrary, it will speedily disappear from the surface of the other, being imbibed by the sand impregnated with the alkaline solution.

(a) This solution is but slightly alkaline, and certainly less so than the lymph and chyle.

The neutral nitrogenous substances which, after their solution by the gastric juice, pass into the blood would speedily destroy the neutral slightly alkaline state of this fluid, which necessary for the preservation of its properties; but the alkali of the chyle, lymph, bile, and pancreatic juice preserves this neutrality of the blood.

The chyle and the lymph hold in suspension a great number of minute granular bodies of from the one to the two thousandth part of a line in diameter, and which appear to consist of a fatty matter enveloped by a membrane, which latter, we have every reason to believe, is formed of a substance analogous to proteine. These same granulations are found in the yolk of eggs, in the milk, chyle, lymph, and in all the liquids that exude in pathological cases, or are destined for new formations. These elementary granulations have been observed to unite to globules or cells analogous to those of the blood, and have, on that account, been looked upon as the morphological elements of all animal tissues. Donné has recently observed that, when milk is injected into bloodvessels, the globules of the milk disappear after the lapse of some time, being covered with an albuminous layer in form of a vesicle; they then assume the appearance of the white globules of the blood, which, at last, d[illegible] appear likewise, being probably transform[illegible] into red globules; the blood presents fina[illegible] the same appearance which it had before th[illegible] injection of the milk.

Thus it would seem that the organic element consists simply of a vesicle, constituted by layer of albuminous matter, which collects a organizes itself around a nucleus formed princ[illegible]pally of fatty matter. The following importa[illegible] experiment, made by Ascherson, may be readily repeated:—Place a few drops of oil into conta[illegible] with albumen; the latter substance will imm[illegible]diately coagulate; mix the whole together, an[illegible] examine a drop of the mixture under a micro[illegible]scope; you will see a group of vesicles, each of the consisting of a minute globule of fat envelope[illegible] by an albuminous membrane, which is, in som[illegible] sort, coagulated; it will appear to you as if y[illegible] had real adipose cells under the microscope The fact may be observed still more distinctly by placing upon a glass plate a drop of oil and drop of albumen side by side, and effectin[illegible] slowly and gradually the contact of the two; is curious to observe, under the microscope, th[illegible] almost instantaneous formation of an exceedingly delicate elastic membrane, which is speedily covered with numerous folds. Ascherson ha[illegible] shown that this formation, operated by the oil and albumen, i[illegible] really of cellular nature. He added a little drop of water to a drop of this formation: the result was swelling of the cells and emission of minute particles of oil. Upon using solution of acetic acid instead of water, the cells seemed to swell to bursting; in oil, on the contrary, they seemed compressed and decreased in volume. These facts, which it would be desirable to extend by further observations, belong evidently to the phenomenon of endosmosis, and can be comprehended only by admitting cellular formation. Thus, we see here a physico-chemical operation, leading to the discovery of the mechanism of the formation of elementary granulations. Fatty substances and compounds of proteine are constantly introduced into the organism; they are found in all animal fluids; the globules of fat which penetrate into the chyliferous tubes, and are thus placed in the midst of an albuminous liquid, must speedily get enveloped by analogous membranes, and must, for this reason, form vesicles similar to those which microscopic observation discovers in the chyle, lymph, and blood

Now, in conclusion, a few words on the gases of the stomach and the intestines, and also on the inorganic bodies which form, more or less directly, an integral part of the animal organism.

Observation has proved that oxygen is hardly ever found among the gases of the stomach, and still less of the intestines; the principal gases met with in these cavities are nitrogen, carbonic, acid, a certain amount of carburetted hydrogen, and sometimes traces of sulphuretted hydrogen. A large quantity of atmospheric air is evidently introduced into the stomach, being, as it were, *swallowed* with the food. The oxygen of the air disappears in the stomach, passing, perhaps, through the membranes by a sort of gaseous endosmose, and finding thence its way to the blood; or, what is more probable still, taking part in the modifications that tend, as we know, to transform the nitrogenous albuminous substances into ferment (yeast). Carbonic acid seems to be abundantly evolved in this process; in some ruminants, fed upon fresh and moist herbs, the disengagement of carbonic acid is stated to be enormous. The production and disappearance of this abundant quantity of gas in the stomach and intestines take place and succeed one another at times with amazing rapidity. The presence of the hydrogen we are as yet unable to connect with any of the physico-chemical changes observed in the process of digestion.

The author has found by experiments that the oxygen is not necessary, as Liebig appears to suppose, to aid the dissolving action of the gastric juice upon fibrine and coagulated albumen. A piece of the stomach of a pig was placed in slightly acidulated water, together with some fibrine and coagulated albumen; the water had been previously boiled for several hours so as to expel every trace of air, and was subsequently, after the above-mentioned substances had been introduced, protected from the access of air by a thick layer of oil; the fibrine and albumen were dissolved as completely in this liquid as they were in an analogous fluid left in free contact with the air.

The inorganic substances found in the organism have been evidently introduced with the food; they cannot force their way to the blood if they are not soluble in water or in the gastric juice of the stomach. All matters insoluble in these menstrua are necessarily rejected with the excrements. Physicians never lose sight of this fact in the selection and preparation of remedies. We know at present, by experience, that the perfect inefficacy of large doses of certain inorganic salts, which at one time created great astonishment, is quite natural; these salts, being inso[l]uble in water and in the gastric juice, are rejected unaltered with the excrements.

ORIGINAL CONTRIBUTIONS.

NEW MODE OF DISTINGUISHING THE SPOTS OF ARSENIC AND ANTIMONY.

By WILLIAM A. GUY, M.B.,
Professor of Forensic Medicine, King's College, &c.

A simple, expeditious, and certain means of distinguishing the spots of arsenic and antimony, obtained by the use of Marsh's apparatus, has [illegible] appeared to me so desirable that I have [ma]de many experiments with a view to discover [suc]h a means; but, as often happens in these [cas]es, the true method was the last to present itself. Lassaigne has proposed to employ the [va]pour of iodine, or an alcoholic solution of [iod]ine, followed in succession by sulphuretted hydrogen and ammonia, for that purpose, and more recently M. Cottereau, jun., has suggested [th]e use of the vapour of phosphorus; but these methods are tedious, and open to some objections which seriously impair their value. The following plan is simple, expeditious, and decisive:—Having obtained a crust of metal on porcelain (the cover of a porcelain crucible is very convenient for the purpose), treat it with a drop of hydrosulphuret of ammonia. The antimonial stain is rapidly dissolved, the thin portions of the crust at the circumference instantaneously, while the centre of the crust speedily contracts, and in less than a minute disappears. The arsenical stain is at first scarcely affected at all, but after a considerable interval of time, varying with the

thickness of the crust, is also acted upon, but imperfectly. On the evaporation of the hydrosulphuret of ammonia the antimonial spot assumes the form of a distinct orange-red sulphuret of antimony, without any trace of the metal; while the arsenical stain, unless the test be repeatedly applied, always presents a centre of metal, with a border of pale lemon-yellow sesquisulphuret. If treated with a drop of liq. ammoniæ this latter stain disappears, while the antimony remains intact: and, on the other hand, on touching the spots with muriatic acid the antimony disappears and the arsenic remains.

The best way to prove the delicacy of this test is to compare a small thin stain of arsenic with a large and thick spot of antimony. It will be found to act characteristically even in this extreme case, the difference being very striking in point both of time and of intensity of action.

With this subsidiary test of hydrosulphuret of ammonia, Marsh's test resumes the superiority for delicacy, simplicity, and certainty, of which Reinsch's test threatened to deprive it. Those who are in the habit of employing both these tests will, I think, admit that Marsh's apparatus is more easy of application than Reinsch's test; the successive processes of boiling the slip of copper in the suspected liquid acidulated with muriatic acid, and obtaining distinct octohedral crystals of arsenious acid, occupying more time and being more difficult than the use of Marsh's apparatus in any of its forms, while it is obviously much easier to obtain the metal and identify it by hydrosulphuret of ammonia than to procure well-marked octohedral crystals of arsenious acid.

A metallic spot obtained by the use of Marsh's apparatus (the purity of the sulphuric acid and zinc having been previously ascertained), undergoing a slow and imperfect conversion into a pale lemon-yellow circle bordering a centre of metal, this border readily soluble in ammonia, but insoluble in muriatic acid, is most certainly arsenical. On the other hand, a metallic spot obtained with like precautions, disappearing almost instantly when touched with hydrosulphuret of ammonia, leaving a distinct orange-red spot, soluble in muriatic acid, but insoluble in ammonia, is as certainly due to antimony.

The coppery hue of the arsenical crust, and the smoky appearance of the antimonial crust, will in many instances serve as a distinction; but, as these appearances are not quite uniform, I do not insist upon them.

The hydrosulphuret of ammonia must contain an excess of sulphur, for otherwise the test will fail. When recently-formed hydrosulphuret containing an excess of ammonia is used, there is no material difference in the effect on the two stains, but on the addition of sulphur the test acts characteristically. I should, therefore, recommend that, whether we employ the hydrosulphuret recently formed, or as it is commonly found on the shelves of the laboratory, we should always add to it a portion of sulphur. When so prepared, the largest and thickest stains of antimony will be found to disappear in from three to seven seconds, as I have ascertained by the watch, while even the faintest arsenical stains remain for a very considerable period intact, and are never completely dissolved by a single application of the test.

15, Bloomsbury-square, July 6, 1847.

Additional Observations. Since writing the above, I have made a great number of comparative experiments, which have, in most points, confirmed the results first obtained. The antimony is in all cases rapidly removed, the arsenic slowly, and generally imperfectly; but where a considerable excess of sulphur is employed the arsenic is at length completely dissolved, and the stain, instead of presenting a centre of metal with a border of pale yellow sesquisulphuret, consists of a white centre, with a yellow border. The pale-yellow border of sesquisulphuret of arsenic surrounding a centre of imperfectly dissolved metal, or a white centre, as just described, contrasts very strongly with the orange-yellow sulphuret of antimony, which generally forms a stain of uniform colour. Occasionally, however, when the hydrosulphuret contains a great excess of sulphur, and is used in large quantity, the antimony stain also presents a white centre with an orange border; but in any case the colour of the border of the crusts is highly characteristic. This white centre presents in either case an imperfect crystalline texture, and probably consists of the pentasulphurets of arsenic and antimony. The only precautions which it appears necessary to point out are—1. To employ a quantity of hydrosulphuret proportioned to the size of the crust of metal. A single drop applied by the point of a glass rod, proportioned to the size of the crust, is sufficient for the purpose. If a larger quantity is used the colour of the sesquisulphuret is not so well marked: and 2. Not to use hydrosulphuret of ammonia containing a large excess of sulphur. The sulphur should not be added to the test in such quantity as to give it an orange colour.

The value of the several tests which have been proposed for distinguishing the crusts of arsenic and antimony having been called in question, I have been induced to repeat them with care, and have satisfied myself that there are no tests in use among toxicologists which give more striking or satisfactory results. Of all the means of discrimination which have been suggested, a solution of the chloride of lime, as recommended by Bischoff, gives, perhaps, the most striking result. The crust of arsenic, when touched with a drop of this solution, immediately and entirely disappears, while the spot of antimony is not affected by remaining for hours or days immersed in it. The spirituous solution of iodine acts almost equally characteristically, by removing the arsenic stain immediately, but the spot of antimony very slowly. The test proposed by M. Cottereau, jun., is only less satisfactory, because it occupies more time. The arsenic spot disappears after a few hours of exposure to the vapours of phosphorus, at the temperature of the air, while the stain of antimony resists its effects for several days. This last test has also this advantage, that by exposing the spot on which the arsenic was deposited to sulphuretted hydrogen, a sesquisulphuret of arsenic is formed which can be readily identified by its colour and solubility in ammonia. Any one of these tests applied with proper precautions will furnish a perfectly safe means of discrimination. The one which I have ventured to propose has the advantage not only of presenting within a short space of time a series of characteristic differences, but of confirming the indications of the other tests by an action the exact reverse of theirs: for the chloride of lime, the spirituous solution of iodine, and the vapours of phosphorus act rapidly on the crust of arsenic, and slowly and imperfectly on that of antimony; while the hydrosulphuret of ammonia acts promptly on the antimony, but slowly and sparingly on the arsenic.

ON THE CAUSE OF THE RECENT EXPLOSION OF GUN-COTTON.

By H. LETHEBY, M.B.,
Lecturer on Chemistry at the London Hospital.

I am tempted to record the result of a few experiments, which I have made with gun-cotton, with the view of ascertaining whether it can be rammed, or otherwise compressed, into a case or chamber, without risk of explosion.

These experiments were set on foot by reason of the recent accident at the congreve-rocket manufactory at West Ham, in Essex, whereby three lives were lost, and much other damage done.

It appears that the Messrs. Wade, the proprietors of the above-mentioned factory, had been endeavouring to construct rockets of gun-cotton, equal to a 12 lb. congreve; but, fore-judging that there might be some danger in the attempt, they deemed it necessary to use every precaution which presented itself: in the first place, to employ a gun-cotton which was not more than one third the ordinary strength; and, in the second place, to subject it to a few severe tests, by way of knowing whether it was liable to explosion from friction or percussion. Portions of it, therefore, were placed on an anvil, and struck repeatedly with a hammer of about seven pounds in weight, but it did not fire. It was then mixed with sand, and afterwards with gunpowder, and again struck, but in every case it failed to explode. After this they rammed a few small one-pound rocket cases, by means of a mallet and drift; still it did not explode. Considering, therefore, that the material might be used in a larger rocket-case with safety, they proceeded to construct one which should be equal to a twelve-pound congreve. Four men were employed in the work; they used the ordinary rocket-case, which is eighteen inches long, and two and a half inches in diameter; it is made of sheet iron, and lined with paper; through the centre of the case a gun-metal spindle passes, which is ten inches long, and tapering from two inches in diameter at the lower end, to one inch at the upper; the whole is secured firmly in a block of wood. It was rammed by means of a wood drift, or rammer, armed with a copper ferrule, and driven by a gun-metal monkey of thirty-six pounds weight, falling from a height of ten feet. The cotton was introduced into the case in charges of one ounce; each had been previously compressed by a weight of three tons; each charge received forty blows from the monkey, and to guard, as the proprietors supposed, against any chance of overheating from friction, they were requested to strike slowly, and to wait between the blows. In this way they had proceeded as far as the twenty-fifth charge, giving it in all 1190 blows, when the foreman left the building, directing them to give it ten blows more, so as to make up the 2000, and then it would be finished. It appears, however, from the testimony of one of the men, who lived for twenty-four hours after the accident, that on giving it the 1191st blow the rocket exploded with fearful violence; the gable end of the house was blown out; the wood safety partitions, which had stood many an explosion from gunpowder, were destroyed, and the two men who were working at the monkey were driven with the partition of the house into a ditch about two feet distant; one was killed on the spot, the other died about twenty-four hours afterwards, while the poor fellow who attended to the charging was shattered in a dreadful manner, and must have died instantly. It does not appear that the explosion was attended by much noise, for the inhabitants of the village close by did not perceive it.

Having gone over these particulars, I was called upon by the coroner to state my opinion as to the probable cause of the accident; and I could not believe but that it arose from the friction produced either by the drift on the hard-rammed cotton, or else from the cotton against the case or spindle.

In the course of the inquiry, it was stated by Messrs. Hall, the patentees, that a similar accident had happened with them when they used the monkey to pack the cotton, and they attributed it, as they did the present accident also, to the heat evolved by the sudden compression of the air. A little reflection, however, will show that such could not have happened here, for, to say nothing of the pressure to which the cotton had been previously subjected, and the consequent liberation of nearly all the air between its fibres, it had received nearly 2000 blows from the monkey, which would have been sufficient either to explode it much earlier in the work, or to have driven out all the air from its texture. I believe, therefore, in the former view of the case; and, in order to put this conclusion to the test of experiment, I have been occupied in subjecting gun-cotton of ordinary composition to pressure, from various sources. It was found that there was no difficulty whatever in firing gun-cotton, by striking it smartly with a hammer, and that it would also explode whenever it

was driven by blows into a metal case; but I found that it could be compressed with safety into its smallest bulk, provided the pressure was used slowly and steadily, as, for example, by means of a screw or lever; in this way 100 grains of it could be compressed into the space of one cubic inch.

5, Goswell-road, June 6.

CONTRIBUTIONS TO THE MEDICAL TOPOGRAPHY OF THE MEDITERRANEAN.

By WILLIAM THOMPSON KAY, Esq., Assistant-Surgeon of the Plymouth Division of Royal Marines.

"THE GRAND OBJECT OF ALL TRAVELLING IS TO SEE THE SHORES OF THE MEDITERRANEAN: ON THESE SHORES WERE THE FOUR GREAT EMPIRES OF THE WORLD—THE ASSYRIAN, THE PERSIAN, THE GRECIAN, AND THE ROMAN. ALL OUR RELIGION, ALMOST ALL OUR LAWS, ALMOST ALL THAT SETS US ABOVE SAVAGES, HAS COME TO US FROM THE SHORES OF THE MEDITERRANEAN."—*Samuel Johnson.*

SYRIA.—*Its Situation, Name, Extent; Divisions, Ancient and Modern; Physical Characters; Productive Industry; Manufactures; Civil and Social State; Climate, Diseases: State of Medicine and Surgery; Works on the Topography, Natural History, &c., of Syria.*

(Continued from p. 292.)

ZOOLOGY.—The object of the present paper is to afford a succinct *outline* of the zoological distribution of Syria, rather than a lengthened dissertation; and therefore, where any species is omitted, it has been intentionally done for the sake of brevity.

Those marked thus * are found in Syria generally, and are also to be considered as belonging particularly to that country; whilst those marked thus ** are found only in the neighbourhood of Beirout.

DIVISION I.—VERTEBRATA.

CLASS I. MAMMALIA.—ORDER I. BIMANA.—*Genus Homo*, CAUCASIAN RACE.—*Syrian Division.*

This is the Syro-Arabian race of Pritchard; the Leuco-Syri of Herodotus; and the Semitic of Eichhorn and other German writers. As the peculiar characters of this race are well known, I shall not occupy the space of this journal by describing them, but give the Arabian estimate of female beauty, as being more interesting and less known:—

"Four things in a woman should be black—the hair, the eyebrows, the eyelashes, and the iris of the eyes; four white—the complexion, the white of the eyes, the teeth, and legs; four red—the tongue, the lips, the middle of the cheeks, and the gums; four long—the back, the fingers, the arms, and the legs; four round—the head, the neck, the arms, and the ankles; four wide—the forehead, the eyes, the bosom, and the hips; four delicate—the nose, the eyebrows, the lips, and the fingers; four ample—the lower part of the back, the thighs, the calves of the legs, and the knees; four small—the ears, the breasts, the hands, and the feet."

ORDER III. CARNARIA.

Sub-order I. CHEIROPTERA.

The *Rousettes.* Pteropus minimus; p. marginatus; p. Zorabii**.
The *Nycteres.* Vespertilio hispidus (rare).
The *Common Bats.* Vespertilio serotinus; v. noctula*.

Sub-order II. INSECTIVORA.

The *Urchins.* Erinaceus auritus; e. Berutii** (resembling the E. Europaeus, with the exception of its colour, the former being a yellowish ash-colour).
The *Chrysochlores.* Talpa Asiatica (rare).
The *Moles.* Talpa Syriaca**.

Sub-order III. CARNIVORA.

The *Dogs.* Canis lupus; c. aureus; c. vulpes; c. zerda (rare).
The *Hyænas.* Hyæna crocuta; h. Syriaca*.
The *Cats.* Felis leo (?); f. pardus (rare); f. leopardus.(a)
The *Lynxes.* Felis caracal; f. chaus.
The *Amphibio-Phocæ.* Phoca monachus (Beirout and Jaffa).

ORDER V. RODENTIA.

The *Squirrels.* Sciurus striatus.
The *Rats.* Mus rattus; m. decumanus; m. musculus; m. amphibius; m. musculus; m. amphibius; m. arvalis.
The *Porcupines.* Hystrix cristata.
The *Hares.* Lepus timidus; l. capensis (properly belongs to Egypt).
The *Jerboas.* Mus jaculus*.

ORDER VII. PACHYDERMATA.

Sub-order, SOLIDUNGULA.

The *Horse.* Equus caballus* (Kochlani of the Arabs); e. asinus.

ORDER VIII. RUMINANTIA.

The *Camels.* Camelus dromedarius.
The *Stags.* Cervus elaphus.
The *Antelopes.* Antilope dorcas*.
The *Goats.* Capra aegagus.
The *Sheep.* Ovis tragelaphus*.
The *Ox.* Bos taurus; b. bubalus*.

ORDER IX. CETACEA.

The *Dolphins.* Delphinus tursio.
The *Porpuses.* Delphinus phocæna.
The *Whales—Balænoptera.* Balænoptera boops (very rare).

CLASS II. AVES.—ORDER I. ACCIPITRES (a) DIURNAL.

The *Vultures.* Vultur monachus.
The *Falcons.* Falco rupicola.
The *Eagles.* Aquila heliaca. Falco fulous; f. maculatus; f. armiger.
The *Eagle hawks.* Falco occipitalis.
The *Sparrow-hawks.* Falco gabar; f. minutus.
The *Kites.* Falco melanopterus; f. Egyptius.
The *Rolles.* Colaris Afra.

Sub-order IV. TENUIROSTRES.

The *Synnallaxis.* Malurus Africanus (rare).
The *Hoopoes.* Upupa epops; u. minor.

THE SYNDACTYLI.

The *Kingfishers.* Alcedo readis; a. caeruleocephala, a. Asiatica; a. Smyrnensis.

ORDER III. SCANSORES.

The *Coucals.* Centropus Ægyptius; c. Nigrorufus.

ORDER IV. GALLINÆ.

The *Turkies.* Meleagris gallopavo.
The *Pea-fowls.* Numida meleagris; n. cristata; n. Ægyptica.
The *Grouse.* Tetrao alchata; t. Senegalus (rare); Pterocles exustus; p. arenarius.
The *Partridges.* a. The *Francolins.* Tetrao Francolinus. β. Perdix Syriaca; p. Afra.
The *True Partridges.* Perdix Græca; p. Hayii.
The *Quails.* Coturnix dactylisonans*; Perdix rubiginosa.

THE TRIDACTYLES.

The *Ortygans.* Perdix Gibraltarica (occasionally).
The *Pigeons.* 1. *Gallinaceous Pigeons.* Columba passerina.
2. *Ordinary Pigeons.* Columba Palumbus; c. arquatrix; c. Afra; c. tympanistria; c. bitorquata; c. alba*; c. maculosa.

ORDER V. GRALLÆ.

Sub-order II. PRESSIROSTRES.

The *Bustards.* Otis houbara; o. Arabs; o. Zorabii**.
The *Plovers.* a. *Œdicnemus.* Œdicnemus maculosus. β. *Charadrius.* Charadrius pluvialis; c. spinosus.
The *Lapwings.* a. *Tringa.* Tringa Helvetica. β. *Vanellus.* Vanellus cinctus; v. Buelli**; Charadruis ceucurus.

Sub-order III. CULTRIROSTRES.

The *Cranes.* Ardea grus.
The *Herons.* Ardea major.
The *Bitterns.* Ardea nycticorax; a. minuta.
The *Storks.* Ardea nigra; Ciconia abdimii.

Sub-order IV. LONGIROSTRES.

The *Curlews.* Scolopax arcuata.
The *Snipe.* Scolopax rusticola; s. gallinula; s. gallinago.
The *Sandpipers.* Tringa maritima; t. minuta.
Totanus. Scolopax fusca; tringa ochropus.
The *Pratincoles.* Glareola pratincola.

ORDER VI. PALMIPEDES.

Sub-order II. LONGIPENNES.

The *Gulls.* Larus marinus; l. cyanorhynchus; l. atricella.
The *Terns.* Sterna caspia; s. leucoptera.

Sub-order IV. LAMELLIROSTRES.

The *Geese.* Anser anser.
The *Tadornes.* Anas Moschata; a. crecca; a. Arabica.

CLASS III. REPTILIA.—ORDER I. CHELONIA.

The *Land-tortoises.* Testudo Græca.
The *Fresh-water Tortoises.* Testudo Europæa.
The *Terrapins.* Testudo subnigra.
The *Sea-tortoises, or Turtles.* Testudo coriacea; t. caretta*.

ORDER II. SAURIA.

The *Lizards.* Lacerta viridis.
The *Common Stelliones.* Lacerta stellio**.
The *Geckotians.* Lacertus facetanus; l. gecko.
The *Chameleons.* Lacerta Africana.
The *Skinks.* Lacerta scincus; scincus ocellatus; s. officinalis**.

ORDER III. OPHIDIA.

Oligdonon. Coluber natrix; c. viperinus; c. atro-vireus.
Vipera. Coluber verus; vipera flava.
The *Naia.* Coluber haje.

ORDER IV. BATRACHIA.

The *Frogs.* Rana temporaria.
Hyla. Rana arborea; hyla lateralis.
The *Toads.* Rana bufo.

(To be continued.)

(a) I saw three at Beirout that had been shot on the mountains; one measured nine feet four inches from the nose to the tip of the tail.

ON THE DIRECTION OF PLANTS.

By Professor MACAIRE, of Geneva.

ABSTRACT.

This paper is divided into three paragraphs. The first has for its object some observations and experiments on the curling of the tendrils of the *Tamus communis.* After the description of the tendril, which in this plant is the footstalk of an abortive leaf, the author shows that the contractive power of the organ is excited by contact with any object whatsoever, even another part of the same plant; that the curling begins at the point of contact, but continues on both ends of the tendril, either to tie knots, if there is something to embrace, or to take the shape of a corkscrew, if not. In a few minutes the knots are formed, and exercise a sort of pressure; a separation from the plant stops the continuation of the curling up of the tendril.

The curling always takes place in the same direction from outside inwards. Plunged in water, or in a solution of gum, the tendril does not contract itself, but does not lose the faculty of curling up by contact with a solid body. Ammonia, alcohol, eau de Cologne, have little or no effect.

Diluted acids, sulphuric and nitric even the vapours of this last, without actual contact—excite immediately an energetic contraction in the tendril. It is the same with a solution of sublimate corrosive.

On the contrary, prussic acid stops the curling up already begun, and renders the tendril incapable of being any more excited by the contact of a solid body. The conclusions of the author on this head are, that the contraction of tendrils cannot be explained by the hypotheses of Knight and De Candolle, of an unequal action of light on the two sides being too rapid for so slow a process, and that it is a vital property residing in the organ on which the poisons act as they do on the sensitive plants.

The second paragraph is on the direction of stems towards the light. After having mentioned the nature of the phenomenon, and the explanation proposed by De Candolle—viz., the bending of the stem by an accumulation of carbon, and consequent hardening of the lightest side—the author

tries to ascertain if the light exercises on the green parts of plants a real attraction.

He operated on naturally floating plants—duck-weed, *lemna minor*, and *polyrhiza*, and on different species of other plants placed on cork floaters. He placed them all on water, in vases which were partly darkened by screens, and never saw the plants receiving from the light an impulsion which brought the floaters away from the place they had been put in. When the plants fully developed were kept in the dark part of the vase, they sprouted from the neck of the root a new stem, slender and blanched, that ran all along the water to reach the diaphragm, and then gave out leaves and grew erect; but the floater never was attracted towards light, though this new stem was often three feet long and more.

In the course of these experiments he had occasion to notice the tendency of roots when developed in the light to take a spiral shape, and found that the white light seems to favour the production of radicular fibrils, while, on the contrary, the blue light hinders it.

In examining the grounds of Dutrochet's theory on the existence in stems of two systems of cells and fibres, decreasing in size from the circumference to the centre, or *vice versâ*, by which he explains by endosmose the bending of the stem, the author has found that this bending in contrary directions of the two parts of a stem slit longitudinally has nothing to do with light. In cutting the stem in various directions it always bends outwards by the swelling of the cells and the resistance of the cuticle, and does not bend at all if this last is removed or slit in two or three places.

To ascertain if the sap could be supposed to march by endosmose from cell to cell, he has placed within one another three endosmose tubes filled with a solution of sugar, the last and largest plunging in water. It was the only one in which any endosmose was visible, the difference in density with the others being insufficient to produce it. It is probable that it would be the same for the cells of plants; and some facts have induced him to think that the liquids penetrate chiefly through the intercellular spaces of the vegetable tissue.

The author has assured himself by experiments that neither heat nor light has any influence to increase the quantity or the rapidity of endosmose, and in consequence is little inclined to admit this phenomenon as exercising the influence sometimes attributed to it in vegetation, and especially in the direction of the stems towards light.

The third paragraph concerns the direction of leaves. "After having described the appearance and structure of the two surfaces of the leaves, and mentioned the known fact of the direction of the superior or varnished surface towards the light, the author reviews the labours of Bonnet and Dutrochet on that subject. As no direct experiments had proved that the direction of leaves was due to the influence of light itself, he has begun by showing—1. That the turning over of inverted leaves did not take place in complete obscurity. 2. That it was possible to induce a leaf to turn itself over by screening its superior surface, and by lighting its inferior one with an inclined mirror. 3. That when both the surfaces of the leaf were lighted, the leaf took a globular form so as to protect against light the inferior surface.

He shows afterwards that, though in most plants the turning over of inverted leaves takes place through a movement of the footstalk, yet in some of them it is the flat part of the leaf that curls itself over, and that in all the same thing happens when it is the best way to bring back the superior surface of the leaf towards the light. This is the case, for instance, when the footstalk has been removed, and when the superior surface is screened by a piece of black paper fixed to it, and the inferior one lighted by a mirror. The flat part of the leaf bends its edges, and takes a globular form.

The two faces of the leaf do not seem to be acted upon by any real attraction towards the light, for when placed in an inverted position, on movable floaters, it turns over by means of the footstalk or the flat part, without creating any motion in the floater.

The removal of one or many leaflets in a compound leaf, or of part of a single leaf, does not prevent the turning over of the remainder when placed towards the light in an inverted position.

By means of coloured glasses, whose purity of light had been ascertained by the prism, it has been shown that the leaves turned over best in the blue rays, next in the violet, but not at all in the red.

The author next examines the difference produced according as the light shone on one or other of the surfaces of leaves, on their power of exhalation and decomposition of carbonic acid. To measure the exhalation, he placed in a bottle full of water, whose weight was known, a leaf with one of the surfaces darkened, and the other exposed to light, changing the surfaces alternately during the same time. The result of a great many series of experiments has been to show that the loss of water by exhalation, in all temperatures and by all weather, is much more considerable in the same time when the inferior surface of the leaf is exposed to light than when it is the superior. This increase explains the rapid withering and subsequent death of inverted leaves which cannot turn themselves over.

In coloured glasses the blue rays have caused the greatest exhalation; next, the diffused white light; next, the green; the last are the red rays. In examining under the same circumstances the decomposition of carbonic acid, the author has first sought in what part of the leaf this chemical power resided. He found that the green matter did not possess it by itself, that it is operated in the cells of the parenchyma, and that the vessels and pores of the cuticle have a useful influence in the phenomenon, so as to increase the quantity of oxygen disengaged.

When solar light is received on the superior surface of leaves plunged in spring water, the quantity of oxygen gas disengaged is, in the same time and under similar circumstances, two or three times greater than when it is received on the inferior surface. The same difference may be observed in the diffused light by means of the leaves of the *camellia japonica*, which, when kept during some time in the dark in spring water, give up, when in the light, bubbles of oxygen gas through the central vessels of the footstalks.

In recapitulating the facts which the author has attempted to prove in this paper, it shows—

1. That the theories advanced to explain the curling up of tendrils do not agree with the experiments made on those of the *tamus communis*, and that it is the result of a vital irritability acted upon by chemical agents.

2. That the direction of the green parts of plants towards light is not the result of an attraction, properly so called.

3. That the bending outwards of slit stems is due to the elongation of the cellular tissue by endosmose of water, and the resistance of the cuticle.

4. That the quantity or rapidity of endosmose is not influenced by heat or by light.

5. That light is the only agent of the natural position of leaves, and of their turning over when inverted. The blue are the most, the red the least, active rays.

6. That light does not act in this case by a physical attraction or repulsion, properly so called.

7. That the turning over of leaves takes place sometimes by a torsion of the footstalks, sometimes by a curling of the flat part of leaves.

8. That the blue ray appears to be the most, and the red the least, active in operating the turning over of leaves.

9. That the exhalation of leaves is much increased when their inferior surface is exposed to light.

10. That the decomposition of carbonic acid and the disengagement of oxygen gas are, under the same circumstances, considerably diminished.

ON THE CAUSE OF EPILEPSY.

By JOHN JACKSON, Melton Mowbray.

In the epileptic paroxysm, especially towards its termination, there is, in addition to the insensibility and convulsions, great venous congestion of the head, face, neck, and upper extremities. Now, this congestion could not be produced, nor could it exist, if the blood could get into the heart by the superior cava. In epilepsy, then, something happens by which the ingress of blood into the heart by the superior cava is prevented. What is that something? In what way is it possible for the current which descends to the heart by the superior cava to be suddenly and temporarily arrested? The only conceivable way is by a sudden, forcible, and undue rush of blood entering the heart by the inferior auricular opening, meeting and overpowering the descending current, and so preventing its entrance by the superior auricular opening. But how could such a rush of blood through the inferior auricular opening be produced? It could only come either from the inferior cava or the cavæ hepaticæ, neither the one nor the other of which of *themselves* could produce it: but let us just step through the cavæ hepaticæ and hepatic capillaries, and where are we? In the hepatic afferent vessel—a vessel which consists of the venous portion of the spleen, and the splenic and portal vein and its ramifications—a vessel remarkable for its distensibility, and whose contractility must be proportionate—a vessel which receives by the gastro-intestinal or mesenteric veins the drink, digested food, and blood from the alimentary tube, and which it not only conveys *to* the liver but propels *through* it—a vessel which, although anatomists seem hardly conscious of its existence, is nevertheless the *first* of the three great afferent vessels, the right auricle and ventricle and the pulmonary and its branches being the *second*, and the left auricle and ventricle and the aorta and its ramifications the *third*. Now, suppose this hepatic afferent vessel were to become unduly distended, and when in that state were to contract with undue rapidity and force: what would be the effect? Would there not be a sudden, forcible, and undue rush of blood through the hepatic capillaries, cavæ hepaticæ, and inferior auricular opening, which would be *very likely* to flood the right cavities of the heart and prevent the ingress of blood by the superior cava? That this is what happens in epilepsy, and is the true cause of the disease, admits, I think, of the most complete proof. I shall not now, however, state all the facts on the evidence of which this theory rests. I may, however, observe that persons subject to epilepsy, when requested to place their hand on that part in which they *most frequently experience pain*, refer generally, if not invariably, to the region of the spleen.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of July 5; M. BRONGNIART in the Chair.

REFLEX SENSIBILITY.

In answer to the communication made at the last meeting, on this subject, by M. Magendie, M. Longet forwarded the following remarks to academy.

Numerous experiments had, since eight years, convinced M. Longet of the fallacy of the opinion brought forward by M. Magendie, and he now considers the absolute and constant insensibility of the anterior roots of the spinal nerves, and of the anterior columns of the cord, as a demonstrated and established fact.

As to the so-called "recurrent" sensibility of the facial nerve, it was incorrect to say that the branches of that nerve retained sensibility notwithstanding the section of their main branch, and lost it by the division of the temporo-auricular filament of the inferior maxillary nerve. Having on dogs removed the anastomotic

branches which unite the auricular with the facial nerve (fifth and seventh pair), M. Longet divided the three divisions of the seventh pair, and found to his surprise that with the exception of one twig, the free extremity of the distal division of the middle branch of the facial, all retained sensibility. M. Longet explained this fact by the presence of anastomotic branches thrown out by the superior and inferior divisions only of the facial nerve, by which a communication is readily established with the fifth pair.

INSALUBRIOUS ARTS.

M. Morin, in a report on a new mode of ventilation applicable to the workshops of knife-grinders, made the following remarks on the insalubrity of that trade.

Amongst the numerous professions which shorten the duration of human life, that of the knife-grinder is one of the most murderous. The dangers attending the breaking of grindstones, the fragments of which are often projected by the centrifugal force to considerable distances, are not the greatest which the workmen are exposed to. These dangers have, besides, been much diminished by the improvements introduced of late years in the composition of the stones. Another cause, slow it is true in its action, but continuous and infallible, carries the greater part of knife-grinders to an untimely grave. Independently of the various anti-hygienic conditions in which they are placed, those men are frequently and periodically exposed to the inhalation of a dry, silicious dust, which escapes from the grindstones, when they are used in a state of dryness, or when their surface is altered. Laryngitis, bronchitis, and particularly consumption, are the fatal consequences of this state of things. In the sword manufactories of France, almost all the workmen die before the ages of forty or forty-five. We must also add, that the knowlege of the miserable fate which awaits them induces many to have recourse to intemperance, by which their health is still further compromised.

ACADEMY OF MEDICINE.

Meeting of July 6; M. Bégin in the Chair.

A letter was read from M. Orfila, in which it was stated that several members of the academy had assisted at the experiments instituted by the learned Dean of the Faculty of Medicine, for the purpose of practically demonstrating the facts laid before the academy on two former occasions, and that these experiments had been fully successful.

Death of M. Pariset.—M. Bégin announced to the academy the death of M. Pariset. Out of respect to the memory of the late "sécretaire-perpétuel," the meeting adjourned at a quarter to three P.M.

Induction of Premature Labour. By Professor Dubois.—A woman, with a very deformed pelvis, was admitted into the Hôpital des Cliniques towards the middle of the month of March. She had arrived at the end of the eighth month of gastation. The patient had, on a former occasion, been delivered, with much difficulty, in the same wards, of a stillborn child. In the present instance, dilatation with the sponge tent was resorted to, and insignificant contraction was obtained. On the 17th, however, after three days' artificial dilatation, the fingers could be passed into the uterine orifice, and the membranes and head were distinctly felt. M. Dubois, in order to bring matters to a more speedy termination, had recourse to the method recommended by Dr. Hamilton, viz., the separation of the membranes from the uterus, in a circle round the mouth. In the attempts to perform this separation, with an instrument, the membranes were ruptured in such a situation as to convert the method of Dr. Hamilton into that of M. Meissner. Notwithstanding the escape of a certain amount of amniotic fluid, it was only on the morning of the 18th that labour fairly set in, and after the rupture of the membranes in the centre of the os uteri. This patient was on the same day delivered of a child, weighing five pounds, who was at first much congested, but was soon restored. Congestion returned, however, and the next morning the infant died in convulsions. On dissection, the cerebral membranes were found much loaded with blood, and in each lateral ventricle existed a clot of the shape of a leech. Twelve months since the learned professor, under similar circumstances, induced premature labour by the exhibition of the ergot of rye; and the same congestion of the brain carried away the child, and was attributed to the ergot.

HOTEL DIEU.

Accidental Stricture of the Œsophagus. By Professor Blandin.—A painter, aged thirty, pressed by intense thirst, accidentally swallowed a certain quantity of sulphuric acid, the greater part of which was instantaneously vomited. No symptoms of poisoning were, therefore, observed, and ulceration of the throat and œsophagus was the only result of the accident. After abundant suppuration, the œsophagian ulcer began to heal, but at the expense of the diameter of the tube: deglutition became difficult, and the narrowness of the stricture was daily increasing. M. Blandin applied a treatment analogous to that in use against urethral coarctations, viz., temporary dilatations, to be followed by cauterization. Small catheters at first were admitted, and allowed to remain ten or fifteen minutes in the passage; each day their size was gradually increased, and at the end of three weeks, the patient was sufficiently recovered to be discharged—cauterization not having been judged necessary to complete the cure.

DEBATE OF THE ACADEMY OF MEDICINE ON THE RELATIVE MERITS OF LITHOTRITY AND LITHOTOMY.

In our last communication we were not enabled to do justice to M. Civiale's communication; it was long, important, and deserved much attention. Since the meeting of June 29, we have obtained a view of the paper, and think that, at the beginning of a debate which promises to be replete with interest, we cannot do better than to furnish at least an outline of M. Civiale's pleadings in defence of his favourite method.

After a long preamble, in which M. Civiale explained his motives for reading, instead of speaking, his communication, M. Civiale examined what was the real value of lithotrity. In order to answer that question, it was not sufficient to bring forward detached cases, because it was impossible to say if unpublished facts were confirmative or destructive of theories established on those which were brought before the public. It would also be necessary to inquire into the precautions taken to ensure a proper diagnosis, a sufficient discrimination of cases, the necessary perfection of the operative process: conditions which should be clearly known, in order that the art might not suffer from the errors or incapacity of the artist. M. Civiale would abstain from any such research, which he considered of too delicate a nature to be undertaken without incurring the risk of giving offence. But the same reserve was not imposed upon him with regard to the results of his own practice, and the statistics of these he would lay before the academy.

From 1824 to 1826, M. Civiale had visited 506 calculous subjects, 199 of which were considered unfit for the operations of lithotrity; 307 cases were submitted to the method:—

9	aged from	7 to 20	years.
55	,,	20 ,, 40	,,
105	,,	40 ,, 60	,,
138	,,	60 ,, 80	,,

296 were completely cured; 7 died; and 3 patients were only partially relieved.

From the year 1836 to 1845, 332 calculous patients were visited by M. Civiale; 211 were operated, 91 were unfit for the new method.

Thus, out of a total 838 individuals, 548 were treated by crushing. To these should be added 25 operations, rendered necessary by a return of the concretions; 8 combinations of lithotomy with lithotrity; and 10 patients treated since the above statistics were drawn up, forming altogether a total of 591 cases to which, in the space of 22 years, the method had been applied; 566 cures had been obtained. In 14 instances death could be more or less immediately referred to the operation; and in 11 the cure was incomplete, the calculi having been crushed and removed, but disease of the bladder or prostate still impeding the excretion of urine.

Lacerations of the Urethra.—At the Academy of Medicine of Belgium, on March 27, a report was read on an interesting paper by M. Didot, in which a new plan of treatment was recommended for the lacerations of the urethra. M. Didot, in three cases of violent contusion of the perineum, followed by effusion of urine, and afterwards by retention of the same fluid in the bladder, unwilling to irritate the contused and swollen parts by the presence of a catheter, made an opening into the urethra, behind the contused parts, &c., by recommending the patients to press with the finger on the anterior angle of the wound, whilst voiding urine, in order to prevent the passage of that liquid into the lacerated parts of the duct: he succeeded in keeping down inflammation. Eventually all the patients recovered, the incision of the urethra healing with remarkable speed. M. Didot proposed, therefore, the adoption of this plan of treatment in all injuries of the perineum sufficiently violent to have occasioned infiltration of urine. The advantages derivable from this method—viz., the possibility of dispensing with the presence of a permanent catheter in the inflamed urethra, the removal of a constant cause of irritation, viz., the filtering of urine between the catheter and the urethral walls—were sufficiently great to induce surgeons to look upon it with favour in those embarrassing and dangerous infiltrations which are the frequent consequence of contusions of the perineum.

Death of M. Pariset.—M. Pariset, the late "sécretaire perpétuel" of the Academy of Medicine, was born in the year 1770, at the village of Grand, in the department des Vosges. After a childhood and youth passed in the most humble circumstances, M. Pariset served in La Vendée, as a volunteer, against the Republican troops. At the close of that war he began the study of medicine, and was for many years prevented from graduating by the smallness of his means. In 1818 he was attached to the Hospital of Bicêtre, and in 1819 sent to Cadiz to study the yellow fever. M. Pariset returned from his mission, convinced of the contagiousness of that disease—an opinion which he never departed from; in 1828 the learned academician demanded and obtained permission to study the plague in Egypt; and after a journey, which lasted no less than two years, published a small volume on "The Causes of the Plague, and the Means of Arresting the Disease," which is still considered a *chef d'œuvre* of science and style. From that period forward M. Pariset consecrated his life to literary pursuits, and his academic orations place his name near those of Thomas and Fontenelle. He was a distinguished *savant*, an eloquent writer, and a good and kind man, whose loss will be severely felt by the Institute and the Academy of Medicine.

D. M'Carthy, D.M.P.

Alum as an Emetic in Croup.—Dr. Meigs, of Philadelphia, prefers alum above antimony and ipecacuanha, from its certainty, speediness of action, and the little prostration it afterwards produces. It is best given in a state of fine powder, mixed with honey, syrup of any kind, or treacle. The dose is a teaspoonful of the powder, to be mixed with equal or double the quantity of the vehicle, and repeated in ten, fifteen, and twenty minutes, should the first dose fail to produce free emesis. It is seldom necessary to give a second dose. The remedy itself has no effect like that possessed in so high a degree by antimony, and to a less extent by ipecacuanha of causing adynamia of the nervous

system—an effect which in some constitutions, or when it is to be exhibited frequently, is sometimes attended with injurious and fatal consequences. Alum may be exhibited in doses above mentioned, three or four times in the course of a day for several days, without dangerous prostration or any other threatening symptoms following its exhibition.

Laceration of the Perineum.—Dr. J. P. Mettauer, of Virginia, relates, in the American "Journal of Medical Sciences," six cases of severe and extensive laceration successfully treated by operation. One of the worst cases occurred in a lady, twenty-four years of age, who was lacerated by the hurried and improper efforts of the midwife before the arrival of the physician. The injury was not discovered at the time, and six months elapsed before any attempt was made at correction. On examination, the recto-vaginal wall was found entirely divided, and the two passages bounded by it united into one, by a cleft upwards of two inches and a half in length, with its margins regularly healed over and smooth. No trace of the rectum and its sphincter muscle could be clearly identified; nor was there the least power of these organs to detain feculent matter passing into the rectum from above. From the mucous coat of the rectum, a thick massy growth of fungous development presented through the fissure into the vagina, and very slightly beyond the verge of the anus and labia externa, which was excoriated in many places. Two days before the operation, the patient was confined to a liquid diet. For the operation, the patient was placed on her back supported by a pretty high bed, with the buttock resting on, and projecting a little beyond, the bed-rail, protected by a folded blanket and sheet, and the parts exposed to a strong light. The thighs were flexed on the pelvis and the legs on the thighs, and held separate by an assistant on each side. The labia were carefully separated by inserting between them the extremities of two curved spatula, to embrace their surface completely, and making traction through them. The denudation was commenced at the verge of the vagina-rectal orifice, and continued upwards to and beyond, the angle a few lines, the separated portions being preserved unbroken. Cold water was freely injected along the line of denudation wherever blood had collected. The denuded surfaces were brought together by a sufficient number of points of the interrupted suture to approximate and maintain them in close and exact contact; and this was effected with short needles, much curved, armed with an animo-metallic ligature, inserted deeply beneath, and two or three lines beyond the margins of the denuded surfaces, with strong needle porte-forceps constructed for the purpose. By arming the needle first with a silken ligature, doubled so as to form a noose, and connecting the bent extremity of the leaden wire with it, little difficulty was experienced in the introduction of the leaden sutures. They were inserted from within outwardly, and the eye end of the needle for that purpose was held by the side of the forceps, so as to leave the point of it free and salient on the opposite side of the part. After the requisite number of sutures were inserted, the wires were tightened, and their free ends twisted together, until the parts were firmly and closely in contact. Care should be taken in closing the cleft at the verge, to secure a complete coaptation to the anus. The sutures must be inserted from four to six lines apart, and in this case ten were required to close the fissure. The whole of the twisted portions of the wire were invested with oiled silk to protect the mucous lining of the vagina, and the patient was placed in bed on her left side, having her knees tied together. The bowels were suffered to repose, by withdrawing every kind of solid food. The wi[illegible] tightened on the fifth day. No action of the bowels till the seventh day. On the twelfth day the wires were cut away, when the cleft was found to be perfectly united. The bladder was evacuated for the first week by a gum elastic tube.

Anteversion of the Womb with Adhesion of the Os Uteri to the Body of the Fourth Lumbar Vertebra.—The patient was a married woman, who had been afflicted for a considerable length of time with what was supposed to be, by her friends, cancer. Dr. Samuel Tyler, of Fredericksburgh, United States, saw her about four months before her death, when he found her with a feeble pulse, pale and anxious countenance: a discharge of pus and sanguineous fluid of considerable quantity from the uterus, without much pain. An examination revealed an orifice the size of the os tincæ, not much dilated, discharging the fluids above mentioned. Her condition continued without improvement till the period of her death. Upon a *post-mortem* examination the uterus was found to be healthy, but *perfectly anteverted; and the os uteri closely adherent to the fourth lumbar vertebra.* On making a transverse section of the womb, there was found within its cavity a *full-formed fœtus*, and the opening which was discovered, *per toucher*, in life, was now found to be a fistulous orifice, made through the under portion of the cervix, by the pressure of one foot of the fœtus, the bones of which had discharged themselves, *per vaginam*, unobserved; the fœtus being perfect with the exception of the bones of the left foot. This case is singular, and the position of anteversion is one not noticed by many of the best authorities.

Singular Case of Laceration of the Broad Ligaments. The patient was a married woman, and attended by Dr. G. T. Allen, of Marine, Madison County, U.S. While arranging a window curtain she fell a distance of about four feet across the top of a chair. The immediate effects of the fall were a slight gush of blood from the vagina, and an inclination to faint, which continued for several hours; after its subsidence, she seemed as well as usual, with the exception of pain in the soft parts that had been bruised: these were so much hurt as to prevent any other than a superficial examination, and to induce a full belief that the only injury was external. For two days there was no other unpleasant feeling than that from the outward injury. On the evening of the third day she was seized with syncope, which lasted for several hours. These fainting fits returned at intervals for the space of a year, when they ceased. At times she suffered from numbness of the left leg, prolapsus uteri, nervous irritability of the womb, hepatic torpidity, and disturbed sleep. A moderate leucorrhœal discharge was ever present, and prominent symptoms of tympanitis uteri troubled the patient from October, 1814, until she became *enceinte*, in September, 1815, and returned after parturition in June, 1846. During the period of utero-gestation she suffered less than before its commencement. She seemed as well after confinement as before gestation, until August 23, when a slight dysentery commenced, with a feeling of distention and violent agony in her stomach; and on the 29th she died. At the *post mortem* examination, the broad ligaments were found to be ruptured, from the fundus to the cervix uteri; the womb lay upon the sacrum, and evidently rolled from side to side of the pelvis, as the patient turned in bed. The vessels in the lacerated part of the broad ligaments resembled a black vermicular mass. The neck of the bladder, with every part within the pelvis, was much tumefied, and there was considerable engorgement of all the pelvic bloodvessels. The lumbar vertebræ were ulcerated, and abraded to the amount of nearly one half their transverse diameter, and the remaining part had lost its firmness. The posterior part of the intervertebral ligaments seemed too thin, and the longitudinal measurement of the lumbar vertebræ, posteriorly, was much diminished by absorption; hence there was inability to bend the spine backwards in life. The spinal marrow was perfectly sound.

On the Ca[illegible] of Yellow Fever.—The theory [illegible] Dr. John Harrison, professor of physiology and pathology in the Medical College of Louisiana, maintains of the etiology of yellow fever is, that from the accumulation of filth in large cities (chiefly nightsoil, and the animal matter of urine), putrefaction must necessarily take place, and upon this putrefaction, *under certain meteorological conditions*, there is generated a poison which, either in the form of a volatile oil or other organic matter, held in solution by ammonia, floats in the atmosphere, is inhaled during the respiratory movements, is taken into the circulation, and poisons the system. It produces specific effects, as much as the matter of smallpox or scarlatina. The formation of this poison begins under certain meteorological conditions which are utterly unknown to us, continues while they last, and ceases with them. As we have said before, the poison is not a gas, but a volatile substance constituted of organic matter—as much so constituted as the matter of smallpox or hydrophobia. In his opinion, yellow fever does not depend on putrefaction alone, nor on meteorological influences alone, but on both conjoined; when this conjunction occurs, seething laboratories of poison are put in operation at different parts of the city.

Fish-bone in the Trachea upwards of Two Years.—Dr. W. B. Herrick, of Rush Medical College, relates the case of a young man, twenty-five years of age, who was suddenly attacked with cough, profuse expectoration, and difficult respiration, with slight febrile excitement. For two years after this attack, these symptoms became more and more alarming; his sufferings were almost insupportable; and at the end of that time, these apparently characteristic symptoms, his emaciated condition, and depressed physical powers, impressed the conviction on himself and others that he was consumptive. Some time afterwards, during one of the violent fits of coughing to which he was subject, a foreign substance, which proved to be a fish-bone, cuboidal in shape, and half an inch or more in diameter, was suddenly and forcibly ejected from the laryngeal opening, upon the floor. From this time all the alarming symptoms began rapidly to abate, and he was eventually restored to perfect health. The patient recollected afterwards that a month or two previous to the appearance of the above-named symptoms, while dining upon fish, he inhaled, as he supposed, a small portion into the air-passages; but, as it gave him little trouble at the time, he thought no more of it, and did not during his illness suspect even the true cause of his sufferings.

Ischuria Renalis.—Dr. R. E. Little, of Quincey, Florida, reports a case of this disease occurring in a mulatto girl, eighteen years of age, which is remarkable for recovery having taken place after a total suppression of the urinary secretion for ten days. During the whole of this time the sensorium of the patient was affected; at one time she was delirious, and at another comatose. Her complaint seems to have been a form of hysteria.

Strychnine in Chorea.—Dr. B. R. Hogan relates two cases of chorea successfully treated by strychnine in doses of one-twentieth of a grain three times a day. He says, also, that he has used strychnine with much advantage, as a tonic, in the convalescence from intermittent and congestive fevers. No relapse of the latter has followed its use. In *subsultus tendinum* from extreme exhaustion, in an anæmic patient with diarrhœa, it has formed a most valuable combination with the *persesqui nitratis ferri*. In the atonic dyspepsia of the habitual drinker who wishes to reform, it has a comforting and permanent value.

Imperforate Prepuce.—Dr. J. C. Cain met with a case in an infant which was not discovered till the next day after its birth. On examining the part, it was discovered that the prepuce had no orifice, but merely a fold of the skin simulating one. The operation of circumcision was performed without delay; and a probe passed into the urethra as far as its membranous portion, to ascertain that there was no obstruction in that part of the canal. *Forty-two hours* elapsed from the birth of the child until the excretion of urine took place. What is remarkable is the circumstance of there not having been, to all appearance, any exit of urine from the bladder into the

sack of the prepuce. The probability is, that there was no secretion for several hours after birth, as no prominence of the bladder was perceptible, and the child was not fœtal.

Absence of One Kidney. Dr. Geo. N. Burwell, of Buffalo, in examining a patient who died of diabetes and anasarca, found the kidney and ureter of the left side entirely wanting: no trace of them was to be found in any part of the abdomen.

Prolapsed Cord not Pulsating, yet Child Born Alive.—Professor Gillman, New York, attended a lady in labour with her third child. The shoulder presented by its anterior surface, the clavicle occupying the centre of the os uteri. A large fold of cord protruded from the vagina, and hung pulseless between the thighs. The soft parts were well dilated, and the uterine action not excessive. The child was turned, and delivered by the feet without delay. It was asphyxiated, but by friction with hot flannels, and an occasional dash of cold water upon the chest respiration was excited in less than half an hour.

A Child Born at the Ninth Month of Utero-gestation, passing through an oblong Aperture under one inch in its narrow, and two inches and a half in its long, diameter.—The case is related by Dr Simpson, of Edinburgh, in "The Monthly Journal of Medical Science." The patient was a woman, thirty-four years of age, originally well formed but, from the effects of malacosteon, the bones of the trunk and extremities became shortened and deformed; and, from being a somewhat tall woman, sunk down in the course of seven or eight years into a deformed dwarf-like figure, measuring about four feet in height. When first seen after her pregnancy, it was so far advanced as to preclude the idea of delivery by the induction of abortion or premature labour, and all attempts to touch the os uteri, on account of the deformity, were ineffectual. After the labour commenced, when the medical attendant, Mr. Wiseman, arrived, he found the soft scalp of the child already bulging through the external parts. Some detached bones, included in the portion of scalp that had passed, allowed him to obtain a firm hold of the protruded portion of the head, and thus enabled him to use some extractive force. In half an hour, by this assistance, the child was entirely born. The time at which the child died cannot be accurately determined, as the mother imagined she felt it living and moving up to the time of her delivery. She has made a good recovery. The infant measured 18¼ inches from the crown of the head to the heels; but its limbs and body were thin, lank, and atrophied; and its weight was only three pounds two ounces. The placenta was small and atrophic, and contained, scattered throughout it, a number of those white tubercles which we so often see connected with and causing marasmus and death of the fœtus *in utero*. Some of these tubercles were of the size of hazel-nuts. The pelvis of the mother was excessively deformed and contracted. In front the walls felt, on examination, doubled or collapsed together; and the outlet, which was the only part that could be very accurately examined, was exceedingly deformed and diminished in size. It was impossible to introduce two fingers between the tuberosities of the ischia; hence this diameter of the outlet was evidently under an inch. Posteriorly, or opposite the sacro-sciatic ligaments, there was transversely more space; but the strong anterior curvature of the coccyx and lower end of the sacrum seemed to curtail the conjugate diameter of the opening, and to prevent the possibility of admitting, when fully dilated, more than three or, at most, four fingers, even in this direction.

On the Prevention of Infection from Wounds in Dissection.—Professor Hargrave, of Dublin, recommends the following plan to be adopted when either of the fingers or thumbs are wounded:—Wash them well for a few minutes in cold water, and then suck them; immediately after apply a ligature above the cardiac side of the wound, with such tightness as will induce decided congestion, which will be indicated by the colour of the parts; some blood will also flow from the injured surface, and a certain degree of numbness will follow the application. The ligature is then to be firmly tied and knotted, and allowed to remain on for at least twelve hours; it may be kept on for double that period. Before commencing *post mortem* investigations it is well to smear or rub into the hands any bland oil: this supplies an additional coating to the epidermal one, and will act as a means of closing any *very minute* and superficial abrasion which might exist, though the individual is not aware of it.

A New Way of Operating for Ectropion.—Dr. Blasberg is inclined to think that the proximate cause of this disease consists in a prevailing contractile power in those fibres of the orbicularis which surround those that form the ciliary portion of the muscles. In a man fifty years of age, with sarcomatous ectropion, a furrow below the ciliary margin of the lower lid was found, which became deeper every time the patient closed his eyes forcibly. A vertical incision was made in the lid and some of the fibres of the orbicularis being much contracted they were divided, and the ectropion was cured. In another case a horizontal incision was made, about three-quarters of an inch long, and, the orbicularis being exposed, some of its fibres, which were most ... . ped, were divided at three different places, and which were situated at about a line below the ciliary margin. In a short time the disease disappeared.

Sulphate of Quinine in Aneurism of the Aorta.—It appears that sulphate of quinine has been employed with much success in some of the Italian hospitals for the relief of aneurism of the aorta, and other internal aneurisms. It has, says its supporters, the immense advantage of bringing down the pulse, without disturbing its rhythm; of making the buffy coat of the blood disappear, that is, of dissipating the organic condition, arteritis, on which it depends, and thus, of retarding the progress of the aneurismal tumour. The other hyposthenics adapted to the same end, according to the same authorities, as by alternation with the sulphate of quinine, are the vegetable and mineral acids, the sulphate of iron, the ergot of rye, the cold ferruginous waters, the arsenious acid, the acetate of lead, and the iodide of potassium.

Monstrous Birth.—M. Huron was called to a patient in labour for the sixth time. On making a vaginal examination, he found that the fœtus presented its pelvic extremity, and presently four feet protruded from the vagina; afterwards the thighs and the lower parts of the trunks were disengaged; and lastly, one umbilical cord inserted below the point of junction of the fœtus; the uterine contractions continued until the lower part of the common thorax was extended, and then there remained no doubt of the nature of the monstrosity. After the lower part of the chest was born, the delivery did not advance in the slightest degree. The hand could only be introduced a short way into the pelvis, towards the sacrum then it met with bulky resisting mass, formed by the two necks and heads. The fœtuses showed by their movements that they were alive when the legs were protruded, but they were now dead, in consequence of pressure on the cord. Traction upon the four limbs was first tried without any result; an attempt was then made to push back one of fœtuses and extract the other, to tilt the one over the other, so as to cause their successive and not simultaneous entry into the pelvic cavity: this plan, also, was found unavailing. Forceps could not be applied, and it was resolved to cut away one of the bodies as far as possible; and as it was obvious that the head next the sacrum could be more easily drawn down, than the head next the anterior wall of the pelvis—for the latter would probably hitch upon the symphysis pubis—the anterior fœtus was for this reason cut away, and a bistoury was passed through its body, between the eighth and ninth dorsal vertebra. This body being removed, the operator was enabled to exert traction upon the posterior fœtus, much more in the direction of the pelvis, and by this measure the posterior head, closely followed by the other, gradually passed through the pelvis.

Mercury in the Pus of a Bubo.—A man was ordered to rub in several ounces of mercurial ointment, in order to disperse a bubo. After poulticing, the gland was opened, and, upon analyzing the pus, unequivocal traces of quicksilver were found.

REVIEWS.

The Physiological Anatomy and Physiology of Man. By R. B. Todd, M.D., F.R.S., &c., and Wm. Bowman, F.R.S., &c. Part III. Pp. 200. London: John W. Parker. 1847.

Anatomy and Physiology are two most important branches of medical education, as they lead to a correct knowledge of the structure and functions of the various organs of the body, without which those aberrations which constitute disease cannot be rightly understood or properly treated. The physician, therefore, whose aim is to practise his profession with the greatest credit to himself and advantage to others, will cultivate with persevering application those departments of science which modern chemistry and the use of the microscope have rendered increasingly interesting and important. The work by Dr. Todd and Mr. Bowman, when complete (if we may judge from the parts which have already appeared), will prove a valuable addition to the medical library, and will be an honourable testimonial of their own industry and intelligence.

The third part, which has recently issued from the press, treats of the organs of smell, vision, and hearing; of the encephalic nerves, and sympathetic; and of digestion. In order that our readers may form a correct judgment of the work, so far as it has been published, we give a single extract, taken from the present number:

"The mucous membrane of the stomach demands, and will repay, an attentive study. It is of that variety which has been termed *compound mucous membrane, i. e.*, its thickness is made up of an infinite multitude of tubular involutions of the simple membrane, with intermediate vascular and other tissues, sent up into it from below. The simple membrane consists of basement membrane, and epithelium, both of which are found throughout. The vessels are uniformly on the deep surface of the basement membrane, and the epithelium on its opposite surface. The compound mucous membrane of the stomach is thinnest near the œsophagus, and is usually of a pink colour in the middle region, and paler towards the pylorus. Over the whole surface of the membrane, as seen on laying open the organ, and stretching it so as to obliterate the larger folds, there are visible, even with the naked eye, but still better with a lens, a multitude of cavities of very irregular shape, and about 1-200th of an inch in diameter, more or less. These cells are not the result of creasings of the membrane, and they do not disappear when it is stretched. They are usually filled with mucus, which requires to be removed. Over the greater part of the stomach they extend in depth about one-eighth or one-sixth of the thickness of the membrane, but they are larger and deeper near the pylorus. In the ridges between them runs a plexus of vessels larger than ordinary capillaries, and which often retain its blood after death, so as to map out the cells in a beautiful manner. This plexus is supplied by vessels sent up from below, and may be very easily injected artificially. The epithelium which lines these stomach cells, and covers the ridges between them, is of the columnar variety; the particles are shorter than in some other parts: one end is free, while the other is directed towards the basement membrane; and they contain each a clear pellucid nucleus near their deeper end. They seem to lie in a double series, the deeper being in course of development, while the more superficial is in course of decay. It has appeared to us that each particle, when arrived at maturity, has, besides the nucleus, granular

contents enclosed; and that, at a subsequent period, the granular contents escape at the free extremity by a dehiscence or opening of the wall at that part, leaving the transparent husk with its nucleus subsisting for some time longer. The clear structureless mucus, which is almost always found occupying the cells and covering the surface of the membrane, seems to be the altered contents of these particles after their escape, for the uniform existence of a minute cavity in the centre of it, where it fills the cells, shows that it has oozed out from every part of their wall, so as gradually to fill them up. It has been said that the cells are so shallow as to dip into the compound membrane only about one-eighth of its thickness. The rest of its thickness, except near the pylorus, is made up of minute tubular offsets from the bottom of the cells, which may be termed the stomach-tubes, and which pass vertically, two, three, or four, from each cell, afterwards subdividing again and again, and becoming more or less tortuous, till they terminate by blind extremities on a dense tough layer of areolar tissue continuous with that laxer stratum which separates the mucus from the muscular coat. The stomach-tubes have a basement membrane, and contain an epithelium altogether different from that which has been just described. Its particles are of the glandular variety, are rounded in shape, without obvious walls; their contents are darkly granular, often mixed with oil globules, and their nucleus is less distinct. The tubes are so narrow that the particles seem to fill them, and obliterate their cavity, except near their orifices, where they empty themselves into the cells. Towards their blind extremities they often seem to be simply a series or pile of epithelial particles; and this has led some anatomists to deny that they are tubes. The existence, however, of a basement membrane convinces us that they are to be regarded truly as tubes, permanently laid down in the tissue of the stomach, for the origination and discharge of the materials of their peculiar epithelial particles on its inner surface. The tubes proceed in sets, corresponding to the cells into which they open; those of each set being enclosed in a common envelope of nucleated tissue like the matrix of the kidney and some other glands. This firm investing structure is attached, on the one hand, to the dense layer on which the compound membrane rests, and on the other to the ridges between the cells; and it sends delicate processes between the individual tubules of each set, and between their branchings, so as to sustain every portion in its proper place. Between the sets of tubules the large vessels run up to the ridges between the cells, and every tubule is invested with capillaries, which take for the most part an upward direction, and are cut across with the tubules in a transverse section of the latter. We have met with no tubular-nerve fibres in the mucous membrane of the stomach; but it is highly probable that nucleated-nerve fibres run among the tubes, though their want of characteristic features renders it difficult to positively assert their presence."

The descriptions are lucid, and the woodcuts with which the parts abound are well finished.

De Saliva. Indagationes Physiologicæ, &c. &c. A. Carolo Strahl, M.D., 8vo. Berolini: Typis Gustavi Schade. 1847.

This is a Latin translation of the physiological and chemical part of the learned treatise on Saliva by Dr. Wright, of Birmingham, other translations of which have already been reviewed in our pages. The original work, as our readers are aware, appeared in the columns of a contemporary, before Dr. Wright became one of the regular contributors to the *Medical Times*. As the treatise first came out, it was regularly translated into the periodicals of France, Italy, and Germany; subsequently, it has been reprinted in America; translated into German as a separate work, and amply annotated by Dr. Eckstein, of Vienna; into Dutch, and annotated by Dr. Riienderhoff, of Amersfoort; and into Latin, by Dr. Strahl, of Berlin. The last is the translation which lies before us. It is well done, and reflects excellent credit upon its author, who in all leading points has well preserved the features of the original—not always an easy task in converting scientific English into Latin, considering the late advances in the use of technicals and particular modes of expression. As regards the original production, perhaps the best praise we can give it is to repeat the fact of its reprint in America, and its translation into five continental languages, within three years of its first issuing in this country. It is one of those rare works of combined industry and genius of which English medical science, and ourselves as one of its exponents, have a just title to be proud.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.*

Delta.—*It is necessary that two qualified medical practitioners should sign the certificate. A licentiate of the Apothecaries' Company may do so.*

Mr. Bentham.—*The arrangement should not be delayed by any speculations about a Medical Bill.*

One Afloat.—*We are much obliged to our correspondent for his information, which, however, it would be imprudent to publish at the present time. The matter is under the consideration of high official personages.*

Medicus.—*The abnormal condition is produced by deficient action of the skin, the peculiar nature of the ingesta, and derangement of primary assimilation.*

J. B., Torquay.—*The prescription is evidently not the production of a scientific practitioner. It is a mere jumble of ingredients, without any regard to chemical reactions. We do not prescribe through the medium of our columns; and we would recommend our correspondent to consult immediately some respectable medical gentleman.*

Candidus, Queen-street, City.—*Our correspondent should remember that the discussion was one of considerable interest to many medical practitioners. It is to be regretted that differences of opinion seldom fail to become matters of personal recrimination.*

J. C. Holland.—*Experiments have been performed to show the identity of smallpox with cowpox. Our correspondent's paper is under consideration.*

Studens.—*The case of abscess of the heart has been received, but cannot be inserted without the reporter's name.*

A Practitioner with Two Qualifications.—*Much perseverance is required to overcome the habit complained of, but we think a careful and slow mode of speaking will be one of the best means of removing the imperfection.*

A Constant Reader.—1. *Dr. Rigby's System of Midwifery will, we think, suit our correspondent's views.* 2. *Gregory and Celsus are the two Latin authors used at Apothecaries' Hall to test a student's knowledge of the language.* 3. *Hippocrates was born in the Island of Cos, one of the Cyclades, in the 80th Olympiad. He wrote his Aphorisms in the Ionic dialect.*

The article on Medical Galvanism cannot be inserted except as an advertisement.

A Medical Apprentice.—*The indentures are binding, and, without the gentleman's consent to whom our correspondent is articled, he will be obliged to remain the full period.*

A Scotch Graduate.—*We cannot offer an opinion on the case; the operation, though sanctioned by the practice of Lisfranc and other eminent surgeons, is not resorted to except under very urgent circumstances.*

A Licentiate and Subscriber.—*The party is evidently liable, under the Apothecaries' Act. Whether the Company, under all the circumstances, would stir in the matter is rather doubtful.*

Mr. Edward Bentall.—*We are sorry we cannot oblige our correspondent by giving him the information required. We are not aware of any published statistics to which reference may be made.*

A Non-Medical Reader.—*The establishment over which Dr. Costello presides is one in which the unfortunate patient will meet with all the skill and attention which his case requires.*

Vindex.—*A coroner has the power of summoning any qualified practitioner; it is right, however, that the gentleman who is called in to the case should be the one summoned.*

A Practising Apothecary.—*There is no remedy for the evil. Druggists too frequently play the part of medical practitioners.*

Medico-Chirurgus.—*There is no law to prevent a licentiate of the Hall practising any branch of the profession; nor is there any law that compels a medical practitioner to take out the diploma of the College of Surgeons, if he engages in performing surgical duties.*

G. G., Oxford.—*The fee for the diploma of M.D. of the University of Glasgow is, we believe, about twenty-six guineas.*

A Correspondent, *who dates his letter from a hydropathic establishment near Regent's-park, addresses a long letter to us on the treatment of tænia, by a Mr. Rayer. Our correspondent says that "the usually-styled nufferish method is the best, and most sure of all kinds of tænia." He recommends, the day before the treatment commences, that the patient should have about half his usual quantity of food. 'The next morning, about five or six o'clock, the patient has to commence taking the following medicines, prepared on the previous day, and arranged in four numbers,* 1, 2, 3, 4. Nota bene: *The patient must be up and walk in the room whilst he takes the medicines. First, No.* 1, *consisting of three or four drachms of* pulvis radius filius maris, *which he must swallow with some water that has been standing in the room. After half an hour he takes No.* 2, *which is the same as the first powder. After another half hour he must take No.* 3, *a bolus, consisting of* pulvis hellebori vigri scammoniu, *and* gumi guttæ, *of each about ten or fifteen grains; and in a quarter of an hour afterwards, No.* 4, *which is another similar bolus. As soon as the patient feels the worm coming, which is usually about an hour after the purgative, an attendant must assist in* slightly drawing the worm, *as it is always inclined to retrograde. After the operation I prescribe for him* olei empyreomatiu (*pyrolignosi*), *a spoonful to be taken every three hours in water, which will destroy the rest of the worm'"!!!*

A Subscriber, Ireland.—*We think so.*

Letters and communications have also been received from Mr. Edward Bentall; A Non-Medical Reader; Vindex; A Practising Apothecary; Medico-Chirurgus; G. G., Oxford; A Subscriber, Ireland; A Licentiate and Subscriber; A Scotch Graduate; A Medical Apprentice; A Constant Reader; Studens; A Practitioner with Two Qualifications; J. C. Holland; Candidus, Queen-street, City; J. B., Torquay; Medicus; One Afloat; Mr. Bentham; Delta; Dr. A. Wynn Williams, Bangor-street, Carnarvon; Mr. John Alex. Morris; An M.D., of St. Andrew's; E. J. M., Drury-lane; Mr. A. W. Duke, Mullingar; Wundarzt, Glasgow; and Mr. Moriarty, Dieppe.

Wundarzt, Glasgow.—*We must refer our correspondent to the Editor of the* Pharmaceutical Times. *We shall be obliged for the communications promised.*

Mr. A. W. Duke, Mullingar.—*The letter is handed over to the Editor of the* Pharmaceutical Times.

E. J. M., Drury-lane.—*A respectable medical practitioner will, upon being consulted, afford relief.*

An M.D., of St. Andrew's.—*The letter has been received.*

Mr. Morris.—*Our correspondent will see that his paper has not been overlooked.*

THE MEDICAL TIMES.

SATURDAY, JULY 17, 1847.

THE MEDICAL PROFESSION AND THE FUTURE—ITS POWER OVER MORALS.

FEW, perhaps, will dispute the truth of the proposition, that happiness is the great end of existence, and that all earnestly desire this inestimable blessing. It matters not in what rank an individual is placed, or what the action he performs: he is animated by one desire, which is alike felt by prince and beggar. Civilization, rightly directed, is society under the progress of refinement—the knowledge of mind practically applied to the production of general happiness. Like everything, however, which emanates from beings of limited knowledge and corrupt bias, it is liable to such obstructions and perversions as often produce the ruin of the most powerful empires. We, who now live in these later periods of the world's history, are permitted to search the archives of ancient kingdoms, where we can discover that truths, practically operating on the morals of society, irresistibly produced national greatness, while, in proportion as their influence was counterbalanced by riches and luxury, the splendour of greatness declined till it sunk in the darkness of an endless night. To the wealth of Greece and Rome must be attributed the sad catastrophe of their irretrievable ruin, for, in proportion as the means of senseless gratification were acquired, so were they employed to the utter subversion of morality and character. Wealth has always been, with but few exceptions, the powerful antagonist of human excellence, not that this is of necessity the case, but from the means which it affords of indulging indolence, gratifying passion, and developing pride.

In women of fashion we have a striking development of the evils resulting from ample means, used without those motives which stimulate to an activity productive of good to others, and of true enjoyment by themselves. The ethics of the school in which they have been instructed is a vain philosophy, which has taught them to consider happiness as only to be found in the excitement of the theatre, the ball-room, or at the concert. Scarcely is there any delusion by which they can be greater sufferers in their own physical happiness, while they are unfitted for active benevolent exertion for others. The victims of an over-excited and ill-regulated nervous organism, their very anticipations curtail their enjoyments, and, when the wished-for pleasure arrives, often does it produce a secret melancholy, because it does not bring with it all that was hoped; hence they become by degrees fastidious in the choice of pleasures, languid in the enjoyment, yet miserable under the want of them. The truth is, there is a limit at which these pleasures soon arrive, and from which they ever afterwards decline. They are by necessity of short duration, as the organs cannot continue their emotions beyond a certain length of time; and, if the endeavour is made to compensate for this imperfection in their nature by the frequency with which they are repeated, then more is suffered than gained by the fatigue of the faculties, and the diminution of sensibility.

It is true—as we are aware—that we have in this article been led, in following out our reflections, to deflect from those physiological conditions (our more especial department) which are to receive our attention in the succeeding number; but we have thought it not undesirable to glance, in the first place, at that moral aspect of the question which, to well-regulated minds, must attach much importance to the subsequent demonstrations of medicine.

This fashionable dissipation not only requires correction, because of the injuries it inflicts upon the votaries themselves, but also on account of the evils it entails on the social relations. Every woman, whatever her station, has in general to discharge the duties of wife, mother, and citizen. As a wife, the slave of fashion must leave the management of her household to others; and there cannot be the exercise of those affections and of that authority which are essential to constitute a well-regulated family. In the relations of mother, the evils are still more apparent. To her is committed especially the early discipline of the youthful mind, and the education of the infant has a most important bearing upon the future conduct of the adult. If any great moral change is to be effected in society, it must be brought about through the influence of maternal descipline. The ambition of the Spartan mother was to educate her child so that he might become a good citizen and a valiant soldier; and, so long as this was kept in view, Lacedemon stood unrivalled amongst the nations of antiquity for virtue and courage. The emancipator of the great modern trans-Atlantic republic received his first impressions of piety and patriotism from his mother's lips; and the hero of the "Iliad" would never have been renowned in epic verse if his mother had not by her efforts prepared him for his greatness. It is a well-ascertained fact that early impressions influence the character and the life beyond all others, and remain strong and vivid after most others are worn away.

But what must we expect of those who, from the very first, commit to others the sustentation and care of their children, and who view the onerous duties of the maternal relationship as so many barriers to the full enjoyment of pleasure? Shall we expect that such will inspire their children with a contempt for the vanities of fashionable society; that waste of the golden hours of life; that sickly devotion to amusement; that pitiable dependence on trifling to help them along through their present tedious existence? Few are entitled more to sympathy, as certainly few are more to be blamed, than those who teach their children to find their enjoyment only in diversions, and to consider a dance, a visit, a play, or a novel, as the only thing that can keep them from sinking into gloom and despondence. The children of aristocratic parents are early taught to believe that they are destined not to usefulness, but enjoyment; and that, therefore, they are privileged to be idle.

But what can be said of these high-born females as citizens, except to their disadvantage? Without the exhibition of prudence, fortitude, temperance, and benevolence, their existence confers no lofty boon upon society, and can be no other than a burden to themselves.

The redemption of these slaves from the hands of a taskmaster, more cruel than the Egyptian Pharaoh, is mainly to be accomplished through the instrumentality of the profession. It is an undertaking fraught with charity and pregnant with blessings to our country—one which will restore to honour, to usefulness, and to happiness, a class of individuals interesting on account of their sex, as well as their position in society, and whose influence, operating benignly on succeeding generations, shall make them truly renowned.

How can we have fresh impulses, healthy thought, or useful action, when existence is divided between enervating languor or wasting excitation? The nerves, forced in turns into excessive action or apathy, and the whole of that muscular system which nature formed for so much action, left unemployed—unused—unexercised. Foul air—all but useless exercise—incessant stimuli, successively through the differing senses—irregular and partial action of the organism—how can these fail to produce, with those physical evils of hysteria, hypochondria, &c., a perfect incapacity for the higher duties of social and moral existence?

THE APOTHECARIES' COMPANY AND THEIR LICENTIATES.

WHEN a medical corporation is in possession of power which may be very useful to the profession, it is but right that that power should be carefully and legitimately employed. In the present agitated condition of the medical commonwealth, the abuse of authority or the neglect of duty in chartered institutions is not only quickly discovered, but keenly resented. It is no time, therefore, for men in office to slumber at their posts, when the commonalty are deeply sensible of their wrongs, and are struggling to free themselves from yokes which have galled them so intensely as to become too grievous to be borne.

The cupidity and tyranny of the College of Surgeons have been exposed and denounced, and that guilty corporation has been branded with a mark of ignominy which a long succession of virtuous efforts will alone be able to efface. The sale of its diploma has been a fraud upon the profession, for the council of the College has endeavoured to make it a source of profit to themselves, and of keeping as low as possible the education of general practitioners. It has been admitted that the Apothecaries' Company has counteracted to a considerable extent the great injury which threatened the profession, and that, by the power which law has conferred on this corporation, the College has been compelled to adopt a respectable *curriculum* of education, however lax it may make its examinations. The Company, however, stands charged with a dereliction of duty, for having disregarded the repeated entreaties of some of its licentiates to prosecute certain individuals who are illegally engaged in medical practice. We published some time ago a communication from a gentleman, near Nottingham, in which he complains of having addressed, within the last twelve months, nearly a dozen letters to the society, relative to the prosecution of a person practising without a qualification, who has not had the slightest notice of their receipt. It appears that this gentleman collected evidence which, according to his statement, would indubitably lead to conviction; and he engaged to prosecute at his own expense, if the society would furnish him with such instructions, derived from their past experience, as would put him in a train most conducive to a favourable result. If such was the case, it was to be expected that the society would at once have complied with the request. The act of 1815 is an important trust; and the body of licentiates brought into existence

by its operation has a right to expect that protection which the law affords. The prosecution of offenders is not like it once was—an uncertain and expensive business; but is now an easy, safe, and cheap way of ridding the profession of unqualified practitioners. In two instances has the new interpretation of the penal clause been put to the test, and not a shadow of a doubt now remains that offences against the act can be punished as a misdemeanour.

This penal clause, however, must at the present time be a source of very great uneasiness to its possessors, though it is fraught with advantages to them. It is beginning to be suspected that all the Company cares about this part of their law is, that it is a source of considerable profit, frightening, as it does, many into an application for the certificate. These candidates imagine that, when they have been introduced into the professional fold, the penal clause, acting like an impregnable barrier, will keep out all who are forbidden to pasture in the sacred enclosure, such as quacks, druggists, and impostors. The poor licentiates, however, soon find that they may be worried with impunity by any one who chooses to do it. The law is used for no such purpose as their protection, and, if they cannot fight their own battles, the corporation, thinks it, perhaps, a very hard thing for it to be expected to stand forth as a champion. But who is to defend the licentiates if those who granted them their license will not? or of what good is, it without the strong arm of the law entwining about it for dignity and safeguard? The profession has praised the Company for its efforts on behalf of medical education, but the certificate has been secretly despised, because its plebeian origin gives it little consequence in the eyes of the public. The result is that numbers, having obtained the diploma of the College of Surgeons, engage in general practice, leaving the Company the nice alternative of prosecuting them for an infringement of the law, or of displeasing the licentiates, who consider that the restraining of such from general practice is but an act of justice to themselves. It is evident that the present order of things cannot continue long; and there are indications that the days of the Company as a licensing body are numbered. Its house must be set in order; and, in the last will and testament of the corporation, let it take care that the licentiates are not left in a less honourable position than that which they now occupy.

GENERAL MEDICAL ANNUITY FUND.

[To the Editor of the Medical Times.]

SIR,—I enclose for insertion in your valuable journal the following abstract of the proceedings of this society. It is highly gratifying to Mr. Daniell, and I am sure it must be equally satisfactory to the profession generally, to find the determined zeal which is evinced by the supporters of this fund, to carry it out in its simple integrity as a measure calculated to meet those contingencies which, although common to every class of profession or business, are peculiarly so to the medical practitioner. There can be no doubt that a very few years of active co-operation will place this fund in the position of an enrolled society; and, as its operations will extend throughout the whole of Great Britain, it may become a great national institution, calculated at once to meet those acknowledged wants felt so extensively by the widows and orphans of medical men. As already upwards of forty gentlemen have voluntarily promised active co-operation as honorary local secretaries, I hope I may be pardoned in urging this part of our plan peculiarly upon the profession, and, if there be any gentlemen still willing to join in these duties, that they will honour me with a communication; and I assure them it will be my pleasure as well as my duty to furnish them with every information they may require.

I have the honour to remain, Sir,
Your obedient servant,
JOSEPH STAINES.
Savings Bank, Newport Pagnell, July 10.

At a meeting of the acting committee of this fund, held on Tuesday, the 6th of July, at Edward Daniell's, Esq., Newport Pagnell—present, John Rogers, Esq., Newport Pagnell in the chair; Edward Daniell, Esq., Newport Pagnell; Dr. Barker, Bedford; G. Harvey Betts, Esq., Watford; H. L. Smith, Esq., Southam; Dr. Pritchard, Northampton; Thomas Parker, Esq., Woburn; George Kelson, Esq., Sevenoaks —

The Chairman having read the resolutions passed at the general meeting at Northampton, on the 1st of June last, appointing the committee,

The Secretary laid before the meeting a list of the members of the Institution, with the amount of their donations and subscriptions to the 30th of June last, being the close of the second year, together with a general statement of the funds up to that time; when the same, having been examined, was approved and ordered to be entered upon the minutes.

Resolved—"That the Treasurer be requested to invest £200 in the names of the trustees of this society."

The Secretary also laid before the meeting a draught of the amended rules and regulations for the management of the society; and, the same having been deliberately considered and discussed, it was resolved "That the rules and regulations, as now signed by the chairman, be the rules and regulations of this society, and that 500 copies of the same be printed for distribution amongst the subscribers and friends of this institution."

The Secretary laid before the meeting a draught of a prospectus of the society. Ordered that 1500 copies of the same be printed for general circulation.

The Secretary also laid before the meeting a list of gentlemen who had offered their services as honorary local secretaries. Resolved—"That the offer of the services of these gentlemen be most gratefully accepted, and that the secretary do write to each gentleman a letter explanatory of their duties, and forward to them the prospectuses and rules of the society."

REMARKS ON THE POTATO DISEASE.

[To the Editor of the Medical Times.]

SIR,—A most important article in the dietary of nearly the entire human family is on the eve of a momentous crisis—of preservation, or of annihilation; any observations, therefore, which can shed the smallest light over the late malady with which it has pleased Providence to afflict it, and with which we look upon it as now threatened, must be regarded with considerable interest by all—by the illiterate as by the scientific. Many learned articles have already appeared on this anomalous subject, with greater or lesser claims to attention, but all with the same philanthropic view and, I regret to have to add, poverty of result. Neither philosophy nor agriculture has derived much, if any, benefit from their investigations, theories, or promulgations. The cause of the potato disease, as it has been termed, continues wrapped in mystery; while its advance has never received a check, and no practical consequence deduced from it, other than that little which the farmer's own common sense and past experience has suggested. How humiliating is this lesson to science; how suggestive of the necessity of calmness, diffidence, and perseverance in its investigation! Had more of these ingredients been blended in the late numerous inquiries into this subject, the dignity of science would have been better upheld, and the futility of human efforts to arrest the advance of the evil more quickly appreciated; and appreciated, too, not from sad experience, but from philosophic induction—by showing it to be the effect of a cause uncontrollable by human agency; a cause which I would hope that no one now can be so blind as not to admit, and which it will, partly, be the object of the following observations further to elucidate, namely, atmospheric contagion.

When the potato disease first excited alarm, and microscopic observers were busily engaged in minutely describing and classing the *fungus* or *animalcule*, or whatever it was which they gravely announced as the *cause* of the *epidemic*, you were kind enough to give insertion in the *Medical Times* to a short article or two of mine, containing a few brief remarks on this subject, with the inference of atmospheric contagion. Without pretending to say that such unpresuming compositions had any such effect, I had observed the opinion to gain considerable ground shortly after, that to a peculiar atmospheric condition could alone be satisfactorily attributed the cause of the potato blight, consistently with the phenomena developed in its rise; and during its course more extended observation confirms this view.

Whatever may be the physical properties of the atmosphere which surrounds our globe, and its relations to animal and vegetable existences, science as well as popular observation has confirmed the fact of its being subject to periodic changes coincident with particular periods of the day as well as of the year. The practical and observant physician has, from the days of Hippocrates down to the present, noticed the varying aspect of disease at various periods of the day; and the science of meteorology confirms the truth which simple observation first promulgated; and Columella as well as Martin Doyle was aware of the influence of the several seasons on the process of vegetation. Were the vegetable organization as well understood as the animal, and the relation in which it stands to physical and atmospheric agencies, the cause of the late potato epidemic would not have proved so difficult of discovery, nor the devastation effected by it matter of so much surprise. In the theory of atmospheric influence would be found as ready and easy a solution of the difficulties involved in its rise and progress as the same theory affords of the phenomena of cholera in man; and a more intimate acquaintance with its anatomy and physiology would supply, in the structural changes effected in the plant and the parts seized with the disease, in the order of succession with other concomitant circumstances, a ready and conclusive inference as to its cause.

I believe that the institution of an analogy between the potato disease and that to which horned cattle, more particularly, are subject first originated with myself. In a work subsequently published by Dr. Parker, of London, in which much learning is displayed, and ingenious but very inconclusive arguments in proof of a novel theory regarding the cause of the potato disease are brought forward, allusion is made to this analogy. In fresh-water fish, during the last year, I have observed, and I believe have been the first to announce, a fatal and no doubt epidemic disease to have prevailed. In the leech I have also noted a disease of a quickly-fatal character; and I have no doubt that, were other classes of the animal kingdom examined, a similar mortality would be found to have existed. The wheat and oat crop also suffered, but to a minor degree, as did all the species of fruit, which were, indeed, almost a total failure. The onion and the nut did not escape; and in all, vegetable as well as animal, analogous organs, viz., the respiratory, were those in which disease localized itself. The anatomical lesions in all were analogous and the same intractibility to every effort of art equally characteristic of these various affections. The cause universally assigned of the disease among the cattle was atmospheric; but no analogy traced any connection between

the vegetable and animal disorders. It need not be offered as an objection to the idea of such a connection, that if the cause were in both instances the same, both animal and vegetable should suffer at the same time. Although chemical or any other kind of analysis cannot detect any differences in those conditions of the atmosphere which are universally admitted to produce specific diseases, differing in themselves, yet originating from the same source, the fact that such diseases are produced by atmospheric agency, and that they are in themselves essentially different, is sufficient evidence in proof of the truth of the opinion that there must be essentially specific differences in the conditions of the atmosphere, which produce correspondingly essential and specific effects. Thus may we admit a specific condition peculiarly hostile to the well-being of the potato; another to that of the cow; and, yet more, another peculiar in its influence over one vegetable, for instance, the onion, and yet innocent of any deleterious properties as regards the apple, &c. Indeed such an admission requires no stretch of imagination: for as each possesses a specific organization peculiar to itself, and specific physical properties, so must each possess specific powers of modifying or controlling specific agents: nay, yet further: individuals of the same species, as they differ from each other more or less by insensible and inappreciable modifications of their being or structure, which in animals we term idiosyncrasy, so must they differ in their resisting powers: for on no other principle can we explain to ourselves the immunity enjoyed by some individuals vegetable as well as animal, which quickly destroy others of the same family, and to which they themselves are exposed under precisely similar conditions. Witness, for instance, in a field of potatoes, visited during the last year and the preceding by the disease, the sound, full-developed tuber, flourishing in healthy maturity, beside others reduced to a pulpy, semifluid mass of putridity.

If Providence has been liberal of her blessings, she also seems to prove herself considerate in the infliction of her punishments. If she afflict the animal kingdom, she in mercy spares the vegetable; and if she strike the vegetable, she as surely spares the animal. Thus, when the grazier, some few years back, was plunged into despair and seemingly inevitable ruin by the unsparing mortality among his cattle, numbers of which a single night sufficed to prostrate, although in apparent health and vigour, the agriculturist's most sanguine hopes were realized in an abundant harvest; and when, a few years later, the agriculturist's turn to mourn arrived, for the ruin of the potato and a deficiency in the yield of his other crops, the grazier's stock flourished in health and increased in value. The atmospheric contagion in both instances reciprocally reacted upon each: it raised up the one as it struck down the other.

In the quantity of land under the potato in the present year, although not more than about the one eighth or tenth of the usual amount, we behold an evidence of the farmer's cupidity and love of speculation; buoyed up by the hope of a coming scarcity in the first instance, and, in the next, stimulated by the chance of an inordinate profit, he risks his capital, and the result is, that from the universality of these motives of gain, a larger tract of ground is under this article of diet than the past experience of the devastation effected by its disease would seem to warrant.

Although it is gratifying to know that no present symptom of a return of the malady has announced itself, it is not wholly unalloyed by fear, as we are just about the period when its invasion first took place last year. There is one consideration, however, grounded upon the previous remarks which leads me to infer that the potato will escape, if not entirely, at least to a considerable extent: it is a tendency manifesting itself to disease among the horned cattle precisely similar in many instances to that by which such vast numbers have been before destroyed; indeed, considerable apprehensions are entertained, in certain localities particularly, that great losses must be sustained this year from this cause. On the other hand, I have witnessed appearances on the cherry-tree, in some localities, which subtract somewhat from my confidence in the happy maturity of the potato crop: these consist in a withering of the leaves and blasting of the embryo. Presuming, however, a failure of the potato this year—nay, even next, or even the year after—the above theory, if true, favours the hope, as it may be inferred, of its ultimate healthy condition and abundant supply. The idea of the necessity of propagating it from the seed, founded on the opinion of its having arrived to its extreme senectitude, is absurd, upon the same premises.

Such is a short summary of the conclusions to which an extended observation of late has led me. If the epidemic among the cattle gain ground (and I have no doubt but that it will), and the potato escape this year, can any more conclusive evidence, I would ask, be required or, indeed, afforded in proof of the existence of a very novel, at least unthought-of, connection between the two—a knowledge of which, if found verified by future observation, must prove of immeasurable practical value to the agriculturist and the grazier, and a fruitful subject of serious and interesting investigation to the scientific inquirer?

July 1. JOHN ALEXANDER MORRIS.

LAW AND MEDICINE.

[To the Editor of the Medical Times.]

SIR,—I beg leave to direct your attention to an important decision which has taken place in the Grimsby County Court; and, in reference to the outrageous piece of injustice perpetrated on the medical practitioner, I beg to ask the following questions:—

Is not the decision legally wrong?

Is there any law in this country which can sanction one man calling another an impostor, because the latter, not being a M.R.C.S., styles himself surgeon?

Is it not quite possible that a man may be a very good surgeon, without being a M.R.C.S.?

Is not the converse of this equally possible, that a man may be a M.R.C.S. without being a surgeon?

And is it not also possible, and does it not appear from the above judgment, that a man may be a "barrister" and a "judge," and yet know as little of *law* as Mr. Burnham is gratuitously supposed to know of *surgery*?

Mr. Burnham being L.S.A., and most likely pleading that fact, is not he entitled to recover for "attendance and medicines," although he may, like all his brother-practitioners, style himself surgeon?

If Mr. Burnham *had* been a M.R.C.S., would he have been legally in any better position for recovering the debt than he was?

Has Mr. Burnham no remedy as well for being insulted in open court, as for the loss of debt and costs?

Would it not have been quite as legal, if the plaintiff had been nonsuited for not being a Fellow of the Astronomical Society?

Carrying out this decision to its full legal consequences, can an artist recover a debt if he is not a member of the Royal Academy? or a druggist, who is not a member of the Pharmaceutical Society? or any other professional person or tradesman, who is not connected with the *chartered* body which represents his trade or profession?

And, lastly, are not the two attorneys who *pleaded* before this learned judge, quite as much *impostors* as Mr. Burnham, not having been called to the bar?

I think you will consider the importance of the subject to the profession sufficient to warrant my troubling you with this communication; and remain, Sir,

Your most obedient servant,

July 10. L. S. A.

The following is the case referred to:—

IMPORTANT TO THE MEDICAL PROFESSION.—GRIMSBY COUNTY COURT.—BURNHAM *v.* WARBURTON.—This was a case in which the plaintiff, calling himself a surgeon, sought to recover of the defendant the sum of £2 11s., for attendance and medicines supplied to a young female by order of the defendant. Mr. C. Ingoldby, who was attorney for the plaintiff, having stated the case, Mr. Brooks, attorney for the defendant, asked the plaintiff whether he was a member of the College of Surgeons, to which he answered —"No." Mr. Brooks then took an objection to the plaintiff's suing to recover a debt in the capacity of a surgeon, as stated both in the bill and the summons, when on his oath he admitted that he was not a surgeon. The judge admitted the force of the objection, as a surgeon and an apothecary were distinct and separate departments of the profession; and for a man to assume a title to which he had no claim—had not passed through studies and examination to entitle him to it—but who sought to recover debt under that assumed title, was a fraud upon the public, and he must give judgment for the defendant.

FRENCH MEDICAL REFORM.—There is now existing a great agitation among the professors of the Faculty of Medicine, on account of the question of *concours*. A certain number are of opinion to address the Chamber of Deputies, by the medium of the Minister, a protestation against the vote of the Chamber of Peers. This resolution meets a very great opposition on the part of several professors who have pronounced against the *concours*. The latter are not the least eminent, or least influential.

LIFE-ASSURANCE OFFICES AND "THE FEES."

[To the Editor of the Medical Times.]

SIR,—Much has been said and written upon this subject, as I think, unnecessarily. From the numberless communications that have appeared in the medical journals, it would seem that the profession is determined to decide which party is liable for payment—the insurers or insured. Now, I take it, this is interfering with that which does not concern us, "ne sutor ultra crepidam." Provided always the medical referee gets his fee, it matters not to him whence it comes. I never heard of a physician refusing a fee because it came not from the sick man's hand. If I swear an affidavit, the fee is not thrown in my teeth because another ought to pay it; neither, if another tenders it, is it refused because I ought to pay it: the party swearing me receives it, and that is his business; it matters not to him who is most interested in the said affidavit. Perhaps I am about to propose a somewhat novel opinion respecting such matters. If an insurance-office applies to me, enclosing a fee, I consider myself bound to act on their behalf, and reply in such a manner as shall best serve their interests. If, on the contrary, I receive an application and a fee from my patient, I am bound to look to his interests, and avail myself of all the loopholes of evasion of which the report admits, up to a *suppressio veri*; the most honourable profession (the bar) furnishes me with a precedent for such a course. If I fee an advocate, he does the best he can to acquit me; that is his business: though he might at the same time be in possession of that which would, without doubt, convict me. I contend, therefore, instead of quibbling about who is to pay, the medical referee should wait and see by whom he is retained. It might be said that the questions are too pointed to admit of evasion. I never saw such as would prevent me from "putting in" a bad life, with all their point: *ex. gr.*, "Is the life such as, in your opinion, might be insured without more than the average risk?" From the loose way of obtaining information gratis, I apprehend the *average risk* to be very great; therefore, I can conscientiously reply—Yes.

Would you, Sir, in your sober senses, think of arguing with a highwayman that taking your purse was discourteous and dishonest? Yet he

(we have it on authority) "steals trash." How much more fruitless, then, such argument with the would-be pilferer of your braincase: there is but the one maxim to pursue—*Coûte qui coûte.*

It might be asked, when applications come without a fee from either side, as is too often the case, what is to be done? Why, like a disinterested man, split the difference: take one half the sheet to light your pipe, and use the other as an envelope (it always has a stamp). Medical men have this matter more in their own hands than they think. If the insurance-offices were disposed to facilitate the business for all parties, I would suggest that to the end of the report should be attached a blank form of receipt for one guinea, without the filling up of which by the referees all the rest should be void.

There are certain offices having the word "Medical" interwoven with their titles. I can only say that the single instance in which I was what is called "regularly done" (*pro. tem.*), was by one of these; and, on applying for my fee (as the party acting for the office), got a polite intimation of a "wish that I might get it" —a wish, by the way, which will be realized. There are medical men attached to all the offices who clearly know right from wrong. For myself, I am an advocate for what is called "self-dependence." I do not like your broken reeds, and would be sorry to lean upon the promises of a profession which I fear never did and never will uphold its own rights, honour, and dignity.

I am, Sir, your obedient servant,

Quid pro Quo.

BEDFORD GENERAL INFIRMARY.

[To the Editor of the Medical Times.]

Sir,—I have to beg the favour of your correcting an error, into which you have been led, no doubt, by an incorrect report of the proceedings at the recent election of a physician to the Bedford General Infirmary.

I graduated, not, as stated in your article, a fortnight before the election, but in August, 1846, without any view to the office I now hold, the vacancy of which was caused by the melancholy suicide of my predecessor. I would also, with your permission, endeavour to remove an impression apparently prevailing, that the diploma of the University of St. Andrew's may be obtained by payment of certain fees, and submitting to a merely nominal examination. With very few exceptions, the candidates who present themselves at St. Andrew's have already passed examinations elsewhere, and been declared competent to practise; and yet the proportion of the rejected is very large, averaging one in five. I believe that at the London Univerity only is it so high.

The examination I underwent was certainly as extended and searching as those of the London College of Surgeons and the Apothecaries' Society together, and was conducted in a fair and gentlemanly manner by men of extended reputation in their various departments of science.

I have the honour to be, Sir,

Your obedient servant,

George Dixon Hedley.

Bedford, July 11.

MEDICAL REFORM.

[To the Editor of the Medical Times.]

Dear Sir,—I am happy to observe, by the *Medical Times* of the 19th, that Mr. Wakley's measure of Medical Reform is no more. Yet we can scarcely say with confidence, *requiescat in pace*, for he threatens to move at a future time for the reappointment of the committee then sitting upon the subject. Now, lest that or any other such imperfect bill may be again introduced into Parliament, and unexpectedly passed through the House, would it not be well to endeavour to establish a great scientific corps in London in imitation of the French, Congress assembled in Paris in 1845, which would communicate amicably with the Government, and, for the guidance of the State, lay down a solid foundation of true reform: for instance, a corps of delegates representing the medical profession of every grade, from all parts of the united kingdom, which would collect information from all quarters, and by their united experience and intelligence develop the principles of a broad universal organization. Without such a united effort, no system of reform can succeed; and without such assistance, Government will ever want that enlightenment upon medical subjects by which alone useful legislation can be ensured. The French Minister hailed in the most cordial manner the aid of the Congress, attended their deliberations, and upon their conclusions based the project of law lately discussed by the Chamber of Peers. If the medical faculty of France had not thus nobly worked together—if the physicians, surgeons, and apothecaries had not thus combined; if they had acted in an isolated manner as we do—their common complaints would have remained unredressed, abuses would have continued, and their divided efforts would have been confined to the opposition of those wild and mischievous schemes of which we have had example in the measures of Mr. Wakley and Sir James Graham. The Congress held their sittings only fifteen days; yet it was one of the grandest manifestations in the history of medicine, and proves the mighty power of intellectual union in overcoming difficulties that would have baffled the mental resources of any individual mind. Every department of medicine had its representatives there—physicians, surgeons, apothecaries, and veterinary surgeons. In the *séance* of inaguration, M. Serres thus alludes to the necessity of union:—"En effet, vous devez comprendre et vous avez compris que tous ces maux qui nous affligent, ne seraient jamais soulagés ou guéris dans l'impuissance de notre isolement, que toujours vos plaintes et vos récriminations seraient stériles et se perdraient dans le tumulte et les préoccupations sociales, tant q'elles resteraient individuelles et localizées, que vos vœux ne seraient écoutés que lorsqu'ils se produiraient comme l'expression d'une manifestation générale librement convoquée, librement consentie et qui réunerait la double garantie du nombre et des lumières."

Legislators in England are not more enlightened than the French upon medical subjects; nor can the legislature of any country enact efficient laws without first thoroughly understanding the nature of what is brought under its consideration. Sir James Graham's Bill was a melancholy instance of the rashness of a man, however intelligent, attempting to frame a law without being sufficiently acquainted with its objects. Legal measures, under such circumstances, are political quackery. As well might a man prescribe for disease who is totally ignorant of the human economy. The sources from which correct information can be attained of the details of the medical profession exist almost exclusively within the precincts of the profession itself; and that is the reason why Monsieur Orfila, Dean of the Faculty of Medicine in Paris, is associated with the French Government as a member of the Council of Public Instruction. There are also physicians and chemists in the Chamber of Peers. A law is changed or amended when its evils and imperfections are ascertained, and it is by a knowledge of the latter that we advance in legislative improvement. The English Government is completely destitute of the information necessary for medical administration. We have no member connected with the Ministry—no member in the House of Peers; and in the House of Commons I may say there is but one, who, from his various duties foreign to medicine, can be scarcely expected to possess that practical detailed knowledge which the consideration of medical reform requires. Medical policy engages the public mind much less than any other political topic; and it is to be deplored that, even amongst the influential and educated portion of the community, very little, if any, correct information exists with regard to the vicious constitution of the medical profession. Medical subjects are considered as only suited to the sheets of the medical press; and, from their having been long confined to medical works and periodicals, the great majority of the public has been left in complete ignorance of the real condition of our medical system. Public opinion has not been legitimately brought to bear upon it; abuses upon abuses have been silently allowed to accumulate; so that eventually a noble science, identified more than any other with individual and general happiness, has become a confused indescribable chaos, for which there is no other remedy than a complete reorganization. The public press seldom or never touches upon medicine, though teeming with every other information. Yet with what assiduity that same press culls from the proceedings of judicial courts every scandalous disclosure of private life. Look at the puffs of charlatanism which every day disfigure its pages and degrade its character; those filthy, obscene, and disgusting advertisements, to which the public press is ever open, by which a journal, instead of being a source of amusement and instruction, becomes unfit for the eyes of innocence; and, instead of forming an interesting appendage to every day's literary occupations, cannot, without very great moral danger, be admitted into the circle of private families.

Descarte says:—"Si l'on pauvait trauner quelque moyen de rendre les hommes plus sages et plus ingénieux, ce ne serait que dans la médecine." But the doctors themselves will not get credit for their reformatory exertions. That good and generous feeling which actuates them in the free and constant discharge of unnoticed and unremunerated services will not be supposed to expand itself into the magnanimous desire of ameliorating the physical and moral nature of the human race. In England, where legislative measures are formed under the influence of public opinion, it is scarcely to be wondered at that medical policy has but little engaged the consideration of legislators, when the public at large, from ignorance of the subject, never raised its powerful voice in favour of an improved system. The public are unaware of the insidious manner in which their dearest interests are compromised; hence their indifference. The representatives of the people must be first impressed with the importance and necessity of medical reform, and fairly instructed in the sad state of medical administration, before they will substantially lend their aid to the profession to extricate itself from its present position. The profession in England requires the assistance of power, as in France. It is too much divided in itself to effect a change, unless the interests of all parties be calmly and liberally debated—unless the fragments which compose it be brought together by some happy understanding. The result of their deliberations may prove disagreeable to some portions, but the opinion of the majority ought to be considered paramount. Government, upon its own responsibility, cannot succeed: for, besides their incapacity upon this particular question, medical institutions have been so long and quietly permitted to govern themselves, to enact by-laws, and follow whatever plans they pleased, uncontrolled in the slightest degree by superior authority, that now interference on the part of the State assumes the aspect of tyranny, and yields to resistance.

The profession has proved itself unequal to the task of reform, and the Legislature, in like manner, has failed. Then let us imitate our Gallic neighbours, by instituting a grand combination of the profession and framer, not servile in any way to the former, and worthy the dignity and wisdom of the latter,—a combination of intelligence, which will have the double object of the public welfare on the one hand, and on the other, that of placing the science of medicine on a sure philosophic basis, becoming the enlightenment of the age. In short, let Medical Reform become, what it ought to be, a great national question, for it interests every man, from the prince to the beggar.

The bill of Sir James Graham, which gave a *carte blanche* to every one to practise medicine, was not only degrading and injurious to the medical profession, but was insulting to the intelligence of the English people. That measure generally deserved well the talented reprobation of the *Times*. Yet I fear that the manner in which one good feature of that measure had been received and attacked by the *Times* in 1844 has greatly tended to interfere with the progress of Medical Reform, and discourage future statesmen from interesting themselves with the subject. The principle of his bill, which would divest medical institutions of their irresponsibility, and establish a central surveillance over them, was good in the abstract. For surely, when the Legislature grants to corporate bodies the privilege of licensing men to enter into a career in which they are capable of doing much good or the most direful mischief—surely that Legislature has a right, and owes it as a duty to the country, to rigidly exact from such corporations, rules and regulations commensurate with the serious duties of their graduates. Can the principle of competition advocated by the *Times* be safely applied to medicine? It scarcely can, if we contemplate the evils that will be entailed upon society by even one badly regulated medical institution, even one incompetent person. The members of such a body mingle in with society, whose safety is placed in the hands of the Crown; and, however that licensing body may afterwards improve, whether from motives of humanity, shame, or a spirit of emulation, the errors of the past cannot be repaired; human life, sacrificed to ignorance, can never be recalled. One great and manifest evil arises from that competition: the discord which is thereby engendered among practitioners who inherit the ideas of their *alma mater*. In every part of the united kingdom we find disunion proceeding from such a cause. Very few of the faculty are upon intimate terms. The greater the distance between them, the more friendly their relations. Each has his party, and the most disgraceful means are often resorted to to injure the reputation of a professional brother. An unfortunate illustration of the proverbial differences with which people are fond of characterizing the profession may be found in every locality, however small; and this want of agreement impedes the progress of science by preventing intellectual co-operation, and deprives the public at large of the benefits of multiplied experience. A medical machine, says Cabanis, like other machines, requires harmony in all its parts.

I have the honour to remain, dear Sir, your obedient subscriber,

S. S. Moriarty.

Dieppe, Grande Rue, 132, July 5.

THE VALUE OF THE APOTHECARIES' LICENSE.

[To the Editor of the Medical Times.]

Sir,—A few weeks since you honoured me by inserting a communication relative to the neglect of the Apothecaries' Com—— in not prosecuting one   of I   who assumes a position as surgeon and apothecary, which he has not the slightest right to hold; and, if you will permit me further space, I will now enter more fully into the particulars of the case, convinced that good might be done to our cause by fairly holding up to public view even one glaring instance of the maladministration of an important act, by a trading corporate body. Virtually I believe the act has become a nullity, at least I can derive no benefit from it, though I have devoted no few hours towards attaining "the full benefit of the act" against ——.

It may be asked, why has this man remained so long unmolested? The context will show. I came to this place in 1844, single-handed, to work out a practice, but I soon discovered the manor in the out-districts was most extensively poached on by this individual; he was attending, undisturbed, most of the farmers' families—the women in their accouchements, the men in all diseases. No one seemed to question his qualification to practise, for he sprang up insidiously, like a mushroom on a murky night, lucky to come in, just at the moment, when age began to diminish the activity of Mr. Peter Best, then holding all the practice of the neighbourhood, and now, perhaps, the oldest practitioner in England. An apprenticeship of a year or two with a man at —— was all the medical education —— ever had; a hasty marriage compelled him to break his indentures, and he came to —— almost a beggar, and even drove a van. Physic, however, was wanting; so, with the smattering he had, he left the "whip to drive a practice." One patient begat another; right or wrong, he went blundering on, curing or killing, no matter what disease beset his patient. On the proceeds he is enabled to keep up an establishment; a horse and gig, on which is blazoned forth "—— —— surgeon, —— ——." The county coroner used to call him in, and his evidence has been received by juries, under the full impression that he was qualified according to law. Till I strung my bow and shot my arrows at him, no one ventured to the fight: he was the Goliah of Gath, and ruled the empire of physic round about. On the many parties, whose names I transmit, he has attended since I have been here. I grew tired of collecting evidence against him, or I might augment the list tenfold. He also attends an Odd Fellows' Club, held at ——'s, in ——; and three or four at ——, held at public-houses; the treasurers, or any one of these parties, might be summoned to give evidence against him, for I have furnished the society with the requisite evidence.' After having taken the initiative against —— at the express instigation of the society, it does make me look such a fool for the matter to be left in *statu quo*—he continuing to practise, and I looking on in evident defeat. Here there is not the possession of a college diploma to gain the sympathies of a jury; to enter the profession he must begin *de novo*. Hitherto his career has been amenable to the laws of the land; conviction would easily follow indictment.

* * * *

A village barber hangs out a pole to show the nature of his occupation; but a blunt razor or an unsteady hand drives away his customers. A village quack seduces his victims by styling himself "surgeon;" but his honeyed words sweeten the draught; and the patient, swallowing both from the charlatan, falls into his premature grave. The keeper of a beershop is fined £20 for selling spirits without a license; there is no trouble in obtaining conviction; and why should *we* have, when the lives of the public are at stake?

Let us awaken from our lethargy. Our diploma is a false shield; let us fashion fresh defences for ourselves; let us institute a prosecution society, and contribute largely towards its support; let us have a high legal adviser to defend the members. We must not stand as we are; an instance like this is sufficient to prove the instability of our position—our tale of woe—the want of value in our diplomas. We have sacrificed the health of youth to obey the supposed mandates of the law; we have burnt the midnight oil in vain; we have scattered thirty golden guineas to the winds—now, in the summer of our lives; and, if we do not screen ourselves, innumerable —— will come to deprive us of the *fruits* of our labour.

I remain, Sir, your obedient servant,

Alfred Ebsworth,

Surgeon to the Bedford Union Workhouse and Bulwell District,

Bulwell, July 11.

[Mr. Ebsworth has serious causes of complaint; but the law of libel would punish us with some severity if we did him full justice in their publication.—Ed.]

GOSSIP OF THE WEEK.

Royal College of Surgeons.—The following gentlemen, having undergone the necessary examinations for the diploma of this college, were admitted members at the meeting of the court on the 25th ult., viz.:—Messrs. Theophilus Taylor, Hereford; William Hand, Northwich, Cheshire; Horatio Harrison Smith, Ramsgate; Robert Horne Kemp, Brighton; Charles William Latham, London; Edward Vye, Ilfracombe, Devon; James Tarzewell, Dorchester; William Leyson Thomas, Neath, Glamorganshire; Augustus Grant, Thayer-street, Manchester-square; and Arthur William Watson Smith, Chertsey, Surrey. At the same meeting of the court, Mr. Nicholas Littleton passed his examination for naval surgeon. This gentleman is a member of the college, his diploma bearing date December 22, 1840.—July 2. J. O'Brien, J. Day, H. J. Rice, T. Park, F. Mason, C. D. R. Symons, G. A. H. Hepworth, M. Thomas, W. E. Hambly, W. Mott, A. Blyth, W. G. Cort, H. Crisp, E. W. Lowe, and J. F. Badley.—July 9. Mr. Horatio Philip Harris, Leominster, Herefordshire; Mr. Louis Truefitt, Bunwood-place, Edgware-road; Mr. John Tudor, Blanford-square, Regent's-park; Mr. John Rogers, Worcester; Mr. John Farmer, Hereford; Mr. Joseph Burgon, Bucklersbury; Mr. Harry Frederick Barnett, Bradley, near Bromsgrove, Worcestershire; and Mr. Joseph Fayrer, Royal Ophthalmic Hospital, Charing-cross. The next examination for the Fellowship of this college will take place on Tuesday and Thursday, the 3rd and 5th of August.

Royal College of Surgeons.—His Royal Highness the Grand Duke of Saxe Weimar, accompanied by his suite, again visited the Hunterian Museum of this College on Saturday morning, and remained upwards of two hours inspecting its valuable contents, which were explained to his Royal Highness by Professor Owen. On departure the illustrious party expressed the great gratification they had derived from the visit.

Apothecaries' Hall.—Gentlemen admitted members June 24: Herman Henry Tribe, John Riggs Miller Lewis, George Augustus Jeffery, William Jones, George Hawkesford, William Crosby, Thomas Clayson Mourilyan, John Dickson, John Griffiths Doidge, Charles Broughton, and John Taylor Rowland.—July 1: James Henry Thomas Vaughan Hughes, Joseph White, Thomas Rhodes Armitage, and Francis William Merry.—July 8: William Henry Cook, Edmond Archer, and Michael Hoole Ashwell.

War-office, June 25.—Hospital Staff: Deputy Inspector-Gen. of Hospitals Henry Franklin to be Inspector-Gen. of Hospitals, vice John Frederick Clarke, M.D., who retires on half-pay; Deputy-Inspector Gen., with local rank, John Kinnis, M.D., to be Deputy-Inspector-Gen. of Hospitals, vice Franklin, promoted; Staff-Surg. of the First Class Andrew Fergusson, M.D., to be Deputy-Inspector-Gen. of Hospitals, with local rank, vice Kinnis, appointed Deputy-Inspector-Gen. of Hospitals; Local Deputy-Inspector-Gen. of Hospitals Sir James Pitcairn, M.D., to be Deputy-Inspector-Gen. of Hospitals; Deputy-Inspector-Gen. of Hospitals Sir James Pitcairn, M.D., to be Inspector-Gen. of Hospitals, with local rank.—July 13.—3rd Dragoon Guards: Richard Carmichael Bourne, gent., to be Assist.-Surg., vice Mapleton, promoted to the 40th Foot.—13th Light Dragoons: Assist.-Surg. George Thomas Woodman, M.D., from 48th Foot, to be Assist.-Surg., vice Sall, promoted in the 5th Foot.—5th Regiment of Foot: Staff-Surg. of the Second Class William Ord Mackenzie, M.D., to be Surg., vice Duncan Henderson, M.D., who retires upon half-pay; Assist.-Surg. William Sall, M.D., from 13th Light Dragoons, to be Surg.; Assist.-Surg. William Battley, from the Staff, to be Assist.-Surg.—21st Foot: Assist.-Surg. Francis Charles Annesley, from 61st Foot, to be Assist.-Surg., vice Clark, who exchanges.—26th Foot: Assist.-Surg. James Johnston, M.D., from 71st Foot, to be Surg., vice Stewart,

appointed to the Staff.—40th Foot: Assist.-Surg. Henry Mapleton, M.D., from 3rd Dragoon Guards, to be Surg., vice M'Munn, promoted on the Staff.—61st Foot: Assist.-Surg. Frederick Hobson Clark, from 21st Foot, to be Assist.-Surg., vice Annesley, who exchanges.—71st Foot: John Andrew Woolfreyes, gent., to be Assist.-Surg., vice Johnston, promoted in the 26th Foot.—Hospital Staff: Surg. Robert Andrew M'Munn, M.D., from 40th Foot, to be Staff-Surg. of the First Class, vice Andrew Fergusson, promoted. Surg. John Stewart, from 26th Foot, to be Staff Surg. of Second Class, vice Copeland Grattan, M D., who retires upon half-pay. Staff Assist.-Surg. George Williamson, M.D., to be Staff-Surg. of the Second Class, vice Mackenzie, appointed to the 5th Foot. Assist.-Surg. Sandford M'Vitty Lloyd, M.D., from the 62nd Foot, to be Assist.-Surg. to the Forces, vice Williamson, promoted.

Naval Medical Promotions.—Surgeon: Dr. John Drummond, to the rank of Deputy Inspector of Hospitals and Fleets.

M. Cassimir Broussais, Chief Physician of the Military Hospital at Gros-Caillou, has just died at the age of forty-four. His funeral took place on Wednesday, in the midst of a numerous concourse of members of the profession. A deputation of the *agrégés* of the school, in full costume, having at their head the Dean, who represented the faculty; the professors and pupils of Val-de-Grâce, as well as a great number of surgeons from the garrison of Paris, came to pay the last token of respect to him who had been, during twenty years, one of their most esteemed colleagues, and one of their kindest masters. Several orations were pronounced over the tomb by MM. Alquie, Larrey, and Marchal (de Calvi), in the name of the professors of Val-de-Grâce; by M. Barth, in the name of the Faculty of Medicine; by the Surgeon-in-Chief of the garrison of Paris; and by a pupil of Val-de-Grâce.

Dr. Laugier, surgeon of the Hôpital Beaujon, has just been appointed surgeon to the Hôpital la Pitié, in the place of M. Lisfranc.

Scurvy.—This disease has appeared in Paris. Several cases have been brought to the central bureau of the hospital.

New Instrument for Etherization.—M. Jules Roux, of the Naval School of Medicine at Toulon, has considerably simplified the apparatus for the etherization of ether. An ox bladder, or a pig's, covered by any thin fabric, and forming together a bag, drawn together by a sliding string; a hole in the side of the bag, encircled by a wooden bowl, and perfectly closed by a small stopper of wood, which can be taken out at pleasure: such is the new apparatus of M. Jules Roux. They place up the bottom of the bag a sponge dipped in ether, and then enclose the nose and chin of the person to be etherized.

Medical Schools of the United States.—By the report made to the National Medical Convention, at its meeting in May last, it appears there are thirty-seven recognised schools of medicine; the oldest of which is the medical department of the University of Pennsylvania, which department was founded in 1765, and the last established is that of the Western Reserve College, established in 1811.

Naval Medical Appointments.—Surgeons.—John Clarke, to the Avenger, vice Steele; Frederick Martyn, to the Imaum.

Obituary.—On Saturday, the 10th inst., at the house of his son, Paddington, William Hopeful Lerew, Esq., surgeon, aged 57.

Police.—Bow-street.—On Wednesday Henry Johnson, the young man who stood charged with forging a certificate of examination at the Apothecaries' Hall, was fully committed for trial at the Old Bailey. It will be remembered that the prisoner, failing to pass his examination, procured a genuine certificate and got a *fac simile* engraved from it. By an understanding between the engraver and the Apothecaries' Company, he was apprehended, with both the original and forged document in his possession.

The Alarm, 26, Captain [illegible], had left Vera Cruz for Halifax, by the last advices. Her crew were very sickly, and dying in twenties at the hospital. She was at Havannah on the 8th of June, and called off Bermuda on the 19th. Dr. Bowler, surgeon of the Alarm, has come home invalided.

Effects of Quackery.—A female died in Rochdale, on Saturday week, from taking Morison's pills. On the day she died she swallowed two boxes of them, each containing 132 pills.

The British Museum.—Mr. J. Payne Collier has been nominated secretary to the commission for inquiring into the management of the British Museum. A better appointment could not have been made. Mr. Collier has devoted many years to literature, especially to that of the olden time; but, besides being deep in "black-letter" lore, he has those habits of application and business which peculiarly fit him for his new office.

Interesting Geological Discovery.—M. Erdmann, Professor of Geology at the imperial University of Dorpat, who is now travelling in the south of Russia, has just discovered in soil, situated to the south of Odessa, a great many skeletons and fossil bones of animals, all of enormous dimensions. The skeletons were about eighty-three in number: six elephants, one rhinoceros, two of the ox-kind, four stags, one antelope, sixty-one bears, two yenas, two dogs, three cats, and one ruminating animal of an unknown species. These skeletons, as well as the bones, were found immediately under a thick calcareous stratum. The discovery made by M. Erdmann is so much the more remarkable, as, till now, few or no remains of the antediluvian animal kingdom have been found in Russia.

Mesmerism.—*The Phare de la Manche* mentions three new operations, performed at Cherbourg, upon patients, during magnetic sleep, with complete insensibility, by M. Loysel, assisted by M. Fleury. One of these operations, the only one that the journal mentions with any details, consisted in the extirpation of a very large mass of glands and ganglions, situated upon the side and back part of the neck. The journal cites as witnesses of these operations a great number of persons, among whom were several physicians and principal inhabitants of the place.

More Poisonings in Norfolk.—On Monday last the inhabitants of Stokeferry were alarmed by a report that a diabolical attempt had been made on the lives of the family of Mr. John Mayes, butcher, of that place. On inquiry it was found to be but too true; for breakfast was barely over before each and all who partook of the tea, of which it chiefly consisted, were taken suddenly and violently sick, with acute burning pains in the throat and stomach. Of these, perhaps, Mr. Mayes himself was the greatest sufferer, though all were more or less affected. At first it was thought to be something in the teapot, but on examination by Mr. H. B. Steele, the surgeon of the place, the presence of arsenic in a large quantity was easily detected in the kettle from which the teapot had been supplied; this kettle Mr. Steele immediately secured. Of course prompt and, we hope, effective measures were resorted to; for the whole of the sufferers (seven in number) were stated to be better. We regret, however, to add that the effects of this horrid act have been visited on an eighth person, Mrs. Tindal, of the Crown Inn, who, calling on her neighbour, Mrs. Mayes, unguardedly swallowed a small quantity of the water from the teakettle (this was before it was known or even suspected to contain poison), and has ever since been in a suffering, not to say alarming, condition. Had she, like the rest, taken enough to cause immediate reaction, she might possibly have suffered less; for the ultimate safety of the intended victims, if saved they are, may be said to be owing to the strength of the poison; and thus the very bane becomes the antidote. Measures are being taken by the police which, it is hoped, will soon afford a clue to the perpetrator of this vile attempt.—*Essex Herald.*

[illegible] of M. Pariset.—[illegible] literature, and the Royal Academy of Medicine have just experienced an irreparable loss in the person of M. Pariset, in the full exercise of his mental faculties and usefulness, in his 77th year. The numerous concourse of physicians, learned and literary men, artists, and people of fashion, who eagerly rendered the last honours to the celebrated perpetual secretary of the academy, testifies the deep sympathy he had obtained from all classes of society. His death has caused general grief, and has left in the academy a void which will not easily be filled up. Several orations have been pronounced over the tomb of Pariset, in the name of the Institution, the Academy of Medicine, the Council of Health, and his numerous friends.

Altering a Diploma.—A curious trial has lately occurred of an apothecary of Graham's-town, named E. T. Taylor, who was accused of the commission of forgery in the alteration of a diploma granted to him by Governor Sir George Napier to exercise the profession of apothecary and wholesale chemist by inserting the word "surgeon." Mr. Ebdon defended the accused party at great length and with much ingenuity; but he was, nevertheless, found guilty, and sentenced to six months' imprisonment with hard labour.

American National Medical Convention.—On the first Wednesday in May last a National Medical Convention assembled at Philadelphia, to deliberate on the means which should be adopted to improve medical science; to increase the usefulness, to elevate the character and standing, and to protect the interests of the profession.

Tannate of Iron in the Treatment of Chlorosis.—Dr. Benedetti asserts that the tannate of iron is the most efficacious of all remedies in the treatment of chlorosis. In evidence of this he cites cases from his own practice and from that of Dr. Majocci, affirming that the treatment by the tannate of iron is successful in from twelve to twenty-five days, according to the severity of the case.—*Bull. delle Sc. Med.*

MORTALITY TABLE.

For the Week ending Saturday, July 10, 1847.

Causes of Death.	Total.	Average of 5 Summers.
All Causes......	[illegible]2	940
Specified Causes...	880	935
Zymotic (or Epidemic, Endemic, and Contagious) Diseases.............	215	226
Sporadic Diseases.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	102	103
Diseases of the Brain, Spinal Marrow, Nerves, and Senses..............	156	157
Diseases of the Lungs, and of the other Organs of Respiration	195	226
Diseases of the Heart and Blood-vessels........	21	25
Diseases of the Stomach, Liver, and other organs of Digestion	91	94
Diseases of the Kidneys, &c.	6	8
Childbirth, Diseases of the Uterus, &c.	11	10
Rheumatism, Diseases of the Bones, Joints, &c. ...		
Diseases of the Skin, Cellular Tissue, &c.	3	2
Old Age.................	50	50
Violence, Privation, Cold, and Intemperance......	23	

ORIGINAL LECTURES.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), M.B.S., Physician to the Royal Infirmary for Children, &c.

(Continued from p. 408.)

GENTLEMEN,—I shall continue to-day the subject of that interesting disorder, *tuberculous meningitis.* You will remember that I told you you would have to be upon your guard, in the diagnosis of this affection, that you did not regard the vomiting and constipation as evidences of primary disease of the gastro-intestinal apparatus, and treat the disorder accordingly. To-day I shall particularly draw your attention to some points of differential diagnosis. The first point for you to bear in mind is, that you may have slight febrile exacerbation in a child, together with heat of head, headache, increase of the special sensibilities, and derangement of the digestive organs—in fact, the first series of symptoms in the formidable affection I am speaking of—and yet, undoubtedly, the child may not necessarily labour under tuberculous meningitis. It is suffering under cerebral congestion, however, and no one can tell how soon such congestion, in a scrofulous child, may be followed by the disorder you will have so much reason to dread. So that, whenever such symptoms occur, and are evidently not secondary upon gastro-enteric disturbance, you must immediately pay attention to the important organ in disorder, and consider the brain as primarily in fault. So, also, if such symptoms intervene in the course of pneumonia, hooping-cough, remittent and other fevers, &c., although the disturbance of the cerebral circulation is *secondary,* yet the brain must be therapeutically treated. Sometimes what we may call simple cerebral congestion—the forerunner of simple acute meningitis, if the former were to continue in progress—may appear in the child; and this will demand equal care and attention, although it might not be followed by the tuberculous disorder, but by simple acute inflammation of the brain and its membranes. The only difference would be that the treatment in the one case is to be more depletory than in the other, as you will be sure of from the difference of the symptoms of the two congestions. In the simple acute congestion the accession is rapid, the face flushed, and there are glistening and suffusion of the eyes. Convulsions, jactitation, or even temporary paralysis, soon come on: in fine, you have a rather subdued exemplification of the early stage of true simple meningito-cephalitis. In the congestion which would be followed by the granular deposit, the accession is not so rapid, the symptoms not so severe, the face not so flushed, and excito-motory phenomena not so quickly occurring.

In *simple acute meningitis,* chiefly liable to be confounded with the tuberculous variety in the second stage, you will have the accession very acute, all the symptoms intense, and the headache and agitation extreme; the febrile erethism very considerable, the vomiting of bilious matter not necessarily complicated with constipation, and coma rapidly coming on. The aggravation of the disorder is quickly progressive, and death very soon closes the scene. In *tuberculous meningitis,* the accession is not acute, but often very insidious, the primary symptoms not being severe and grave, except the vomiting, and which is accompanied by constipation. Generally the intellectual functions are normal, save in their gradual torpidity as the disease progresses. The course is comparatively slow, irregular, often very much prolonged.

Secondary simple acute meningitis is preceded by well-known primary symptoms of a special disorder, such as an eruptive fever, &c. It is not necessarily preceded by constipation, but often by active diarrhœa; sometimes by general anasarca or acute local inflammation of the chest, abdomen, &c., with deficient secretion of urine, and with high fever.

Meningeal apoplexy and *cerebral hemorrhage* can but rarely tend to hinder your diagnosis, although you will find a very interesting case in Rilliet and Barthez, of a girl who died after exhibiting the symptoms of the tuberculous disorder—some other symptoms, however, being superadded; and after death, a large clot was found in the left optic thalamus. The comparative rarity of these hemorrhagic affections, the very great irregularity of their symptoms, and the very early supervention of convulsions, will help to assist your diagnosis. I may refer you, however, to the writers I have named.

Hypertrophy of the brain is more likely to be confounded with *chronic* hydrocephalus, in some of its forms, than with our present malady, except, perhaps, in those cases alluded to by Mauthner, where the hypertrophy assumed an active character in consequence of the cranial parieties not yielding to the rapidly increasing growth of their contents, and in which the symptoms were those of active cerebral disorder and of compression. But "we do not believe that the diagnosis between induration and acute hydrocephalus is so difficult as writers pretend; not that it is so easy to recognise the former malady, but because, with a little attention, we can easily exclude the possibility of the meningitic disorder." (See Rilliet.) *Partial induration* has been described by one or two continental writers, the symptoms of which are very obscure, chiefly consisting in very rapid emaciation, convulsions, and torpor.

By the *rapid atrophy* of the brain, treated of by Mauthner, you are in no danger of being misled: for here the patients continue living for a considerable time in a state of exhaustion, observing nothing, neglecting all usual amusements, "while the automatic movements of their limbs betray an intelligence not higher than brutes." In that disease, which has been called *microcephalus* or congenital deficient development of the brain, with a small skull, the very low state of the intellectual functions, will prevent a mistake. "Such children are on a level with cretins." Here the physical powers, however, are often very good.

Elsaesser and Widtmann have drawn our attention to a disorder which they respectively term *tetanos apnoicus* and *cranio-tabes,* and which they regard as a species of rachitism, exemplifying itself in an atrophy of the cranial bones. This disorder is also accompanied with marks of inflammation of the meningeal membranes, and presents certain symptoms which might lead to the opinion that the child was suffering under tuberculous meningitis. From what I can glean from nine or ten cases of Widtmann (detailed in the *Gazette Medicale* for March, 1845), the following seem to be important signs of the disorder:—Great perspiration about the occipital region, which is soft and yielding to the touch; desire to lean the head forward, pressing on the brow, leaving the occiput free; great agitation in the night, especially if the child is not put to sleep lying on its side; *great tendency to laryngismus stridulus;* tonic and clonic spasms, or periodic tetanic disturbance of variable intensity; disease more frequent between the third and sixth month after birth. In two out of nine cases the child died; in one only is the state of the brain and membranes noticed, and this is said to have been normal. The laryngitic symptom is said to be owing to temporary congestion of the brain, become more sensible by the thinning of the cranium. The above may help your diagnosis, should such a case come before you.

In those cases of *phlebitis of the sinuses of the dura mater* which have been recorded, and in which the patients died after presenting cerebral symptoms, such as giddiness, syncope, dilatation of the pupils, strabismus, grinding of the teeth, alternate contraction and relaxation of muscles, &c., secondary affections have given rise to these symptoms, such as hemorrhage, effusion of fluid in the ventricles, softening, capillary apoplexy; or these lesions have existed, and yet the symptoms were such that no connection could be traced between them. In some examples death has been quite sudden.

With respect to the diagnosis between "acute hydrocephalus" and febrile diseases, I may remark that *typhoid fever* is not very frequent in children; the tongue is brown and loaded, diarrhœa often present, and heat of body and thirst in the early periods more intense; the pulse is more equable, as is also the respiration; there is much more debility from the onset, and an absence of convulsions, paralysis, &c., and other peculiar cerebral symptoms usually seen in the affection of the brain.

Remittent fever is more common, abdominal complication frequent and evident, and the lips red, chapped or fissured, and retracted in bad cases. In the milder, the regular remissions and excerbations of the fever, the heat, the thirst, the readily-procured evacuations, the often brightness of the eye, and the state of the tongue, together with, in many cases, the ex-

istence of stomatitis, will help the diagnosis. In the brain disorder, the abdominal or digestive complications are attended with well known cerebral symptoms and tense fontanelles, and the lips, tongue, heat of body, thirst, and appearance of the eyes, are not those of the febrile disorder.

Now and then, even with your greatest attention, however, you will find yourselves at a loss to diagnose between certain forms of remittent fever and particular stages of tuberculous meningitis. I have now and then been at loss to say whether the head symptoms which were present, together with much heat of skin, febrile exacerbation, and derangement of the digestive system, were really secondary to the febrile disturbance, and were to be viewed as likely to yield as the fever subsided, and that they were only evidences of temporary irritation of the nervous centre. In such cases I have always acted, however, very carefully, as I know that this temporary cerebral irritation and congestion of the nervous centre, not uncommon in the remittent fever of childhood, may in a scrofulous child lead on to perfect development of an intercurrent form of the true meningitic disorder. Upon this point, however, I shall treat more fully when I speak to you of the fever in question.

Now and then you may be called to a case on account of the fears entertained from brain symptoms present, even accompanied with convulsions. Perhaps the next day you will find that they have entirely subsided, and that the little patient is covered with one of the exanthematous eruptions. But a fortnight ago I was called to a case of this description, and on my second visit found the infant covered with a dark measly eruption; the child laboured, in fact, under that disorder which is called *rubeola sine catarrho*. But in these cases—at least those which I have seen—of the exanthemata being ushered in by head symptoms, there has not been the constipation which is observed in the meningitic disorder, nor in the younger children the tense fontanelles. In *smallpox*, which you meet with amongst the children of dispensary practice, you will often find vomiting and head symptoms usher in the malady, and it is in this exanthematous disorder that you will have to be most upon your guard in your diagnosis. I think you can better tell what is coming in *scarlatina* than in the other eruptive fevers, for here is from the first a peculiar state of the tongue and dryness of the mouth, with a strange sort of odour of the breath, even from the very first, that are not so likely to mislead you. In *measles*, too, you will, of course, mostly have the affection of the mucous membrane of the eyes and nasal passage, &c., to guide you; but, as in the case I have just told you of, they may all be wanting. In this the eruption receded very soon, but the infant was considered to be going on so well that my attendance was no longer required; but I heard from the family attendant that four or five days afterwards it died suddenly in convulsions.

The cerebral irritation which often intercurs during *difficult dentition* may simulate somewhat the premonitory symptoms of tuberculous meningitis. But in these cases the swollen, tender, hot, and redder gums, and the very great dryness of, or, on the contrary, the continuous dribbling from the mouth, the more irritable disposition, the frequent precession or coetaneous existence of diarrhœa, will assist you in your diagnosis.

The presence of *worms* sometimes induces anomalous nervous symptoms, about which I may just caution you, so that you may be upon your guard, as also the forcing little children to too early and long-continued mental exertions, at some of our new-fashioned schools.

You know that in the scrofulous child severe internal *otitis* and *purulent otorrhœa* are not unfrequent affections. In bad cases involvement of the temporal bone is seen to take place, and you can readily imagine that, if this proceeds to any extent, it will be likely to affect the contents of the cavity which it surrounds. And so it does sometimes, the brain and its membranes becoming secondarily affected. Sometimes the discharge ceases suddenly, and is accompanied by a sort of internal throbbing, stupor, convulsions, or slight delirium, or with partial paralysis. The brain disorder may suddenly supervene, and death quickly follow, and on dissection after death evidences of simple secondary meningitis or cerebritis be present. On the other hand, the brain affection may take place more slowly, and assume the characters of common tuberculous meningitis. Dr. Cheyne, in his "Essays on Hydrocephalus Acutis," quotes several instances of secondary brain affection from disease of the ear. More lately, Dr. Cormack has called attention to the intimate connection between abscess of the brain and affections generally of scrofulous origin commencing in one of the structures of the internal ear; and you will find a notice of a very interesting case of abscess of the brain in a young female labouring under disease of the ear, which occurred to Mr. Hancock, in No. 341 of the *Medical Times*; I chiefly notice these cases in order to show you that the brain symptoms which may thus supervene are not to be regarded as those of idiopathic or primary disorder of the nervous centre, and treated accordingly.

I shall conclude what I have to say on the diagnosis of the disease I have been considering, in making a few remarks upon what Dr. Elliotson has called "spurious hydrocephalus," and to which other names have been given by various writers. You must know that sometimes soon after a naturally weak or badly brought up child has laboured under diarrhœa, or some exhausting disorder, or at a more late period of like affections in a stronger one, there will occur brain symptoms very apt to mislead an incautious practitioner into a belief that they indicate the supervention of our present disorder, or are to be viewed as symptoms of common hydrocephalus: the truth being that they are the evidences of vital exhaustion, and a very depressed condition of nervous energy—a state to be treated in a different manner from its first appearance to that which you must have recourse to in the other affection.

When I have seen this peculiar condition I have generally observed it in the stage alluded to by Dr. Gooch—viz., the child lying on the nurse's lap, unable or unwilling to raise its head; half asleep, one moment opening its eyes, and the next closing them again with a remarkable expression of languor; there is great heaviness of head, drowsiness, but no pain or active febrile symptoms present. In addition to these symptoms, and on which I lay great stress, are the great pallor of the face and coldness of it, as well as of the extremities. These symptoms may be followed by "coma, stertorous breathing, and dilated and motionless pupil," or even squinting and blindness—(Maunsell and Evanson).

Dr. Marshall Hall, to whom we were first indebted for having our attention prominently directed to this affection, divides it into two stages: the first being that of irritability, the second that of torpor. In the first "the infant becomes irritable, restless, and feverish, the face flushed, the surface hot, and the pulse frequent; there is an undue sensitiveness of the nerves of feeling, and the little patient starts on becoming touched, or from any sudden noise; there are sighing and moaning during the sleep, and screaming; the bowels are flatulent and loose, and the evacuations are mucous and disordered." Now, if these symptoms are not properly treated by the administration of gentle stimulants and cordials, the second stage of Dr. Hall will follow, and the patient sink in a state of collapse. The second stage, with which I am alone familiar, is marked by the symptoms I have just spoken of. However, I cannot do better than refer you to the last edition of Underwood, in which you will find much more about the disorder.

If you were called to a case where the child is lying, as I said, on the nurse's lap,—either very drowsy, or in a state of great languor, or in deep stupor (for I do not know what else to call it), with pale cold face and extremities, dim eyes, perhaps squinting or dilated pupil, or with, now and then, twitchings, or even convulsions, and irregular or suppressed respiration,—you should at once inquire if the child has, had diarrhœa for some time, or has been treated by much depletion in any way for a presumed inflammatory disorder: for, if such has been the case, it is in all likelihood suffering under intense depression of vital power, and it must be treated accordingly. It is in this, also, that I agree with Gooch, in only having seen this "spurious hodrocephalus" occurring after exhaustion from diarrhœa and depletory treatment; and this is a very great point for me to help myself in the diagnosis. On the other hand, Dr. Hall, in most of the cases he has seen, says that "the child has had no previous illness, and the leeches have been applied subsequent to the drowsiness, and as a remedy for it." But still Dr. Hall admits that a state of *exhaustion* had existed previously in all the cases he had seen or heard of

A peculiacondition of the brain has been spoken of by Dr. Nickoll, which he calls *erethism*, and of which he makes two varieties, *sensitive* and *torpid*.

Out of his sensitive erethism I can make nothing but *congestion*, and the torpid appears to me to be a variety of the disorder we are at present speaking of, but still one with which I am not personally acquainted. My own experience does not allow me to say that I am aware of a hydrencephaloid affection, save as following upon exhausting disease or a like cause, but others assert that it does. Of course I am aware that general constitutional debility will give rise to anomalous nervous symptoms, but I never saw it produce anything like "spurious hydrocephalus," such as I have been talking of, unless combined with, or immediately preceded by diarrhœa or loss of the circulating fluid. Still, the following observations of Dr. Henry Davis are worthy of your attention:—"Although exhausting discharges are for the most part the more frequent cause of hydrencephaloid affection, yet the disease sometimes takes place without any apparent cause of exhaustion; and alterations in the quality of the blood, or in the nutrition of the brain, sometimes induce the same train of symptoms. Hence defective nutrition of the body, and an imperfect supply of other vital stimuli, particularly air and light, may, by first inducing a state of irritation, eventually induce congestion or the symptoms simulating hydrocephalus; and, in accordance with Dr. Bennet's statement, it is in the feeble children of the poor that hydrencephaloid affections are more commonly seen, except in those cases where they follow direct exhaustion."

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.

By Professor MATTEUCCI, of Pisa.

PART VI.

RESPIRATION—ENDOSMOSIS OF GASES.

The action of the atmospheric oxygen upon the venous blood, the changes which the inhaled air suffers in the pulmonary cells, the modifications which the blood undergoes in the capillary network spread over the thin partitions of the bronchial vesicles—these are the principal phenomena that constitute the function of respiration.

The life of all animals, without exception, is essentially dependent upon the modifications which the atmospheric oxygen operates in their substance. The organs charged with the respiratory function, in the divers classes of animals, are more or less developed, and of different form and organization, according to the nature of the medium in which the several classes respectively exist. These differences are so well known that we need not here expatiate upon them.

The mechanism of the respiratory movements may be aptly illustrated by the action of a bellows.

Man introduces into his lungs, in every in-

halation, about one-third of a litre (a) (about one half-pint) of atmospheric air; the exhaled air contains from 3 to 5 per cent. of carbonic acid, and in very full and deep exhalations as much as from 6 to 8 per cent.; on the other hand, the exhaled air contains from 4 to 6 per cent. of oxygen less than it contained at its inhalation. With these data (which have been selected from among a great number, as the most trustworthy) we can readily calculate the quantity of oxygen absorbed by an individual in the space of twenty-four hours, assuming the number of inspirations per minute to vary between 15 and 20. According to Lavoisier and Séguin, the oxygen consumed by the respiration of an adult amounts to 1015 grammes per diem. The volume of oxygen which disappears in the respiration of man and of birds is nearly equal to that of the carbonic acid eliminated. Very scrupulous observers have found that the volume of oxygen absorbed in respiration is more considerable than that of the carbonic acid produced in this process. This difference is more particularly marked in the carnivora: Dulong found in the course of his experiments that, in this class of animals, the amount of oxygen absorbed is sometimes double that of the carbonic acid formed.

Dulong and Despretz have proved beyond question that the exhaled air contains a larger proportion of nitrogen than the atmosphere. This excess of nitrogen is furnished by the food, and may, perhaps, also proceed from the nitrogen which we presume to exist in the stomach and intestines, as residue of the air that has been introduced into these viscera with the food. It might be objected to this, that the proportion of nitrogen in the atmosphere remains invariably the same; but this objection is removed by Boussingault's observation, that some plants absorb nitrogen.

The air dissolved in the water suffers the same changes in the respiratory process of the fishes. Common water and sea water hold a certain quantity of atmospheric air in solution, which may be disengaged by ebullition, or by bringing the water into contact with other gases, or may be withdrawn by means of the air-pump.

The experiments of Morren have shown that common water and sea water hold likewise a certain amount of carbonic acid in solution, which amount seems to vary in an inverse ratio to that of the oxygen present at the same time. The proportion of oxygen found in a certain definite volume of air dissolved in the water exceeds that in which this gas is found in the atmosphere. Humboldt and Gay-Lussac found found 32 per cent. of oxygen in the air withdrawn from spring water. According to Morren, the proportion of oxygen present in the air in sea water seems to vary in the different hours of the day—attaining its maximum at noon; the proportion of carbonic acid seems to vary in the inverse sense. Fishes absorb a portion of this dissolved oxygen, and yield, in return carbonic acid, which is absorbed by the water. The respiration of these animals, therefore, can be maintained only by the constant solution of fresh particles of atmospheric air in the water. Fishes die speedily in water covered with a layer of oil, and in water from which the air has been expelled by ebullition. A large torpedo was kept for forty-five minutes in about one gallon of water of the Adriatic, taken near the coast; the air in this water was found to be composed of,

10 of carbonic acid.
60·5 of nitrogen,
29·5 of oxygen.

The torpedo was frequently excited, and gave accordingly a great many shocks, and died speedily. The air in the water was, upon analysis, found to contain thirty-six per cent of carbonic acid, and sixty-four per cent. of nitrogen; every trace of the oxygen had consequently disappeared.

Experience has proved that these changes in the composition of the air are not effected by the lungs alone, but that the whole surface of the animal body produces similar modifications, though in a different degree. Frogs deprived of their lungs, or prevented in some other manner from breathing, continue to live; and, when placed in that state in a certain definite amount of air, it will be found after some time, that a portion of the oxygen has disappeared, and is replaced by carbonic acid. Humboldt and Provençal saw tenches live without great sufferings, although their head and gills were kept above water. Spallanzani and Edwards have proved, moreover, that frogs could not exist without cutaneous respiration. It has been observed that frogs deprived of their lungs exist for several days, whilst, on the contrary, the removal or varnishing of the skin kills them in the space of a few hours. Sorg kept one of his arms immersed for four hours in oxygen gas; he found, after the lapse of that time, that about two-thirds of the gas had disappeared. Davy injected air into one of the pleura of a dog: upon analyzing the injected air, a short time after, he found only slight traces of oxygen left in it.

That the venous blood is changed in the lungs during the act of respiration into arterial, and its dark colour to a fine vermilion, and that the interruption of this transmutation of the blood causes speedily death, are facts universally known.

The inspiration of nitrogen gas, pure or carburetted, or sulphuretted hydrogen, carbonic oxide, carbonic acid, or binoxide of nitrogen (nitrous gas), is more or less speedily followed by death; the blood, in such cases, is found black throughout the body. With oxygen and protoxide of nitrogen, respiration may be maintained for a short time—indeed, with oxygen this function might be maintained much longer, were it not that the inspiration of that gas augments and accelerates the respiratory movements and arterial pulsations to an extent incompatible with the continued normal performance of the respiratory and circulatory functions. Protoxide of nitrogen likewise accelerates the respiratory movements; the cerebral functions become disturbed, and a kind of intoxication supervenes.

Having thus briefly discussed the phenomena of respiration, we are naturally led to the question: are these phenomena effected exclusively and alone in living bodies?—or do changes analogous to those observed in the act of respiration continue for some time to take place between venous blood removed from the living organism, and the oxygen of the atmosphere? These questions have long been solved by actual experiments, and the purely physico-chemical nature of the respiratory phenomena (modifications of the blood and of the inhaled air) has been proved beyond controversy.

But what is the nature of the change which the venous blood suffers by the action of the atmospheric oxygen? What are the laws that preside over this change? In our endeavours to solve these questions we must have recourse to the fine researches of Magnus.

If blood drawn from a vein of an animal be caught in a receiver containing pure hydrogen gas, and agitated with this, a certain amount of carbonic acid will be found in the receiver, which certainly cannot proceed from any chemical combination of the hydrogen with the elements of the blood, nor can we imagine it to have been expelled from the blood by the affinity of the hydrogen for the body with which the carbonic acid might be supposed in combination in that fluid. It is, therefore, evident that the blood contains carbonic acid in solution, and that the disengagement of this gas by the hydrogen is simply owing to the action which one gas exercises upon another gas of a different nature dissolved in a liquid. If the same operation be performed with arterial blood, the quantity of carbonic acid obtained will be found less than in the case of venous blood. The same results will be obtained if nitrogen be substituted for the hydrogen—the quantity of carbonic acid obtained from venous blood being double that obtained from arterial blood. The application of this method disengages not only the carbonic acid, but also the oxygen and nitrogen, which the blood holds in solution. The following table shows the numeric results (in cubic centimètres) obtained by Magnus in his experiments upon this subject, relative to the respective amount of the gases which the blood holds in solution:—(Magnus operated with a particular apparatus which enabled him to create a vacuum above the blood.)

Arterial blood of a horse, 125CC, yielded	9·8 of gas	5·4 of carbonic acid, 1·9 of oxygen, 2·5 of nitrogen.
Venous blood of a horse, 205 CC, yielded	12·2 of gas	8·8 of carbonic acid, 2·3 of oxygen, 1·1 of nitrogen.
Arterial blood of a horse, 130 CC, yielded	16·3 of gas	10·7 of carbonic acid, 4·1 of oxygen, 1·5 of nitrogen.
Venous blood of a horse, 170 CC, yielded ..	18·9 of gas	12·4 of carbonic acid, 2·5 of oxygen, 4·0 of nitrogen.
Arterial blood of a calf, 123 CC, yielded ..	14·5 of gas	9·4 of carbonic acid, 3·5 of oxygen, 1·6 of nitrogen.
Arterial blood of a calf, 108 CC, yielded	12·6 of gas	7·0 of carbonic acid 3·0 of oxygen, 2·6 of nitrogen.
Venous blood of a calf, 253 CC, yielded	13·5 of gas	10·2 of carbonic acid, 1·8 of oxygen, 1·5 of nitrogen.
Venous blood of a calf, 140 CC, yielded .. ..,	7·7 of gas	6·1 of carbonic acid, 1·0 of oxygen, 0·6 of nitrogen.

Taking the average of these numbers, and, cal culating them upon 100 parts of blood, we find that

100 CC of arterial blood contain ..	10·4276 of gas	6·4967 of carbonic acid 2·4178 of oxygen, 1·5131 of nitrogen.
100 CC of venous blood contain	7·6825 of gas	5·5041 of carbonic acid 1·1703 of oxygen, 1·0081 of nitrogen.

It would be highly desirable that these experiments of Magnus should be repeated and extended still further, more especially with a view to arrive at the absolute quantities of the several gases which the blood holds in solution.

The following conclusions drawn from the results of Magnus's experiments are, however, even as the matter stands at present, of the highest interest for the theory of respiration:—

1. The arterial blood contains a larger amount of gas than the venous blood.

2. The amount of oxygen found in arterial blood is double that found in venous blood.

3. The proportion of the oxygen to the carbonic acid is, in arterial blood = 1 : 3, and nearly like 1 : 2; whilst in venous blood it is only like 1 : 4, and even as little as 1 : 5.

The transformation of the venous into arterial blood is effected in the lungs where the atmospheric air and the blood are brought into almost immediate contact with each other, being separated only by an exceedingly thin membrane. It is essential now to prove that the reciprocal action of the gases, and the change of colour which the blood suffers in the act of respiration, take place likewise, and in the same manner, through the layers of membranes, without the slightest possible intervention of the vital force, or, in other words, out of the living organism.

Gases enclosed in bladders escape speedily through the pores of the latter, and are replaced by atmospheric air. Were the volume of the latter not so infinite as compared to that of the gas within the bladder, the exchange between the two would be suspended after a certain time, and both within the bladder and without would be found a mixture of the two. Place a bladder, filled with water slightly acidulated with carbonic acid, under a glass jar filled with hydrogen, oxygen, or nitrogen, and, after the lapse of some time, you will find that a portion of the carbonic acid has escaped from the water in the bladder, and that a portion of the gas originally in the jar has penetrated through the bladder and is now held in solution by the water.

(a) One litre is about 50¼ cubic inches Par.; the English quart about 56½ Par. cubic inches.

Generally speaking, two gases, separated by a membrane, and of which the one is free or dissolved in a liquid, exert a reciprocal action upon one another, and intermix in definite proportions.

It would be highly desirable that a series of experiments should be made, with a view to determine the laws of this phenomenon, regard being had to the respective nature and density of the gases, and to the nature of the interposed membranes. The result of some such experiments, made by the author, would lead to the assumption of a phenomenon analogous to that of endosmosis in this interchange and intermixture of gases. The author took the lungs of a recently-killed lamb, withdrew the air from them by suction as carefully and completely as possible, filled them partially with oxygen gas, tied the trachea tightly, and placed the lungs thus prepared under a jar filled with carbonic acid and inverted over water; after the lapse of a short time, the lungs were seen to swell and distend as far as the capacity of the jar would permit. The gas was analyzed after the experiment, and it was found that a portion of the carbonic acid had penetrated into the pulmonary cells, and that oxygen had been disengaged from them, but not in equal volumes—the amount of the carbonic acid introduced into the pulmonary cells exceeding that of the oxygen disengaged from them. In one experiment of this kind, which was continued for four hours, the author found the mixture in the lungs to consist of two-thirds of oxygen and one-third of carbonic acid, and the mixture in the jar of one-fourth of oxygen and three-fourths of carbonic acid.

Soap bubbles filled with atmospheric air, or with hydrogen gas, and dropped into carbonic acid, increase in bulk; and it is a curious fact that, notwithstanding their dilatation, they sink to the bottom of the jar containing the carbonic acid. The excess of carbonic acid that penetrates into the bubble causes the latter to increase in bulk on the one, and in weight on the other hand--balancing thus the relative loss of weight attendant upon the increase of volume; at the same time the layer of water forming the envelope of the bubble dissolves a portion of the carbonic acid, and thus again increases the weight of the bubble.

The author filled a bladder with oxygen, and placed it subsequently into carbonic acid, taking care to keep the bladder perfectly dry; the bladder did not distend; after the lapse of some time, however, it was found that the interchange between the two gases had taken place, but in equal volumes. In another experiment, the author filled a lung with carbonic acid as completely as he could effect, and placed it subsequently into oxygen; the result was collapse of the lung and intermixture of the two gases, but the amount of carbonic acid that escaped from the lung was more considerable than the proportion of oxygen that entered it. Thus it seems evident that, in all these cases, we are to take into account—besides the reciprocal action of the two gases separated by the membrane—the water bathing the latter, since this dissolves a certain amount of carbonic acid; the acid liquid, thus formed, finds itself on one side in presence of a gas different from that which it holds in solution, and which acts upon the latter as it would *in vacuo*. We might, accordingly, account for the excess of carbonic acid introduced into the soap bubble and lungs, by attributing it either to a species of gaseous endosmosis, or to the solution and subsequent exhalation of this gas. To elucidate this question, experiments should be made with gases that have no affinity for water. The laws discovered by Graham, regarding the diffusion of gases in the air, bear also upon this subject. Graham has established that the power of diffusion of gases in the air, when separated from the latter by a membrane or a layer of mortar, is proportional to the square roots of their respective densities. The recent researches of Valentin and of Brunner tend to show that the same la[w] holds good in the phenomenon of respiration.

Spallanzani, Nysten, Martigny, Edwards, ex[pelled] the air from the lungs of frogs, by pressure upon the chest and abdomen of the animal; this operation was, of course, performed with the greatest care and caution, as are all the experiments made by these scrupulous observers. The lungs thus voided, some of the animals were placed in hydrogen, others in nitrogen gas. Dogs, rabbits, and a number of other animals were subjected to the same process, either with voided lungs, or lungs filled with artificial air. The results were invariably the same: the hydrogen or nitrogen gas was absorbed, and carbonic acid exhaled in its place; and, besides this, nitrogen, in all cases where the animals had been placed in hydrogen. A mixture of oxygen and nitrogen, containing the former element in larger proportions than it exists in the atmosphere, was introduced into lungs, previously voided, by means of a syringe. The amount of carbonic acid inhaled was found to be proportionally larger than is the case in the respiration of atmospheric air. Frogs emit carbonic acid in hydrogen and in nitrogen, even though deprived of their lungs.

These facts, taken collectively, lead to the following conclusions:—

1. That the respiratory function is a purely physico-chemical phenomenon.

2. That the gases which the venous blood holds in solution are liberated by the absorption of other gases.

3. That a portion of the carbonic acid of the venous blood is exhaled by the absorption of the atmospheric oxygen operated by this fluid.

4. That the carbonic acid exhaled, or, at all events, the greater portion of it, is not formed in the lungs, but exists in solution in the venous blood, and is liberated during the act of respiration, by the agency of the oxygen introduced in its stead, in the same manner as it is liberated by the agency of the nitrogen or hydrogen in the artificial respiration of the latter gases.

5. That it results from Magnus's experiments, that the five pounds of blood passing through the lungs every minute hold an amount of carbonic acid in solution nearly the double of that which is exhaled in the same period of time.

DUMAS ON ORGANIC CHEMISTRY.

No. XXV.

(Continued from page 369.)

ON THE MILK—(*continued*).

MM. Boussingault and Le Bel have, in their turn, made some experiments upon the milk of the cow; and they appear to have drawn a conclusion, that the nature of the aliments consumed does not exercise any very marked influence upon the quantity and chemical constitution of the milk, provided care be taken to give to the animals equivalent nutritive quantities of the different kinds of food. The following table presents the result of their experiments:—

Now, do the above aliments contain the principles which are found in the milk? There is no doubt but that the saline matters, which exist in this liquid, are carried directly to it by the drinks and by the food. As to the sugar of milk, it may arise from the saccharine, amylaceous, or gummy matters, which enter so largely into the food of the herbivora. We have seen that, under the influence of a purely animal regimen, the lactose disappears, or, at least, it is produced in a perfectly inappreciable quantity. The origin of the caseine is equally apparent: this principle results from the transformation of the albuminous matters contained in the aliments, and which are capable of undergoing so many and such ready isomeric modifications.

It is not so easy to state the source of the butter contained in the milk: for, if it is evident that the various fatty matters belonging to the aliments invariably concur in a direct manner to the formation of butter, it is also certain, according to the recent experiments of M. Boussingault, that the influence of the aliments is not confined to this limited action; but that, by a principle analogous probably to that which we observe in fermentations, they determine a more abundant formation of the fatty matter at the expense of some of the bodies which they contain. M. Boussingault thinks that the fatty principles naturally contained in the aliments exercise over the production of the butter a double influence, not only by concurring of themselves to its formation, but also by favouring those metamorphoses, in consequence of which the saccharine, gummy, or amylaceous matters are capable of being partially transformed into fat.

The diet is not the only circumstance capable of influencing the production of the milk. Hygienic conditions, age, race, &c., may exercise over the same species of animal a very marked effect as regards the abundance and quality of this secretion. For agricultural purposes, sound animals, or such as are of good breed, are always preferable, although in some cases it may be difficult to foretel what individuals will furnish the best milk, under the same conditions of food, &c.

The moral agencies have a very marked influence upon the secretion of milk: fright, excess of joy or anger, may interfere very injuriously with, and in some cases altogether check this secretion. It is especially with women that these causes have the greatest influence, in whom the milk will, under such circumstances, sometimes become positively injurious to the young one. Examples of this kind may be found in animals, but here they are much more rare.

The quantity of milk in the cow, setting out from the period of parturition, may be said to augment for the first month or six weeks; after which it gradually diminishes. We have merely to glance over the table given by M. Boussingault

Composition of the Milk.

No. of [days] since p[artu]rition	[Milk] given [in 2]4 hours.	[Sol]id matter [in] 100 parts of mil[k]	Aliments received, equivalent to fifteen kilogrammes of hay.			Sug[ar of] milk			
1	5·0	21·6	Potatoes, hay	15·1	2·6	3·6	0·3	78·4	Milk taken after parturition.
13	7·5		Do.	,,	,,	,,	,,	,,	
24	10·6		Hay, green trefoil	3·0	3·5	4·5	0·2	88·8	
35	12·0		Green trefoil	3·1	5·6	4·2	0·3	86·9	
200	5·6		Hay	3·0	4·5	4·7	0·1	87·7	
207	6·0		Turnips	3·0	4·2	5·0	0·2	87·6	
215	5·6		Beetroot	3·4	4·0	5·3	0·2	87·1	
229	5·0		Potatoes	3·4	4·0	5·9	0·2	86·5	
240	3·6		Hay						
270	3·4		Potatoes						
290	3·5		Artichokes	3·3	3·5	5·5	0·2	87·5	
302	2·8		Hay and oil-cakes.	3·4	3·6	6·0	0·2	86·8	Ration, 1½ equivalent.
			Influence of green food.						
176	9·3		Potatoes, hay ..	3·3	4·8	5·1	0·3	86·3	
182	8·9		Hay, green trefoil ..	4·0	4·5	4·0	0·3	87·2	
193	9·8		Green trefoil ..	4·0	2·2	4·7	0·3	88·8	
204	7·8		Trefoil in flower ..	3·[illegible]	3·5	5·2	0·2	87·4	

to be convinced of this fact. Neither the season of calving, nor the quality of the food, provided always that it remain equivalent to fifteen kilogrammes of hay, in any way modify the abundance of the secretion.

The chemical constitution of the milk ranges within very narrow limits; in fact, in the table already mentioned, we find that it invariably contains close upon twelve or thirteen per cent. of solid matters. The caseum varies but slightly, although we may perceive that, after the secretion of the colostrum has ceased, this principle presents a trifling augmentation. The butter offers marked variations; as to the sugar, it appears to augment with great regularity, in proportion as we recede from the period of parturition.

M. F. Simon has arrived at analogous results by analyzing the milk of the human female; only, in the latter, the sugar diminishes the further we advance from the time of childbirth.

The following table gives the result of his analyses:—

Dates.		Density.	Water.	Solid residue.	Caseum.	Sugar.	Butter.	Salts.
August	31	1·0316	873·2	126·8	21·2	62·4	34·6	1·92
September	7	1·0300	883·8	116·2	19·6	57·6	31·4	1·66
„	8	1·0300	899·0	101·0	25·7	52·3	18·0	2·00
„	14	1·0300	883·6	116·4	22·0	52·0	26·4	1·78
October	27	1·0340	898·2	101·8	43·0	45·0	14·0	2·74
November	3	1·0320	886·0	114·0	45·2	39·2	27·4	2·87
„	11	1·0345	914·0	86·0	35·3	39·5	8·0	2·40
„	18	1·0330	880 6	119·4	37·0	45·4	34·0	2·50
„	25	1·0334	890·4	109·6	38·5	47·5	19·0	2·70
December	1	1·0320	902·0	98·0	39·0	49·0	8·0	2·08
„	8	1·0330	890·0	110·0	41·0	43·0	22·0	2·76
„	16	1·0344	891·0	109·0	42·0	44·0	20·0	2·68
„	31	1·0340	861·4	138·6	31·0	52·0	54·0	2·35
January	4	1·0320	873·6	126·4	40·0	46·0	37·0	2·70

M. Peligot directs attention to the influence which weaning exercises over the qualities of the milk: he concludes, from his experiments, that the milk becomes proportionally poorer, as the interval since the last draught is more lengthened Annexed are some analyses, which he made on this subject, upon the milk of the ass:—

	One hour and a half after suckling.	Six hours after.	Twenty-four hours after.
Butter ..	1·55	1·42	1·23
Sugar of milk	6·65	6·40	6.33
Caseum ..	3·46	1·55	1·01
Solid matters	11·66	9·37	8·57
Water ..	88·34	90·63	91·43
	100·00	100·00	100·00

	Six hours after suckling.	Twelve hours after suckling.
Butter	1·73	1·51
Sugar of milk ..	7·00	6·70
Caseum	1·25	1·10
Solid matters ..	9·98	9·31
Water	90·02	90·69
	100·00	100·00

Not only will the milk differ in its composition according to the length of time elapsed since the last suckling, but also it may present, on analysis, sensible variations, according as it has been taken at the commencement or towards the end of the draught. Thus, after remaining nine hours without suckling, the milk of the ass yielded by analysis the following results, on dividing the fluid drawn into three portions:—

	I.	II.	III.
Butter ..	0·96	1·02	1·54
Sugar of milk	6·50	6·48	6·45
Caseum ..	1·76	1·95	2·95
Solid matters	9·22	9·45	10·94
Water ..	90·78	90·55	89·06
	100·00	100·00	100·00

Parmentier and Deyeux have likewise arrived at similar results, by analyzing the cream taken from different portions of milk. It is, as we see, chiefly in the butter and the caseum that these variations are found.

M. Quévenne has confirmed this result, by determining the volume of the cream, the density of pure milk, and that of the same fluid when skimmed. The following are the results of his experiments.

Acid milk taken eleven months after parturition:—

—	Density of the milk.	Density of milk skimmed.	Cream obtained in 4 hours
Commencement of the draught	1·0326	1·0352	5
Middle of ditto.. ..	1·0316	1·0362	6
End of ditto	1·0296	1·0342	12

Alkaline milk taken ten months after parturition:—

Commencement of the draught ..	1·0290	1·0322	
Middle of ditto.	1·0297	1·0347	15
End of ditto	1·0274	1·0337	21

We shall presently find, that the composition of the milk may change according as it is taken from a healthy or from a diseased teat.

Many chemists have employed themselves in analyzing the milk; of these some have adopted different methods. M. Berzélius analyzed separately the cream and the skimmed milk; this plan has, however, been abandoned. M. Peligot employs a very simple process, and one which seems to give pretty accurate results; it consists in evaporating, in a water-bath, a certain quantity of milk, the density and volume of which have been previously determined. When the residue ceases to undergo any further reduction, it is to be carefully weighed; we then treat it by a mixture of alcohol and ether, which removes all the fatty matter. The next step consists in drying the residue, and once more weighing it, when the difference of the two weights gives the amount of butter. By washing in cold water, the caseum is left behind, whereas the saccharine matter and the soluble salts are removed, and may be subsequently separated by means of alcohol, which menstruum does not dissolve the sugar of milk.

This process presents one inconvenience: a little caseum is invariably taken up by the cold water; this amount appears to be greater with the milk of the human female than with that of the cow. We cannot, therefore, affirm that this proceeding gives exact results; nevertheless, it has rendered considerable service; and, if it has at the present day been nearly abandoned, this is chiefly on account of the slowness and difficulty experienced in evaporating the milk to dryness, and also because the caseum becomes somewhat altered and partially soluble.

M. Simon desiccates the milk, weighs the residue, pulverizes it, and treats a fixed quantity, at three separate intervals, with five or six times its volume of sulphuric ether: this isolates the fatty matter. He then digests, for a certain time, the residue, freed from fat, in a little hot water. The substance thus obtained is afterwards thrown into a larger quantity of water. If operating on the milk of the cow, this becomes in chief part dissolved; whereas a considerable residue of insoluble caseine remains from the milk of the human female. The solution is now evaporated to a syrupy consistence, taking care properly to regulate the temperature, and then the whole is treated by ten or twelve times its volume of alcohol at 0·85. The caseine becomes precipitated; but, as it still retains some sugar, it is advisable to wash it in water and in alcohol. Lastly, he dries it thoroughly and weighs it.

The alcoholic solutions carry off the sugar and the greater part of the extractive matters, which it becomes very difficult to separate. We may, however, succeed in this, by dissolving the impure sugar in a small quantity of water, and then precipitating it by pure alcohol. The alcohol retains the extractive matters and a little sugar. This treatment may be repeated so as to effect a more complete separation of these principles. The amount of the salts may be ascertained by incinerating a portion of the desiccated milk.

When the milk contains albumen, we determine its quantity by a separate mode of treament; that is to say, by coagulating it by heat, then washing the precipitate in dilute alcohol, and subsequently in ether.

M. Quévenne analyzed the milk by precipitating the caseum by acetic acid, and washing the precipitate in pure water; after drying it, he treated it by a mixture of alcohol and ether. The serum is then evaporated to dryness. This process may be effected with rapidity, but it is apt to be incorrect in its results.

M. Lecanu prefers the coagulation of the milk by dilute alcohol. He thus separates the caseum, which he frees of all fatty matter by means of ether. The evaporated liquor furnishes the sugar of milk and salts, which are to be separated by means of cold water and pure alcohol.

M. Haidlen has, more recently, reduced the milk, by coagulating it by means of sulphate of lime. For this purpose, we are to pour the milk into a clean glass vessel, containing about one-fifth part of hydrated sulphate of lime, previously dried at a temperature of 100° C.; by applying a gentle heat, the milk becomes coagulated. On evaporating it to dryness in a water-bath, we obtain a mass readily reducible to a fine powder, which is to be acted on successively by ether and by alcohol; the ether removes from it the butter, and the alcohol dissolves the sugar and soluble salts, without touching the caseine which is perfectly coagulated. The residue contains a caseate of lime with an excess of gypsum. By deducting from the weight of this residue that of the sulphate of lime employed, we obtain the amount of caseine.

But we cannot make an exact analysis of the milk by any one of these processes. In evaporating the milk *en masse*, or the serum, by means of heat in the open air, the extractive matter becomes greatly altered. These operations should, therefore, be performed *in vacuo*. Moreover, to determine the amount of butter, it is better to boil the milk, having previously strongly acidulated it by means of acetic acid; then, to allow it to cool, and to agitate it twice or thrice with an equal volume of ether, which removes the butter. When we wish to ascertain the quantity of soluble caseum, we should saturate the milk by chloride of sodium, and subsequently filter it. The limpid liquor, being coagulated by acetic acid or by alcohol, will furnish the caseum. As to the salts and sugar of milk, they will be found in the serum, freed from its butter and caseum by the ordinary methods, and then evaporating it to dryness *in vacuo*. By this means, we obtain a perfectly colourless residue.

French Medical Appointments.—M. Foullivy, inspector-general of the Naval Board of Health, is appointed to take a part in the high commission of Medical Education.

M. Villeneuve has been recently appointed medical director of the Lunatic Asylum of Dijon, in the place of M. Dugast, who has resigned.

ORIGINAL CONTRIBUTIONS.

OBSERVATIONS ON THE USE OF MERCURY IN SOME FORMS OF PRIMARY AND SECONDARY SYPHILIS.

By HENRY SMITH, Esq.,
Late House-Surgeon to King's College Hospital.

In my papers lately published in the *Medical Times*, on the Action of Mercury in Inflammation, I made allusions now and then to its use in the various morbid affections caused by the poison of syphilis; but refrained from dwelling upon that point at any length, as I considered it might well be made the subject of some future and distinct inquiry. I have no intention, however, of going at all fully into the old and hackneyed subject of the use and abuses of mercury in syphilis; but merely wish to make a few remarks on some points connected with its administration in this disease, which are the result of the experience of no inconsiderable number of venereal cases, and of much thought and inquiry on the subject. When asked a short time ago, by an old and retired practitioner, whether we had any regular period of time for continuing mercury in syphilis; and, again, when in consultation on a case of secondary syphilis, attended with severe irritative fever, it was proposed to rub into the thighs immediately a quantity of mercurial ointment, I could not help thinking that, however much improvement has taken place in the employment of mercury, at the same time there are unscientific and erroneous notions respecting its use still clinging closely to the minds of some who have been educated in a particular doctrine, and have not had the time or inclination to inquire into the points of that doctrine, as to whether they may be acted upon or not.

Much discredit has, I believe, been brought upon this remedy in consequence of a neglect of those rules which science, reason, and experience suggest to us in the administration of mercury, and which must be attended to, should we expect to gain a safe and successful end.

There are many cases of primary and secondary syphilis, occurring in particular constitutions, which demand great care and judgment in their treatment. A man, who is broken down in health from various accidental causes, gets a venereal sore. He, perhaps, has been in the habit of taking little animal food, consumes a vast quantity of gin, and is exposed to all sorts of temperature, and in this condition gets inoculated with a dreadful poison; he is weak, pale and thin; he is feverish; his pulse is frequent and compressible; and the sore has an unhealthy appearance. This is a picture of many of the cases which are daily seen amongst the poor of London, and these are the cases amongst which we occasionally see the most deplorable ravages committed.

The principles of the treatment in such cases differ in this respect from those which should be adopted in cases where the infection is received into a sound constitution and healthy frame, namely, that whilst in the latter case we extirpate the poison, without depressing the powers of life, or doing any injury by the remedy we use, in the former we extirpate the poison, and at the same time should do our best, not only to keep up but to *restore* the strength of the system, and revive its already depressed energies.

Mercury undoubtedly is the remedy in either case; and the remedy which I believe most English surgeons consider it a point of conscience to give; but the manner in which it is given should differ; and additional remedies are required in such cases as I have mentioned.

If such a case presents itself, it would be well to proceed cautiously with the use of mercury; some preparatory measures being premised, such as a warm bath, if possible, and a free unloading of the bowels, and a suppression of febrile symptoms. If the system is by these measures brought into a less morbid state, we shall be able to cure the patient with less mercury, and I believe that should be an object in the treatment. The mercury should be commenced in small doses, and conjoined with some tonic which will serve as a kind of antidote against the depressing influence of mercury alone; and no tonic will serve better this purpose than quinine: it will render the system more susceptible of the influence of mercury, and at the same time make it proof against the injuries which in such a state the remedy and disease may alike produce. The preparation of mercury which I believe to be the best, is either the mercury with chalk, or calomel. The former is mild, unirritating, and easy of control; the latter is powerful, and at the same time safe. The former, however, will be the best, as it is the mildest, and yet I believe every good may be obtained from it. My friend Mr. Haynes Walton, who has the opportunity of using a considerable quantity of mercury in venereal affections of the eye, at the Central London Ophthalmic Institution, never employs any other preparation than this, and he assures me it answers every purpose. From two grains and a half to three grains, made into a powder with one grain and a half of quinine and a quarter of opium, may be given twice a day; or, if calomel is employed, a less dose may be given—from two to four grains daily.

At the same time the patient should be allowed to take solid meat, and milk. If the system is not very rebellious to the action of mercury, we shall find that in a short time (three or four days, perhaps, or a week) it will become affected, and that too without any great disturbance, but fairly and easily: the foundation of the cure will thus be laid.

The poison of syphilis has against it, in the blood, a more powerful antagonist; and the struggle for the mastery, one over the other, will take place and be completed without injury to the system, in consequence of the support which the more powerful has joined with it.

It will not do to give mercury in large doses, in a routine way, and without other suitable measures, in such cases as these; but I believe it is done daily; and I believe that a great number of those deplorable cases of syphilitic disease which are now occasionally seen, are owing to a carelessness in its use, as well by the educated practitioner as by those unscrupulous and rapacious quacks who fix like vultures on their prey, and feed upon the diseased and decayed bodies of their unsuspicious victims.

It is likely, in some cases I have been speaking of, that mercury given in this careful manner will not do its duty; the system will not get affected, or a train of symptoms will arise which will not warrant us to continue in its use. If the patient becomes weaker, gets feverish, and the sore begins to spread to any extent, and the mouth is not affected, there must be something wrong. It would be well to suspend its use for a time, and endeavour to get the system into a more tractable state by remedies adapted to the occasion, and then carefully commence the employment of mercury again. But great care is necessary, in some of these cases, lest phagedenic ulceration should be brought about, as will happen in an injured constitution, on incautiously receiving mercury when not prepared for it. I have lately had under my observation a deplorable case of this kind, where, in a weak constitution, mercury was taken to a considerable amount, and rapid ulceration took place over various parts of the body, with the loss of nearly the whole penis.

There are cases of syphilis occurrring in individuals of a naturally scrofulous habit, who are otherwise healthy; these demand as much caution in the use of mercury as those I have been treating of.

In the lower classes of life, gin and want of animal food; in the higher classes, a more refined dissipation, are powerful allies to the poison already imbibed. There are some, I believe, who would not dare to give mercury to a scrofulous patient labouring under syphilis; but I believe it may be employed without injury, if due care is taken; and this may be gained by combining the mercury with quinine, in the same manner I have before mentioned; and, other auxiliary measures being used, a cure may be effected safely and speedily. I have lately had a good opportunity of testing this in the case of a gentleman of good health and regular habits, but of a scrofulous family. Great irritation and depression ensued upon the introduction of the venereal poison into the blood, so that he was obliged to keep his bed for some days. After some preparatory measures, mercury in conjunction with quinine was given, and in a very short time the system was fairly and comfortably affected, and the symptoms yielded rapidly without any injury to the constitution; but yet the rapid emaciation and diminished power which followed on the taking of mercury showed that, had not great care been taken, the remedy would have been as noxious as the disease; on the other hand, the cleaning of the tongue and the return of appetite, and loss of fever, told how surely and safely the combined remedies were doing their work.

There are many cases of secondary syphilitic affections which puzzle practitioners very much, and prove most tedious and refractory in their treatment. Mercury is given, the system is affected, the constitution gets disordered, but the disease yields not. Iodine is tried with some success at first, but the medicine loses its influence and the disease persists, or it vanishes and returns again. Many such cases turn out like this, whatever is done, and perhaps some accidental remedy completes the cure; but I believe much may be done by the careful and judicious use of mercury, combined with constitutional treatment by other remedies. Let us take, for instance, a case of iritis.

A wretched, gin-drinking costermonger gets an attack of iritis. He comes with his eye inflamed, the iris studded with nodules of lymph; his pulse is beating from 100 to 120, his tongue is furred, and he has no appetite. Mercury is given to him, and nothing else; his mouth becomes very sore, but his health gets more and more out of order; and, on looking at his eye, there is still the lymph on the iris, the great vascularity of the conjunctiva remains. The treatment is changed, but the mercury is not thrown aside, but it is given in small doses with quinine; the man is told to take some solid food and milk, and not to expose himself to variations of temperature. In a short time a change takes place, his health improves, and his eye begins to mend, and he gets cured without injury to his constitution.

Who has not seen rheumatic iritis again and again dissipated for a time by mercury, when given alone; and again and again recur, and not be entirely removed, until some other aid is given? Obstinate affections of the throat sometimes demand the assistance of the surgeon, and in these cases much discrimination is required to know at what period and in what manner to employ mercury. These generally appear in those who have been long labouring under venerial poison, and who are considerably injured in health. The iodide of potassium, which is found to be so invaluable a remedy in some cases of secondary syphilis, will be totally powerless in these instances; there is too much of the poison in the system to be exterminated by this drug alone. The surgeon may attempt to heal the ulceration by means of fumigations, but he will find this inadequate; after trying various measures for a time, recourse is had to mercury, which he was afraid to give at an earlier period; and this, in conjunction with tonic medicines and a nourishing regimen, brings about a cure.

There are certain affections which take place after an attack of syphilis in an unhealthy individual, the true nature of which the surgeon has great difficulty in detecting, and in finding out whether they depend upon the poison of syphilis or of mercury. I am speaking more particularly in reference to those cases where the patient has been long labouring under the disease, has either been taking large quantities of mercury at his own suggestion, or has fallen into the hands of some

-eless practitioner or unmerciful quack; and consequently no accurate history can be learned. But, in many cases, sufficient can be learned to show that these symptoms are referrible to a copious and careless use of mercury; whilst, on the other hand, they may depend upon a too limited use of it. In the former cases we shall find the throat attacked, the cartilages of the nose diseased, and rapidly spreading ulcerations of the integument of the legs and chest; at the same time the general health is terribly shattered, and the whole system is prostrated by the action of a compound poison. In the latter cases the periosteum is attacked, especially that of the skull; and the skin is affected in the shape of papulæ or scaly spots; but the general health is not so much pulled down. The treatment in these cases should consist in giving mercury with iodide of potassium; but in the former, mercury must be studiously avoided, as it will only aggravate the existing evil; and we should have recourse to a general tonic and stimulating plan; the daily use of sulphur, tepid bathing, if the patient be not too weak.

There are many other points worthy of consideration connected with this interesting subject; but I shall now conclude, having strictly confined myself to that part which the heading of the paper indicates; and having endeavoured to show that in some forms of syphilis, extreme caution is necessary in the administration of mercury; that this remedy should be given in conjunction with general tonic medicines; and that its action will be rendered more safe and certain thereby; and, moreover, that a routine treatment will not do in syphilis, and that there is no disease which so much requires its treatment to be based upon scientific principles, and not upon a foolhardy empiricism.

July 3.

FOREIGN PRACTICE.

Reported for the MEDICAL TIMES by ALFRED MARKWICK, Esq., Surgeon to the Western German Dispensary, and formerly Externe to the Venereal Hospital, Paris, &c.

A CASE OF VERTICAL (a) OR DE CHAMP DISLOCATION OF THE PATELLA, WITH OBSERVATIONS, BY M. PAYEN, M.D.

This species of displacement—which was first described by Moscati, illustrated by two cases by Monteggi, (b) called in question by Manne and Léveillé, considered impossible by Boyer, and which has been passed over in silence by Delpech, A. Cooper, Samuel Cooper, and Chelius—has been investigated by M. Malgaigne, in an excellent memoir, "Sur la Détermination des Diverses Espèces de Luxations de la Rotule." (c)

Owing to its rarity, the recital of another case may be interesting:—

M. D., a strong robust man, about fifty years of age, was walking on the snow on the 15th of last December, when his right foot slipped backwards, thereby giving to the body a rapid rotatory movement in the same direction. Being on the point of falling, M. D. seized the railings that were within his reach, and thus immediately arrested, for the upper part of the body, the impulsion, which expended itself on the lower extremities. The violent torsion he thus experienced occasioned him very acute pain in the right knee.

It is quite certain that M. D. neither fell nor struck himself, as there was no mark upon the snow, and his clothes were not soiled. Persons came to his assistance and supported him, when he made a few steps to enter his house.

I was immediately sent for, and on my arrival found the leg slightly flexed upon the thigh, the knee extremely painful, and strangely deformed. The patella was placed edgeways in front of the condyles of the femur, so that its external border, from having become anterior, raised the skin; its cutaneous surface was directed inwards and *rather backwards*, and its articular suface outwards and *rather forwards*, while its internal edge rested firmly on the anterior part of the extremity of the femur, a little external to the middle line; the muscles of the thigh were powerfully contracted, the slightest movement was impossible, and every effort caused very great pain.

The patient having been placed in bed, with the limb resting on a mattress, I attempted to push the patella backwards by pressing the internal border from without inwards with my thumbs, whilst with the other fingers I brought the external border from within outwards, but without success. I then flexed the thigh upon the pelvis, the leg being extended, as recommended by Valentine, and again tried, but with no better result. I then had recourse to the very rational method deduced by M. Malgaigne from his researches, (a) and which M. Coze (b) had previously successfully employed in a case of *de champ* dislocation—viz., to forced flexion of the leg. But the first attempts occasioned such violent pain, and the contraction of the muscles of the thigh was so energetic, that I considered this mode as impracticable, and that I ought to abandon it.

Convinced, from the reasons given by M. Malgaigne, that the difficulty of reduction in this case was owing to the angle of the patella being wedged in what he calls the *subcondyloid space*, and being unable to dislodge it by flexing the limb, I imagined that I might arrive at the same result by the opposite proceeding, that is, by causing the patella to ascend. To effect this, the limb being extended on the bed, I ordered the patient to raise his leg as much as possible, my fingers being at the same time so placed as to cause the patella to turn over. The patient obeyed, and made a sudden and violent effort; the patella yielded and became somewhat raised, and then, with the combined assistance of my fingers, immediately reduced to its proper position. The knee immediately regained its shape, and was scarcely at all painful. The patient was ordered to keep in bed. During the first day the articulation was surrounded with compresses dipped in cold water. On the following day a swelling made its appearance on the inside of the knee, which gave the sensation of fluctuation. There was, however, no ecchymosis. On the seventh day the knee was restored to its ordinary size, and but little pain was felt on moving the patella from side to side. I surrounded the knee and the adjoining parts of the thigh and leg with a dextrined bandage, and the next day the patient was able to walk about on crutches.

On the twenty-sixth day I removed the bandage, and replaced it by a laced knee-cap. The patient was ordered to keep his room for a few days longer, and six weeks after the accident M. D. went out on foot with merely the aid of a stick. He is now quite recovered.

A few observations relative to this case may not be out of place.

1. At the time when M. Malgaigne published his essay, and from the facts which he had collected, we were justified in stating that the internal *de champ* luxations were more common than the external (5 to 3). The two new cases of MM. Watson and Gazsan, however, restored the equilibrium. Now, the one above related places the majority on the other side, that is, in favour of the external dislocations (6 to 5).

2. Of the known cases of *de champ* luxation, those produced by mere muscular contraction are much the most rare, since only two of the ten cases I have just related—one external, and the other internal—are of this description. The one I have mentioned was external; and it seems rational to admit that the greatest number of dislocations of the patella, caused by muscular action alone, ought to take place in this direction, for it is to this side that the triceps tends to draw the bone, and we know that it is on this same side that what are called spontaneous luxations are always observed.

3. The above case fully confirms M. Malgaigne's ideas as to the cause of the difficulty of the reduction, and it is evident that the proceeding we adopted could succeed only by disengaging the angle of the patella from the subcondyloid space. As regards the mode of reduction, our case is very analogous to that of Monteggi (M. Malgaigne's sixteenth observation), in which the patella became spontaneously reduced during the efforts made by the patient in walking. In both cases the bone was dislodged from its wedged position by the same mechanism; we may, therefore, reasonably establish the precept, viz., to assist the reduction by making the patient stand up, or even by making him walk.

4. As regards the facility of the reduction, our case holds an intermediate position between the extreme cases; and we may mention that, of the eight recorded by M. Malgaigne, the difficulty was so great in four that, in one, division of the muscles and of the ligamentum patellæ was resorted to without success; in two others, the elevation was obliged to be employed; and that in a fourth the reduction was impossible. We may also add that in the case of M. Gagsan, the bone was not reduced till after the ligamentum patellæ had been divided, yet this division did not apparently facilitate the reduction.

5. It has been said that the greater or less facility in the reduction depends on the cause of the displacement, and that the luxations of the patella produced by muscular contraction are more easy to reduce than others. May not this depend on the action of the muscles alone not being, generally speaking, sufficient, unless there is some anatomical disposition to favour the displacement; and which, consequently, facilitates the inverse route which the bone has to pass through in order to become reduced? Still I may remark, that in one case where M. Cuynat was obliged to employ the elevator, the dislocation was occasioned by muscular contraction. However, notwithstanding that M. Malgaigne's opinion, as to the partial and spasmodic contractions of the triceps femoris being a cause of the luxation of the patella, is contested.(a) I, nevertheless, entirely coincide with it; indeed, it appears to me to be corroborated by the case we have related, for we cannot comprehend how there can be complete harmony of contraction in the inordinate and discordant movements above described. These isolated contractions of the muscular fibres appear to me incontestible; it is stated in all our treatises on anatomy, that when the arm is raised, the anterior portion of the deltoid contributes to carry it forwards, and the posterior portion backwards; the same, in fact, with numerous other muscles. We, therefore, see no difficulty in acknowledging the preponderating contraction of one portion of the triceps

(a) This designation, although commonly employed, is a very improper one. It is correct only where the patient is in the horizontal position—a situation in which he is never supposed to be placed in describing the anatomical or surgical regions of the body. [The latter term—*de champ*—signifies that the bone is resting on its edge. It has, as it were, undergone a species of *circumversion*, its external edge having become anterior and its articular surface turned outwards and slightly forwards.—TRANS.]

(b) This author states in his "Instituzioni Chirurgiche," on the authority of Manzotti, that a surgeon at Florence communicated a case of this kind to the Royal Academy of Surgery, who refused to believe it.

(c) *Gazette Médicale*, 1836. M. Malgaigne mentions only eleven cases of *de champ* luxation, and gives the details of eight. Since the publication of this essay, two other cases have been met with—one at New York, by Mr. Watson, and the other at Pittsburg, by M. Guzsan.

(a) See his "Mémoire," p. 49, and his "Anatomie Chirurgicale," art. "Articulations du Genou."

(b) "Mém. de la Société Méd. d'Emulation," t. ix., p. 517, and the "Mémoire" already quoted, p. 68.

(a) A. Berard 'Dict. de Méd.,' in 30 vols., . xxvii., p. 646.

femoris, as a cau of certain dislocations of the patella; and M. Malgaigne has very truly affirmed that the simultaneous action of all the muscles of a joint tend to consolidate, and not to modify, its relations.

6. It has been stated that there may be some difficulty in ascertaining whether the *de champ* luxation is external or internal; in the above case, no doubt could possibly exist; and the patella, evidently placed outside the middle line, pointed out very clearly the direction of the displacement. I am not aware that it is the same in every case; still the examination of the surfaces of the patella ought to be an indication, as it proved to be in our patient.

7. As to the information said to be furnished by the extensor tendon and the ligamentum patellæ—the internal border of which, being more tense, indicating an internal luxation, and *vice versa*—we have endeavoured in vain to appreciate its value; the ligamentum patellæ, when forcibly stretched, did not present any distinct or appreciable border.

8. Lastly, in the details I have given, I have mentioned that the surfaces of the patella had become placed not merely laterally, but that the posterior was external, and *at the same time rather anterior;* and the anterior internal, and *a little posterior*. This disposition was sufficiently marked for me not to hesitate to admit the possibility of the *upside-d wn* luxation; and I am convinced that, if M. D. had fallen on the knee after the displacement of the patella, this dislocation, in a more or less complete form, would have been the result (a)—*L'Abeille*.

I have lately met with a similar case in one of my colleagues, who has been under the care of Professor Blandin. In both, the accident was occasioned by a fall on the knee. Dr. P. can now walk without much difficulty. *Médicale*.

19, Langham-place.

THE PHYSIOGNOMY OF DISEASES OR SEMEIOTICS IN THEIR ASSIMILATIVE CHARACTERS.

By GEORGE CORFE (Author of "A Popular Treatise on the Kidney," &c.), of the Middlesex Hospital.
[Illustrated by Portraits of Cases.]

INTRODUCTION.

In the course of nearly sixteen years' residence in the Middlesex Hospital, where twelve or thirteen thousand patients are annually relieved, it has often struck me, amidst the vast number of cases of disease by which I am surrounded, that such stores of information as are therein presented to the eyes of students, ought not to be allowed, as it were, to run to waste; but that gleanings might be largely collected, in order that the general features of this mass of knowledge might be recorded in a somewhat profitable manner.

Amidst the continual change of patients whom I have to receive and ward, and the progress of whose diseases I have to notice in the course of my duties, in two, three, or more diurnal visits to the medical wards, it may be seen that very rare cases pass on, cured, or otherwise ending in death. Common cases occur with exceedingly curious symptoms superadded to the ordinary ones; all of general interest to the medical man. They are seen, and they vanish, to make way for another dense mass of objects, presenting more or less of curious feature to the observant eye; and thus the year rolls out and numbers its ten, twelve, or fourteen thousand in our institution, and like the shores of the ever-full ocean, the tide ebbs but to fill again.

I have been solicited by a valued friend to put some of these pictures on paper, in connection with my own ideas and remarks; and I feel inclined, if my life should be spared by Him who holds our breath in his Divine hand, according to His own declaration, so to do. And here I must observe, that though I love my profession, and will give place to no man in admiration of the splendid talent and skill which adorn this hospital, as well as many other metropolitan institutions of the same kind, or the distinguished names which shine in private practice, I, nevertheless, am bold to declare, that I consider God alone The One who kills and who makes alive.(a) Who wounds and who heals; and in these days of profanity on the one hand, and of hypocrisy on the other, I consider that a man should speak plainly, that the principles which sway him may at once be known; and herein God must be magnified, since, of ourselves, we should shrink from the expression of religious influence, unless the Lord bestowed His powerful grace accordingly.

Thus, my belief is, that the Lord Jehovah blesses the prescriptions, and advice, and experience of a talented physician, when such is His Almighty will; and that, on another occasion, with the same form of disease, the patient of the same sex and age, with symptoms closely similar, with the same care bestowed by the same accomplished physician—that, notwithstanding, the patient dies; because man has an appointed time for death, and go he must when it comes, whether suddenly, in the pride and vigour of his step, or slowly, by the attenuating disease. Thus, I desire to give the glory to God which is His due, in His designs, and in His workings in Nature, Providence, and grace; and I believe His government of every object, however minute, or however immense, to be as absolute as it is wise; and as good as it is perfect; and so will be found to be, at the winding up of all things in the great day.

In the course of my experience I have often had occasion to remark one point especially, to which, indeed, my attention was early led by my valued and talented master, Dr. Latham, whilst he held the office of physician to St. Bartholomew's Hospital, where I was a student under his tuition; namely, the physiognomy of disease in its assimilative character; and since I have entered the Middlesex Hospital, I have had occasion to observe the fatal results which have taken place too often, from the medical man out of doors having mistaken one disease for another, and treated the patient accordingly; so that he has applied to us for advice when it was no use.

When, therefore, preparatory to the visits of the physicians, I have had to make mine, I have endeavoured to impress upon the minds of those pupils who were pleased to accompany me, the very great importance of the study of disease through the index of the countenance—the features of the face—the air, gait (if able to walk); the manner, cast, colour, turn, expression, silent or speaking language, implied or indicated by words or signs, so that almost on the first glance one might say, "hepatic," "cardiac," "renal," "uterine," "cerebral," &c. &c.

It is related of the celebrated physician Andral, so famed for decision upon physiognomical presentation, that the moment his penetrating eye surveys the features of a patient who has some hidden disease stealing on, he will immediately detect and declare it to those around him; but especially keen is the discrimination which he is able to make from the eye of a fever patient who has passed a tranquil and refreshing night, or a restless and disturbed one.

The medical student who carefully notices the cases in our London hospitals, and who is not altogether ignorant of country practice, may be struck with one thing: the fierce aspect of many diseases which, out of doors or in the provincial small towns and hamlets, bear generally a mild and tractable character.

The reasons I conceive to be mainly these:—First, that hospitals, and metropolitan ones especially, contain the working and lower classes of the people, who live in unwholesome kitchens, feed upon the most unhealthy articles of diet, and allow their bodies to be filthily dirty beyond conception, however smart and neat the outside appearance.(a) These persons are more than ever brought up with unbridled passions and tempers, in which they indulge in after life, carrying their whims, fancies, and leadings, into any and every extravagance, to the total neglect of all good advice from wise relatives or superiors. Secondly, that this class of persons are immoderately fond of all medicines or compounds, quack or otherwise. (b)

(a) I may take this opportunity of mentioning a very uncommon accident of the patella, viz., the rupture of its tendon. The patient was an aged female, and mother of one of my friends, who is the director of the hospitals. The tendon appeared to be torn from its attachment to the tibia, rather than ruptured in its centre. The knee became completely ankylosed.

(a) The Lord God, as a Sovereign, gives command. He wounds by instrumentality, and heals, in the tender mercies which are over all his works, at once, by his own word. "He sent his word and healed them" (Psalm cxlvii.) has a temporal as well as a spiritual meaning. It appears from scripture, that the enemy of man is empowered for the work of death and disease. The Lord gave leave, and "so went forth Satan from the presence of the Lord," commission in hand, to smite with sore diseases, but not to kill. (Job ii, &c.) Also, the Prince of Life and Glory, the Lord Jesus Christ, as recorded by the Holy Ghost, said, "Ought not this woman, whom Satan hath bound" (with some sore affliction of body), "lo! these eighteen years, to be loosed from her infirmity," &c. The same enemy, through sin, has the power of death, when leave is given from Him "who holds the breath of man in his hand," thus, "him who has the power of death, that is, the devil" (Hebrews ii.) Satan had permission and command, first, to slay and to destroy what Job had, children, servants, cattle, &c. He was restrained from touching Job. Afterwards he was empowered to touch Job with disease, but to withhold the stroke from "his life." (Chaps. i. and ii.) In earthly matters, a master or governor does not himself destroy—he gives the order to the executioner; or he lets loose upon one animal another whose nature it is to wage war against the first. Thus the dog baits the bull, worries the fox and hare, and destroys the rat, &c., by command of him who is said to do it himself—as the mouse is let loose upon the cat by the owner's command or hand; they act but in agreement with their destructive natures. The Lord wounds by instrumentality: as in the pestilence, famine, or the sword, &c. &c., whether it be against a nation or an individual: thus, the King of Israel being offered one of these three, the pestilence was chosen, and it fell upon the nation, destroying 70,000 men. He heals by His own Almighty word: "He sent his word and healed them, and delivered them from their destructions." (Psalm cvii.)

(a) A butler, some time since, who was in the habit of gaining a livelihood by attending large dinner parties as a waiter, fell down in a fit, whilst so engaged at the table of one of our splendid mansions at the west-end of the town. On his admission here, his head was ordered to be shaved, when he was found to be literally overrun with pediculi and pruriginous eruptions.

A married sempstress was under the care of the physician, as an out-patient, with the most inveterate form of scabies and itch combined, whose employment was to attend daily in one of our largest hotels at the West-end, to keep in order the stock of linen; and this she did during the whole time she was under treatment, and prior to her attendance as a patient.

(b) There is hardly a servant in private families who can bear to throw away a few pills, or some untouched draughts, &c. A lady, whom I know, ordered her own maid to carry down some draughts in phials, to pour out the contents, and to put away the bottles. The cook, seeing her take the phials to the sink, declared it was shocking extravagance to throw away physic. "Do give me some of it," she said. She accordingly emptied four bottles into a basin, and drank off the whole quantity: then, shaking her head, she fetched a raw carrot from

Every neighbour has a remedy to recommend for every ache and pain, and the one person is no readier to recommend, than the other is to try the same. These persons physic themselves, too, with enormous doses of such things as salts, sulphur, calomel, and purgative pills, &c. &c.; and they often insist on being bled without any advice whatever; they go to the patent-medicine warehouses, and buy any nostrum whose title has struck them outside the window, or which some friend has suggested. A young woman was lately brought into our wards in a frightful state of ptyalism, from only taking two powders, bought in such haphazard way at a patent-medicine warehouse near at hand. Thirdly, when these people are downright ill, and the disease is set up, in however severe a form, they still go on, utterly reckless, apparently, of life or health; and the friends, however ready with their tears for their sufferings, are just of the same stamp with themselves. They have been known to bring a heavy-crusted meat-pie in their arms, with a baby seated on the top of it, in order to feed a sister just merging from the most severe attack of gastro-enteritic fever. A man has brought a beefsteak pudding, in the crown of his hat, to his wife, ill with pneumonia; and the wife has brought her husband pork and greens in a teapot, and they have been detected eating them together, although the patient has not recovered from a dangerous attack of enteritis.

A porter is not always vigilant, nor is a nurse always faithful to her duty; it would be scarcely credited, if a long list of the contraband eatables, which are hebdomadally seized in our public hall, was submitted to an intelligent mind. The cant phrases, "Poor thing, it will do him or her good, if he or she can only get it down," has beguiled many; and even an apoplectic man has had some article of cookery surreptitiously brought in and stuffed down his throat by this ignorant, mock, and wicked pity. We have not only found out and detained every kind of improper food at the entrance of the hospital, but we have also detected the same in the hurried circulation, the oppressed breathing, the swollen epigastrium, and the hot skin, with returning delirium, in the patient. And, if such be the case where so much pains are taken to compel a proper regimen, what must there be of reckless cramming of the stomach where such restrictions exist not, as in the little private home! Thus, without restraint on the passions, unbridled tempers, full indulgence of appetite in any eatable or ardent spirit that is within the means to obtain, disregard of the best medical advice and orders, wicked folly of friends and their example, and a readiness to swallow any nostrum recommended by the ignorant, we may form some notion why diseases are seen to assume the appearance they do in our institutions; joined to these, also, may be added constitutions unstrung by the free use of tea and ardent spirits, general irregularities, with poverty, and anxiety, and care.

On the other hand, the general practitioner expects, and for the most part obtains, in private practice the most implicit obedience to his rules and orders. He also, with the physician, has another advantage, that in the ushering in of a disease he is applied to; and, although the perfectly-developed features of a serious disorder may not be as yet so portrayed as to enable his mind to catch the real character of the approaching disease, yet experience and a quick eye master even this difficulty in time; and the sickening stage has also its small index, however minute the points of the dial, and however illegible the characters. The practitioner has an opportunity of witnessing the early stage of every disease, whilst these accessions are rarely met with in an hospital. Here we see disease at its height running down to death, or disease at its height running up to convalescence; but disease at its height traced up to the spring-head of its onset we rarely have a full opportunity of viewing. It seems, therefore, probable that the main reason why the private practitioner may be often misled in the formation of a correct diagnosis of an approaching malady is, that he is perplexed by the presence of so many minor symptoms and feeble outlines of the disease; whilst the hospital practitioner has the privilege of viewing the broad features of the enemy, and is, therefore, not led astray by the contradictory statements and feelings of the patient. In short, I think it may be said that the diagnosis of diseases in hospital practice is less perplexing to the private practitioner than is the detection of the trifling *malaise* in private practice by the hospital practitioner.

The advantages of both experiences combined must be very great. The hospital physician and house-surgeon alone enjoy them. It is true that the perpetual pupil engaged for years in private practice has free access to the wards of his pupillage; but with him time cannot be spared for these visits. Neither is his duty involved in regular attendance, as is the case with the hospital physician and surgeon.

The fastidiousness and folly of the rich and noble classes of society, and their terror of death, which the poor so often look upon with recklessness or a stupid indifference, induce them to send so frequently for the phisician, when scarcely any bodily complaint exists. A friend of mine was requested to send an eminent physician to a young lady making very great complaints of indisposition; the noble-minded man cast his eye on the lady, asked a few questions, and then turned away, to the astonishment of my friend, who, on taking him aside, heard him declare there was nothing whatever the matter with the supposed patient. It was entirely put on; and very angry was she, when informed that the physician, who knew her better than my friend, said he should call no more. Now, the fond mother of that young girl would most willingly have paid ten or twenty guineas in fees, for her darling and only daughter; but Dr. —— was too noble to pander to the folly and vices of persons in high or low life. Indeed, nothing makes those of all classes more enraged than to tell them they are very well, when they positively declare, and insist upon it, that they are very ill. Notwithstanding which, the truth is The Truth; and that lip which flinches least from declaring it will, in the long run, obtain most of honour, confidence, esteem, and respect, from every liberal-minded employer.

It has been remarked that diseases are, for the most part, somewhat advanced when patients are admitted into the hospital; some of them have been sadly neglected, or mistaken by a general practitioner, who having, unhappily, set out in life by mistaking mere fancy for tact, or bent of genius, has fixed on the profession of medicine; in which hard study, consequent rich harvest of knowledge, with clinical experience in all the wards of an hospital, have been held as disagreeable works of supererogation.(a)

MIDWIFERY. — SHORT UMBILICAL CORD, WITH RUPTURE ON DELIVERY.

By J. W. REED MACKIE, Esq., Cupar, Fife.

Mrs. H. was seized with labour pains on the evening of June 20. They gradually increased in severity till the morning of the 21st. About ten a.m. I was sent for, and on my arrival, about eleven a.m., I found her in bed, pulse natural, pains recurring regularly, &c. &c. On making a vaginal examination, I found a large primary syphilitic ulcer on the right labium, the vagina well lubricated, os uteri nearly dilated, membranes not ruptured, and the head presenting in the first position. I may state, the head was well descended in the cavity of the pelvis, and that the bowels and urinary bladder had been frequently evacuated. Her former delivery was natural, but tardy.

The pains continued to increase in severity, the head during each was pushed upon the perineum, and as the pain subsided it (head) gradully receded high in the pelvis. This state continued for about three hours, when the membranes burst, and the head was pushed partly through the outlet; a very strong pain succeeded and drove the head powerfully through the vulva; the body immediately followed; a tremendous gush of blood at this moment took place. On examining the child, I found the umbilical cord to have been torn about one inch from the abdomen; I tied this. The child was quite blue and livid, and covered, especially on the head and chest, with the copper-coloured eruption. Finding the hemorrhage from the mother still continuing, I introduced my fingers into the vagina to get the cord tied; the cord I could not feel, but had recourse to cold applications, which, to a small extent, proved hemostatic. Ringing in the ears, headache, and great sickness now came on. She had a little wine, the abdomen rubbed and a bandage applied, and ʒjss. of the liquor secale cornuti of Battley (the best and most certain preparation of the secale I have yet seen—indeed, I think superior to ergotine itself).

In about five minutes, contractions of the uterus now occurred, and on examining again I found the torn cord hanging through the os uteri. The placenta shortly followed, by a little manipulation. The hemorrhage ceased. On examining the placenta it was in some parts quite hard, indeed ossified (a state which exists more frequently than what many medical men will credit); in others quite soft, like jelly. I measured the cord, and found it to be only four inches and a quarter in length. The child died next day. The mother did well, and is now following her usual avocations, although under treatment for syphilis; I may state, the father is also under treatment for "secondary symptoms."

In this case I am inclined to believe that the cause of rupture of the cord proceeded partly from the syphilitic taint, and partly from its extreme shortness.

PRACTICAL OBSERVATIONS RELATIVE TO THE MANAGEMENT OF THE INSANE, AND THE MODE OF GOVERNMENT PURSUED IN OUR PUBLIC HOSPITALS FOR LUNATICS.

By WILLIAM SMITH, M.R.C.S.E.,
Formerly House-Surgeon to the Lincoln Lunatic Asylum, Member of the Association of Medical Officers of Hospitals for the Insane.

(Continued from page 271.)

I have in a former paper expressed an opinion that the commissioners in lunacy have exercised a sound discretion in recommending to the Lord Chancellor "That in any county asylum or hospital hereafter to be erected, into which

---

the pantry and ate that, to take away the nausea!

The more medicine our patients have, the better pleased they are. It is most amusing to see the scribe of the ward, with spectacles on his nose, poring over the medicine tray, with the crowd around him, while he eagerly looks over the bottles, remarking, "There is some nice red medicine for you, Mr. ——;" "that is strong stuff for you, Mr. ——;" and "here's your new medicine, Mr. ——," &c. &c.; and sometimes our physicians order a dose immediately, for an out-patient, and it is laughable to see the satisfaction with which an Irishman, especially, swallows down the draught, and drains the glass to the very last drop; saying on one occasion, "Thank'ye, your honour; that's the first bit of victuals I've had these two days."

(a) We have repeatedly admitted the lowest form of typhus, amongst the ill-fed Irish, from the wretched haunts of St. Giles's, who have been seen by some such awkward practitioner in the first stages of the fever, and have been largely bled—once, twice, or even oftener; whilst others, who have laboured under acute pneumonia, have been allowed to run on from hour to hour, and day to day, with some opening pills and a dose or two of salts! Such gentlemen frequently send their diagnosis with the patient, and, on hearing the real disease declared, are not satisfied with our treatment or our report of the case.

curable lunatics (either alone, or together with incurable patients) shall be received, the number of patients shall not exceed 250 in the whole." I will now endeavour to adduce such arguments as may prove the necessity of not exceeding that number.

Every one, I think, conversant with the past history of legislation in our large public asylums (more particularly those of Hanwell and Lincoln) will admit the necessity of an entire unanimity of feeling amongst the medical officers of an hospital for the insane; without any desire of making unpleasant personal attacks upon the management of any particular establishment, I consider that the subject which I have taken up perfectly justifies me in mentioning any asylum which may strengthen the arguments I am attempting to prove; my object is to benefit the insane and make public any improvements in practice. If it be admitted, then, that unanimity of feeling amongst the officers of an hospital or asylum is absolutely necessary to the carrying out of any system of management (be it *non-restraint* or any other), what, let me ask, can be more effectual than *placing the executive administration in as few hands* as possible? At Lincoln, where there is *an honorary and unpaid medical staff of three physicians and three surgeons, in addition to a salaried house-surgeon or director*, things have worked very badly, and frequent changes of the *chief executive officer* have taken place, which undoubtedly has had a prejudicial influence over the welfare of the patients. At Hanwell, with a vast assemblage of 1000 patients, and a consequent amount of attendants (or, to use the elegant phraseology of the commissioners, keepers and nurses), two resident medical officers were found inadequate, and what took place is recorded in the following words by the commissioners in lunacy:—"In the case of the Asylum at Hanwell, the visiting justices have lately appointed a gentleman (formerly an officer in the army), who has had no previous experience in the management of the insane, as the governor. The appointment appears to have become necessary in order to preserve good order in this large establishment; and, for that purpose, the governor has the power of suspending, not only the servants, but even the medical officers and matron of the asylum. He has also the entire control over the classification, employment, amusements, instruction, and general management of the patients, both male and female, subject only to the general control of the visiting justices." This singular arrangement of course could not continue long, and was speedily abandoned as impracticable. Now, in correcting abuses, I am an advocate for applying remedies at the fountain-head; in plain truth (as I have before asserted) the Hanwell establishment is much too cumbrous to work well under any system of management whatever; and this unpalatable truth will, some day or other, be exhibited in such a light as to force conviction even upon the minds of the Middlesex justices. If an establishment (my remarks will apply equally to hospitals for the sick) do not contain more than 250 patients, one resident surgeon is amply sufficient, and in this individual should be vested the absolute control of the attendants and household. It is a curious circumstance, and somewhat remarkable, *that the medical officers and attendants in those asylums advocating moderate restraint should retain their appointments much longer than those where non-restraint has been exclusively adopted.* I do not profess to give any explanation, but such undoubtedly is the fact. *Where any difference of opinion is known to exist amongst the managing committee or medical staff of any lunatic hospital or other medical charity, the task of regulating the attendants and household will be proportionably increased.* I state this as the result of personal experience. On being elected house-surgeon to the Lincoln Asylum, in April, 1840, I found that establishment in a state of chaos and confusion. The medical officers were at issue on the important subject of *mechanical restraint*, and, as a natural consequence, the *lay governors* were divided in opinion ("for who shall decide when doctors disagree?"). Not having had any practical acquaintance with insanity, I had everything to learn, and much to combat with (for to the *uninitiated the discipline and regulation of the attendants is the gravest labour*). These unfortunate divisions continued for two years, when, having made myself thoroughly acquainted with the practical working of the house, and trained up an entire fresh set of attendants, I declared myself in favour of the *system* of *non-restraint*, from a conviction of its entire practicability and humane tendency. From this period our difficulties gradually disappeared, and I had further the satisfaction of discovering that, from observation of the working of the asylum whilst under my superintendence, Dr. W. D. Cookson, one of the physicians, became a convert to the system of non-restraint. These circumstances are brought forward now, not from a desire of ripping up old grievances, but to demonstrate the imperative necessity of *one animus prevailing throughout the staff of any hospital for the insane.* Had there been no *intestine discord* at Hanwell, it is extremely probable that the valuable lectures of Dr. Conolly might not have been so clear and instructive. Much still remains to be done with reference to the *attendants* in all establishments for the insane: we want persons of superior education and good moral character, in place of *a race of giants and amazons*. One might almost imagine, on visiting some institutions, that the Empress Catherine of Russia had been consulted in the selection of "these nervous six-foot fellows."

Mr. Hill, my predecessor at Lincoln, has put forth a dogma on this subject to which I can by no means subscribe, and possibly my practical experience and powers of observation are not inferior to his own. I look upon the attendants of an asylum as instruments for great good to the patients, or the reverse: if they are well-informed, humane, and enthusiastic in the performance of their duties, they are very powerful instruments for good in the hands of the medical superintendent; to encourage this spirit, they should receive liberal wages, be comfortably treated in every respect, and have frequent leave of absence (within proper restrictions) *since contact, during any lengthened period, with the insane has a depressing, though, at the same time, irritating effect upon the mind of sane persons.* Every inducement should be given to retain officers and attendants in an hospital for the insane. If officers and attendants are continually going and coming, the evils will affect the patients more or less. In establishments where such changes are unusually pregnant, there is a defect somewhere. "Something is rotten in the state of Denmark."

I have spent considerable time and some money in inspecting many of our largest and best-regulated hospitals for the insane, and, not being officially connected with any establishment now, I feel myself perfectly free to express my sentiments without any reservation whatever.

With reference to officers and attendants being married or single, I consider it very desirable that the resident surgeon should be a married man, and that his wife should discharge the duties of matron; a neglect of this arrangement has been one cause of the frequent changes at Lincoln:—this circumstance, together with the unwarrantable interference of certain individuals with the executive government of the institution (in the intervals of the weekly boards), induced me to throw up my appointment at Lincoln: a step which I have ever since deeply regretted, as the treatment of insanity has now been for more than seven years my favourite study.

To prove that my views on the point I forehamed are in accordance with the result of experience, I would direct attention to the asylums of Northampton, Glasgow, Wakefield, Gloucester, and Nottingham; in these establishments, which in point of excellent management are first and foremost, the medical superintendents are married men; some of them of long standing, and, what is still better, they possess the entire confidence and esteem of their respective governing bodies. *They have grown grey in the service—a circumstance alike honourable to themselves and creditable to the establishments over which they preside;* but if we turn to some other asylums, with whose management I am thoroughly conversant, we shall find a different state of things: *the public benefit is sacrificed at the altar of personal ambition; individuals who have yet to learn the difficult task of governing their own tempers and passions arrogate to themselves the right of controlling the actions of a public officer; if he have the independence to resist, disagreeable regulations are imposed, and his comforts, and authority over the establishment, are curtailed as much as possible* (and here let me observe, *the rules and regulations of certain establishments have been constructed with a lawyer-like craft and subtlety known only to the tortuous mind of an Old Bailey practitioner*); if, on the contrary, he submit (the rubicon once passed), *one act of tyranny follows another, until, instead of being the executive head of the establishment, the quondam director sinks into the abject tool, the mere puppet of a restless, unprincipled agitator.* Dr. Conolly, in his usual masterly manner, has vividly portrayed the evils resulting from the control over the attendants being placed in other hands than that of the resident medical officer. Even the rules of the Lincoln Asylum (inconsistent as they are on some points) declare that "the attendants and servants shall obey the orders of the house-surgeon and matron, as the master and mistress of the house;" but where the surgeon and matron are not man and wife, there is a great chance of differences arising between them, in which case each officer will have his or her partisans—a state of things wholly subversive of sound discipline.

Where the responsibility rests, there should be the power. If the visiting physician and resident surgeon pull well together, the institution will prosper; *but if* (as obtains at Lincoln), *there be more than one physician, and these unfortunately differ on important points of treatment, how is the resident surgeon to act?* "We cannot serve God and mammon." *Facts are always preferable* to mere assertions. Now, what has latterly occurred at Lincoln? Why, the physicians are directly at issue, *not on trivial points*, mark you, *but on objects of vital interest to the insane: one month the patients are regaled with porter and wine, sedatives are prescribed*, and *seclusive classification is adopted;* the next month, *before the physician can have time to witness the effects* (unless we are to suppose that the physicians see each other's patients *on the sly*), *their allowance is knocked off and the opiates are discontinued;* now, are we to presume that *both doctors are right, or both wrong?* Verily, it would puzzle Hudibras to solve this problem! Allow me to solve it in a different manner. Pack off two of the physicians (they might toss up, heads or tails), and place more authority in the hands of the house-surgeon—he is never little better than a *cipher;* and as to the "*Book of Regulations,*" verily, my head aches now at the very recollection of that "*chaos of impossibilities.*"

In favour of small asylums, I might mention the district asylums of Ireland, which, I understand, do not accommodate more than 200 patients. The hospitals in France have not answered so well as ours in consequence of their extreme magnitude.

In the Seventeenth Report of the Lincoln Asylum, page 29, there is the following foot note:—"We hope the time is near when the conviction will be more strongly felt than it has hitherto been, that the ultimate success of an institution in which human beings are assembled together, whether for instruction, support, correction, or physical cure, must depend almost, if not entirely, on the strength of character and moral fitness for the situation of the individual who is placed at its head. Whether it be a school, a workhouse, an asylum, or a prison, no committee of managers, or set of visitors, can ever hope to be able to bring it into a thoroughly prosperous state,

unless their intentions are seconded and carried into execution by the individual who is in reality the executive head of the whole."

With the sentiments herein expressed I fully concur, and I have had ample opportunities of judging in such matters whilst acting as house-surgeon to the Lincoln Asylum and County Hospital at Lincoln, and subsequently as medical officer to an extensive poor-law district and work-house in Hertfordshire.

I am further of opinion that our *public medical charities* might be rendered much more effective to the sick poor if, in place of the present mischievous system of having *a numerous unpaid medical staff* and *an inexperienced salaried medical officer, the resident surgeon were an experienced man, and authorized by the rules to act in the generality of cases. All the medical officers of a public charity should be salaried officers, and elected by* concours. *The reports of our public hospitals might, in proper hands, be really valuable documents. The physicians and surgeons, according to the present system, are not paid, therefore, they will not be at any trouble, and the task usually devolves upon the house-surgeon, who is for the most part a raw hand, fresh from his* alma mater!

In "The Provincial Medical Directory" for 1847 (pp. 337, 338) are the following observations:—"The hospitals in Germany are always supported by the town or government; the mere administration is *not* carried on by a lay committee, but it is entirely intrusted to the medical staff. The head physician, or head surgeon, is appointed director, and generally resides in an adjoining building, or near the hospital, and is held responsible for the proper administration of its medical and general affairs. All medical officers, from the director to the house-surgeon, are paid for their services, in such sums as would enable them to maintain their respective stations without any private emoluments. For although the present career of the former, and the future career of the latter, are greatly benefited by their appointments, still this would never be deemed a sound reason why the time and the services they give up to the state should remain unrewarded. If, however, German practitioners would consent to fill these situations gratuitously, that is to say, to buy these situations for such annual sums as are equivalent to their services, the offers would not be accepted, for the authorities would fear lest the unpaid should be considered secondary to the remunerated occupations, or lest the situation, so ardently desired while in prospect, might be considered irksome when obtained, and lest the institutions should lose the right of claiming the utmost exertions from those who devote their skill as charity." Are not these arrangements infinitely preferable to our own? No sooner do our *house-surgeons* become thoroughly conversant with their duties, and therefore of real value to our *sick poor* (the parties for whose benefit these noble charities were *ostensibly* endowed and supported), when hey presto, they fly off into private practice, or elsewhere, and are succeeded by other *novices*. Until late years (the change has been obtained by the comments of an independent medical press) it was not deemed necessary to have *a qualified resident surgeon* at Guy's Hospital, containing 500 beds; patients were bled by dressers *(pueri indocti)*, and *the brachial artery might perchance be punctured; and if that learned Dogberry, the steward, willed it so, no inquest was deemed necessary*, it was, perhaps, considered "*justifiable homicide*;" our youthful disciples of *Æsculapius* must have subjects to exercise their skill upon, and why should not the poor and destitute furnish the materials?

It is truly lamentable to observe in this enlightened age and country the apathetic indifference to human life exhibited by our legislative bodies and the public generally. In any matters bearing upon *pounds, shillings, and pence*, what lynx-eyed vigilance is displayed in investigating even the most trivial minutiæ! *exempli gratia*: observe the critical acumen displayed by *assurance companies*; but let a man's life be at stake, or his health seriously impaired, the first *designing vagabond*, or *illiterate pretender to medical science*, is at once installed *master of the ceremonies*, especially amongst our *aristocrats*, hinc omne genus, *mesmerizers, homœopaths*, &c. &c.

But to return to the insane. Many persons (amongst whom I will enumerate the learned commissioners in lunacy) are impressed with the belief that a quantity of physic is requisite for the cure of insanity. This I consider to be a mental delusion; it may possibly savour of presumption in me to call in question the opinion of such learned Thebans; unfortunately for their theory, however, my sentiments on this point are in unison with those of gentlemen who have spent the best part of their lives in "ministering to the mind diseased." I do, therefore, assert that very many cases of insanity are cured without a single particle of physic. The principal indication, then, in a case of insanity is a speedy removal from home, for, as it is natural to suppose, the maniac submits with a very poor grace to any control exercised by his friends, or deputed to servants. Then, again, until the publication of Dr. Conolly's practical lectures the majority of medical practitioners were wholly ignorant of the treatment of insanity; or, still worse, their ideas were based on false premises; *insanity was viewed by them as an inflammatory affection of the brain; and bleeding, blisters, setons, tartar emetic, and low diet, with other antiphlogistic remedies*, were vigorously enforced by these zealous but misguided individuals. In our public hospitals for the insane a very contrary practice is adopted, and I have always found it attended with the happiest results.

King-street, Belper, June 1.

(To be continued.)

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of July 12; M. BRONGNIART in the Chair.

CONGENITAL OPACITY OF THE CORNEA. BY DR. TAVIGNOT.—On June 15 a child, aged ten months, was presented to Dr. Tavignot. The eyes were in the following condition:—The eyeballs were of a natural size, their form being, however, more regularly spherical than usual, and both being agitated by that sort of lateral movement called nystagmus. In all its extent, with the exception of a transparent zone one line in breadth at its circumference, the left cornea was completely opaque; on the right side the opacity was limited to the very centre of the membrane, one-third of which only was impervious to light. No traces of morbid vascularity could be detected, the lids being natural, and showing no marks whatever of previous ophthalmia. The iris, in each eye, had almost completely disappeared, being reduced to a small greyish line, in contact with the ciliary ligament. The pupil appeared to be perfectly insensible to the influence of light; vision existed on both sides, but too strong a light caused photophobia, and produced sneezing. The infant was born in this condition, and had never since birth suffered from ophthalmia. Examining the case in an etiological point of view, Dr. Tavignot remarked in his communication that the alterations might be referred to one of two causes, viz., either to an arrest of development of the eye, in consequence of which the cornea preserved in a permanent manner the temporary opacity existing provisionally during the first months of intra-uterine life; or to inflammations attacking the cornea during gestation. Dr. Tavignot was inclined to attribute to the latter cause the condition of the eyes in the present case.

DESTRUCTION OF CALCULOUS CONCRETIONS WITHIN THE BLADDER.—M. Phillips forwarded on this subject a paper, in which he recommends the association of galvanic power with chemical solvents, for the purpose of destroying the cohesion of calculi. The fluids which M. Phillips adopts are either acid or alkaline, in the first case consisting in 100 grammes of water acidulated with one gramme of sulphuric acid; in the second, constituted by 0·50 centigrammes (10 grains) of potass in 200 grammes (73) of water. The instrument, resembling in its form M. Heurteloup's percussor, contains a sound adapted for receiving a double stream of fluid, and the wires to be placed in communication with the poles of a galvanic battery.

ACADEMY OF MEDICINE.

Meeting of July 13; M. BEGIN in the Chair.

THE BITTER TASTE REMOVED FROM EPSOM SALTS.—M. Soubeyran communicated, on the part of Mr. Combe, a paper, in which is mentioned a new method calculated to deprive sulphate of magnesia of its bitterness. Ten centigrammes (two grains) of tannin, added to the quantity of water necessary for the dissolution of one ounce of sulphate of magnesia, accomplish this purpose. In order to destroy the pungent taste of the tannin, it is only necessary to boil the solution with a small quantity of ground and burned coffee. The result is a pleasant mixture, the purgative effects of which are certain (a).

SCURVY AND TYPHOID FEVER.

M. Scoutteten, a military surgeon, related to the meeting the details of an epidemic of scurvy, which attacked the garrison of the town of Givet during the month of May. The 42nd Regiment of Foot, and the 2nd Cuirassiers, were both affected, though in a very unequal manner; two cases only having been observed in the cavalry regiment. All forms of petechiæ and ecchymosis were observed, from the smallest specks to the broadest hemorrhagic patches; febrile excitement was present only in the worst cases. A severe epidemic of typhoid fever had preceded the manifestation of scurvy in the garrison, and was referrible to the same causes—viz., bad ventilation and insufficient food. The patients were removed to a fort placed in more favourable hygienic circumstances, where they speedily recovered.

M. Rochoux remarked that scorbutus was evidently the result of the respiration of vitiated air—a fact proved by the total disappearance of the disorder from the cities of Paris and Strasburg, since their sanitary improvements. But typhoid fever still existed in both places, and to a great extent; consequently, he would be inclined to adopt a different opinion from M. Scoutteten, and to say that the two disorders recognised different causes.

M. Moreau asked M. Scoutteten to explain a passage of his communication, in which he stated that the diseases were produced by insufficient food. Was it possible that the victuals distributed to the soldiers were so scanty as to produce these fatal results?

M. Scoutteten, in consequence of his official position, declined giving any explanations on this point. As to M. Rochoux's argument, M. Scoutteten would not deny that a vitiated atmosphere had a great deal to do with the production of scurvy; but the modification in the nature of the food had also considerable importance. Thus, in the penitentiaries, epidemic scurvy broke out when meat ceased to be given to the convicts, and was arrested only when animal diet was again allowed them. Besides, M. Scoutteten did not maintain that the causes of scurvy and typhoid fever were absolutely identical; but he contended that they were analogous, from the resemblance of their causes. Might not, also, an analogy of nature be fairly concluded to exist? The men were not crowded in the sleeping-rooms, and the cavalry soldiers

(a) Is it desirable to remove bitterness from Epsom salts? To this question we would be inclined to answer in the negative, as we have, in common with most practitioners, hitherto considered the bitter taste of the salts as a favourable circumstance, in consequence of which sulphate of magnesia may be classed with "tonic purgatives."—D. M'C.

mixed with the infantry, and were better fed; hence, perhaps, the great difference observed in the intensity of the disease in the two corps. With regard to the similarity of nature of scorbutus and typhoid fever, M. Scoutteten reminded the academy that, seventeen or eighteen years ago, he had laid before the society the intestines of animals in whom, by a peculiar diet, he had produced typhoid fever and ulceration of Peyer's glands; if, therefore, this disease could be produced at will, its causes must be known. If, in some cases, they escaped detection, it was because they were not sufficiently sought after.

Professor Bouillaud could see no analogy whatever between scurvy and typhoid fever; he had observed upwards of seven hundred cases of the latter disease, and not a single one of the former, yet, if they were produced by the same causes, this could hardly occur; beisdes, typhoid fever was by many deemed to be contagious, and no one fancied scurvy to be so; fever was present in typhus, and absent in scorbutus; in a word, the two diseases presented neither resemblance nor even analogy.

Tuberculization of the Bronchial Glands, and Pathology of Dropsies.—Such was the title of a paper read at the close of the meeting by M. Marchal (de Calvi). The presence of tubercles in the bronchial glands had hitherto been considered as a phenomenon special to infancy; M. Marchal related two cases in which the disease was observed in the adult, and in both death had been the result of compression of the air-tubes. In these two cases death was sudden, and could not be explained by insufficient oxidation of the blood. In the first case œdema of the superior parts of the body and ascites were observed, and M. Marchal took this opportunity to make some remarks on the general pathology of dropsy. In this particular instance the infiltration was referrible to compression of the veins.

Meeting adjourned at a quarter past five P.M.

Quinine.—Dr. Landerer states that a nurse, having taken a large dose of sulphate of quinine, her suckling obstinately refused to take the breast. Chemical analysis demonstrated in the milk the presence of a notable quantity of quinine. The same author asserts that he detected the presence of the same substance in the dropsical secretions of one patient, and in the *tears* of another, who was using sulphate of quinine in frictions. The rapidity with which the salt of quinine is now absorbed is now a well-demonstrated fact. We recollect a case of intermittent fever, which we published in the *Gazette des Hôpitaux* of July 12, 1841, in which this astonishing rapidity was exemplified and demonstrated in the most remarkable manner. On the first day of the treatment, *ten minutes* after the exhibition of ʒj. of sulphate of quinine, four ounces of urine were removed from the bladder. M. Bouchardat, the learned chemist of the Hôtel Dieu, examined this fluid, and found that it contained half a grain of the medicine. With regard, however, to the absorption of the salt through the skin without the assistance of previous removal of the epidermis, the researches of M. Martin Solon and of M. B[illegible]et have constantly yielded to those observers negative results. M. Landerer's assertion, therefore, is of great interest, but, in our opinion, requires further confirmation.

Rapid Vesication with Ammonia.—It is often requisite to obtain, in a very short space of time, a denuded surface, and in such cases ammonia is very generally resorted to; but it often fails in producing the desired effect on account of the rapidity of its evaporation. Professor Trousseau recommends the following simple plan:—Imbibe a piece of cloth of the size of the required blister, in ammonia; apply it to the surface, and cover it with a piece of coin of corresponding [illegible]itude, and within a few minutes the bliste[r]

Fatty Matter in the Lungs.—At the las[t] meeting of the Institute, M. Nat. Guillot read a paper "On the various Proportions of Fatty Matter contained in the Lungs." They are more considerable before than after birth, and seem to diminish as the activity with which the respiratory functions are accomplished increases. At the period of parturition, before the lungs of the infant have breathed, they contain 10, 12, 15, or 18 per cent. of fatty matter; but when air has been admitted, the proportion of this matter in the desiccated lung is no more than six per cent. In phthisis and pneumonia, when a portion of the respiratory organs becomes impervious to air, it becomes infiltrated with fat, and may contain as much as 30, 40, or even 50 per cent. of that matter. Section of the pneumo-gastric nerves and asphyxia have also appeared to M. Guillot to produce the same result.

Cure of Aneurism by Galvano-Puncture.

Case.—M. P. R., of the city of Plaisance, aged forty-one, of a strong constitution, was in the habit of playing with iron balls, which he threw up into the air and received on his extended arm. The consequence of this practice was a phlegmonous inflammation of the right forearm, and after the resolution of the phlogosis, a tumour of the size of a large walnut at the bend of the elbow. M. Restelli was called upon to attend the patient on September 27, and that physician detected in the swelling, pulsations isochronous with those of the arteries. Pressure above the tumour caused it to diminish, and, on the contrary, increased its size and the violence of its pulsations when exercised below. On examination with the stethoscope, a distinct *bruit de souffle* was heard at each arterial beat. An aneurism was therefore diagnosed, and M. Restelli determined to treat it by galvano-puncture. On the 28th of September, one element of the Bunsen pile was prepared, and two needles were introduced into the tumour. During twenty minutes a non-interrupted electrical current was passed through the aneurism, in which pulsation immediately ceased to be perceptible: its size gradually diminished, and on the 5th of November the patient was cured. Two very small eschars formed around the punctures made by the needles, and were healed one week after the operation.

M. Restilli recommends the use of a galvanic pile, composed of small but numerous discs, in order to diminish the development of heat, and at the same time to increase the coagulating power of the electrical fluid. The doctor also insists upon placing the needles in a direction contrary to that of the stream of blood to be arrested.

The Successors of M. Pariset.

The situation of "Sécretaire Perpétuel" of the Academy of Medicine is vacant by the death of M. Pariset: it is not only a most honourable post, it is also one to which a yearly salary of 6000 francs is attached. The following gentlemen are candidates for the office; it may not be uninteresting to our readers to become acquainted with the titles they bring forward in support of their claim:—

M. Bourdon, a physiologist, known by a paper on "Vomiting," and by two treatises of medical and compared physiology; also by a small volume on the German Spas.

M. Bousquet, more distinguished by the situations he occupies than by his scientific titles, is secretary of the council of the academy, and the the author of a short paper on vaccine and on the cowpox, discovered at Passy in 1837.

M. Dubois (d'Amiens), the late annual secretary of the academy, has written an excllent treatise on general pathology, and a philosophical history of hypochondriasis and hysteria, and some other works of minor importance.

M. Mélier, the present secretary of the academy, has written very little; however, his memoir on diseases of the uterus, and his report on the sanitary conditions of the manufacturers of tobacco in France, have attracted much attention.

M. Réveillé-Parise, the *feuilletontist* of the "Gazette Médicale," a correct and not inelegant writer, is the author of two volumes of physiology, of a treatise on the "Hygiene of the Eyes," and the editor of the "Letters of Guy-Patin."

M. Roche, one of the most ancient and ardent pupils of Broussais, has presided at the academy during the year 1846, and furnished to the medical dictionaries a large number of much-esteemed articles.

M. Royer-Collard, professor of hygiene at the School of Medicine, the grandson of the celebrated political character of the same name. M. R. Collard is unfortunately afflicted with a disease of the spinal chord, which has, within two years, almost deprived him of the use of his lower extremities. This circumstance will, very possibly, plead in his favour. All would be happy to see his election produce upon him the same effects which history informs us were brought on in the case of Sixtus V., by his preferment to the papal see, although that miraculous recovery can hardly be expected to occur a second time.

D. M'Carthy, D.M.P.

Development of Bone in the Falx in a Case of alleged Homicide.—A man, a weaver by trade, was, in a scuffle, thrown against a pile of straw, and while down was pressed upon by another man. During this time he was unable to speak, and on getting up he declared himself very ill, and made frequent attempts at vomiting. During the next day there was occasional sickness, and in the afternoon he was unable to answer when spoken to. Within twenty-four hours after the violence done him he expired, having been comatose for some hours before. At the *post-mortem* examination, by Dr. Selkirk, of Carlisle, there were no marks of violence discovered externally; the lungs were gorged with blood, giving out freely, when cut, a frothy sanguineous fluid. There were some crude tubercles in the upper part of the right lung, and the trachea, from the mouth to the bifurcation, was filled with a frothy sanguineous serosity. The brain was congested, otherwise healthy. Beneath the dura mater there was an extravasation of blood on the surface of both hemispheres: that on the right amounting to an ounce; that on the left more diffused, and somewhat smaller in quantity. *Between the hemispheres there were found three pieces of bone, two being small, the third about half an inch.* The heart was empty.

Malignant Tumour involving the Cranial Bones.—The patient was a man thirty-two years of age, and attended by Dr. Menzies and Mr. Spence. The tumour was situated at the right side of the head, and when first noticed it was not larger than a pea, but in the space of three months attained the size of an orange. Its external appearance was round and regular, owing to the dense covering of the scalp; but on manipulation it was found to be nodulated, soft, and elastic at different points. Its base was broad and undefined, and firmly attached to the skull. The patient had headache and vertigo when it first appeared, but his principal complaint was a severe pain in the right orbit and eyeball, and a peculiar difficulty which he felt in passing persons or objects placed on his left. No pain felt on pressing the tumour, nor did the pressure produce any effect on the pupils, which were sensible to the stimulus of light. Palliative measures were had recourse to, in order to relieve the pain in the orbits and headache, which, however, became more intense; and in a short time he was seized with convulsions, which succeeded each other rapidly till he died. On examining the head it was found that the surface of the tumour was closely invested by the aponeuroses and some of the muscular fibres of the occipito-frontalis and temporal muscles. On removing this covering, the external surface was seen to be lobulated, and varying in consistence at different parts, but generally soft and elastic. The tumour occupied nearly the posterior half of the right parietal bone and superior and right portion of the occipital, together with the part of the lamdoidal suture between these

bones. Its extreme length measured 5½ inches; breadth posteriorly, 5¼; and anteriorly, four inches. Internally it was limited towards the mesial line by the falx cerebri, which was much thickened. The dura mater to the right of the falx was completely destroyed by ulceration, the tumour having passed through it. Its cerebral aspect pressed upon the posterior and lateral part of the right hemisphere of the brain; the arachnoid was ulcerated, and the surface of the hemisphere was much softened, sloughy in appearance, and greatly flattened by the tumour. On making a lateral section of the hemisphere, the roof and floor of the right lateral ventricle were found closely pressed together; and on removing the posterior part of the roof, the upper surface of the right optic thalamus was found much flattened. The effects of the pressure were found to be limited to the right side of the cerebrum.

Scurvy.—"In some of the scorbutic patients," says Dr. Ritchie, one of the physicians of the Royal Infirmary, Glasgow, "admitted in the present epidemic, the infiltration of the legs by fibrinous or other effusion, and the consequent tension of the fasciæ and obstruction to the circulation, have been so great, as to suggest the occurrence of gangrene; and it is not improbable that, should we lose any by the disease, such may be one of the modes in which it will happen."

On the Presence of the Sugar of Milk in the Milk of the Carnivora.—Dumas inferred, from his experiments on the milk of the bitch, that though sugar was present in considerable proportion when the diet was vegetable, yet that the sugar disappeared entirely when the food consisted wholly of flesh. Dr. Bensch finds that this conclusion is erroneous: affirming, after careful experiments, that on long-continued exclusively animal diet the sugar does not disappear from the milk, and hence that the organism must possess the power of forming sugar of milk from the fatty or nitrogenous matter. He thinks that the difficulty of detecting sugar in the milk of dogs fed exclusively on an animal diet arises from the tendency of the phosphoric acid then present to convert the sugar of milk into uncrystallizable grape sugar, which, remaining with the extracts in a syrupy form, escapes observation.

Elaterium in Bright's Disease of the Kidney.—Rostan, in the Hôpital la Charité, has found elaterium of some advantage in this disease, though hardly coming up to the expectations he had formed of it. This he ascribes to the inefficiency of the drug to be met with at Paris, as compared with that sold in London, and he has taken steps to procure a supply of the more efficient article. The editor of the "Annales de Thérapeutic" considers elaterium so little known in France that he has transcribed in a recent number the principal part of Dr. Christison's account of this substance, as the only carefully-written article on the subject which he has met with.

Arsenic in Vinegar.—Deschamps found, on preparing pure acetic acid from wood vinegar, that the latter contained arsenic, which he ascribes to arseniferous sulphuric acid having been used in the manufacture of the pyroligneous acid. As wine vinegar is frequently strengthened with this, Chevalier was induced to examine several samples of ordinary vinegar, and found some of them to contain very perceptible quantities of arsenic.

Strangulated Hernia of the Cæcum.—Landsberg, of Breslau, relates a case occurring in a female, forty-one years of age, which proved fatal. Six months before, she had discovered a small tumour in the right groin, somewhat painful, which soon disappeared. The tumour reappeared after unusual exertion, with pain, constipation, and vomiting. On the eighth day after the attack, several stools having during this time been passed, after the use of the taxis, she had copious perspirations, painful and hurried breathing, thirst, pungent heat of surface, flushings of the face; pulse steady, and above 200; the hernial tumour, seated on the outside of the crural vessels, was three inches long, three-lobed, elastic at the base, not tympanitic; the skin was sound, and attempts at reduction painful. The symptoms increased and the patient died. At the autopsy, a crucial incision being made over the seat of the disease, a portion of the intestine was found displaced, which was soon recognised as the cæcal appendix. It was surrounded neither by hernial sack nor serosity; it projected across the internal crural aperture above the crural vessels; towards its free extremity it had a contraction, giving an appearance as if the appendix were divided into two parts; it was thickened, black, gorged with blood, and was more than two inches in diameter. A large quantity of feculent matter issued by the crural aperture, coming from the cæcum, the posterior surface of which was gangrened. The aperture of the cæcal appendix admitted the barrel of a quill, the extremity of which passed out by a preternatural passage beyond the contraction; neither liquid nor gas issued from the cavity of the appendix.—M.

Subperiosteal Extraction of Bones.—M. Larghi, principal surgeon of the Hospital of Kercell, observes that the end in view being to preserve the periosteum, in order to the production of a new bone, it should be our aim in extracting the solid portion of the bone to injure the membrane as little as possible. For this purpose it should be divided no further than is necessary for the removal of the bone. The portion to be removed is either short or long. If short, it is sufficient to make a longitudinal incision parallel to the length of the portion of bone to be extracted, and reaching its surface through a muscular interspace for the sake of preserving the muscles. This incision being made, the two borders of the divided periosteum are to be separated, which is the more easy, as it is already in part separated from the bone by the gelatinous fluid secreted for this very end; and the membrane is thus to be detached all round the bone. In this manner a passage is made for a band, which, by means of a flexible needle, is brought to encircle the bone. While successive tractions are made on the bone by means of this band, the muscles inserted into the periosteum, are thrown into contraction, and act in an opposite direction over the several points of the periosteum, whence a complete separation is effected. If there be any difficulty, the injection of warm water assists. On this plan Larghi has successfully extracted the osseous part of the eighth and ninth ribs in one patient, almost the whole of the right humerus in another, a part of the right ilium in a third, the lower part of the ulna in another, and several times the first phalangeal bone of the toe.

Death of a Newborn Child from Hypertrophy of the Thyroid Gland.—A robust and full-grown infant, born in a state of asphyxia, continued to respire in an abnormal manner even after the removal of the asphyxia. A dose of squill-juice occasioned vomiting, after which the child fell asleep. On awakening, the suffocative attack was renewed, the voice being hoarse and crowing. Deglutition was also impeded, the food being swallowed with difficulty, and with evident noise. A perceptible swelling occupied the neck. On the fourth night a suffocative attack terminated life. On dissection, the thyroid gland was found engorged with blood, and composed of a very compact parenchymatous substance, and was so much enlarged as to occupy the whole anterior region of the neck, its two horns extending above the lateral parts of the thyroid bone; its lateral borders reaching beyond the anterior margins of the sterno-mastoid muscles; the upper concave edge covering the larnyx, its lower the upper part of the sternal manubrium. Behind the thyroid gland there were seen two thick muscles surrounding the windpipe and throat throughout. The most considerable stricture of the trachea was at its lower part, while the rima glottidis was perfectly normal. At the bifurcation of the trachea a great quantity of dirty milk-like mucus was met with. The thymus was less developed; both lungs of normal appearance, with the exception of the top, which exhibited several more compact, somewhat liver like, dark red sports. The heart was deep red, and, as well as the pericardium, was engorged with venous blood. In the pericardium there was about a spoonful of yellow serum; the valve of the foramen ovale was not yet quite closed. There are two diseases which might have been confounded with that just described—asthma stridulum, and croup. These differ, however, in many points: the former, by its more tardy appearance, the non-permanency of the dyspnœa, the tetanic spasm, and complete interruption of the respiratory process at the close of life; the latter, by the normal deglutition, and, in common with the former, by its more tardy appearance.

Ligature of the Penis for Nocturnal Emissions.—M. Teisser relates the case of a young man, who, having been for a length of time treated unsuccessfully for nocturnal emissions, conceived the idea of tying a ribbon round the penis at night. The constriction produced during erection awoke the patient, who, by getting up, and emptying the bladder, was able to pass the night comfortably.

Tincture of Aconite in Rheumatism.—M. Magand gives the preference to the tincture, above the other preparations of aconite, in the treatment of rheumatism. He has tried its efficacy in several cases. The first was a young lady affected with occasional pains in the left arm, induced by atmospheric vicissitudes, and continued for four or five days in succession. These pains were completely removed by the administration of six drops of the tincture. The second was an old man subject to darting pains in the face and limbs. Being a robust man, blood was taken from the arm in the last attack, and six drops of the tincture were given every night and morning; the pains diminished, and disappeared in three days. The third was a person affected with chronic rheumatism in the lower limbs, the wrists, and the loins. The tincture was given in doses of six drops, gradually increased to thirty, three times a day, with perfect success.

Incision of the Os Uteri in Labour.—M. Nichet regards the above operation as warranted in puerperal convulsions, in which the extraction of the fœtus is deemed necessary when serious hemorrhage appears at the close of pregnancy, and the cervix remains undilatable; in contraction of the pelvis, when it has been ascertained by measurement that the application of the forceps will be necessary, and the neck does not readily dilate; and when the head is separated from the trunk, and remains within the womb, the rigidity of the neck not allowing of the introduction of the hand.

Wound of the Scrotum, with Hernia of the Testicle.—A young man fell from a tree upon a stake fixed below, which penetrated the scrotum, and tore it into two unequal parts. M. Ollivier, on his arrival, found both testes completely exposed, and the injured scrotum gangrenous in several points. The injury occupied its entire length from the perineum to the root of the penis. The patient was bled, strictly dieted, and purged. The parts being well sponged, the testicles were replaced, being kept *in situ* by ligatures. Next day a large portion of scrotum sloughed away, and the left testicle was again uncovered; and, from engorgement, it was found impossible to form a scrotal investment for it. Under these circumstances, the part was dressed with simple dressing, and in the course of two months the lost portion of the scrotum was entirely restored, the testicle becoming adherent.

Syrup of Hydrocyanic Acid.—Dr. Reich prepares it as follows:—Take of sweet almonds two ounces; immerse them for the space of a night in cold distilled water, and in the morning remove the skin by pressure of the finger and thumb; then pound the almonds in a deep mortar, adding two ounces of the purest sugar. Pound together in a mortar, either of porcelain or marble; then by degrees add distilled water two ounces, and strain with the application of slight force. To this emulsion add sugar of the purest kind two ounces, and promote solution by mixture alone, heat being avoided. To four ounces of this

syrup add seventeen grains of amygdaline, and rub together in a porcelain mortar. Much of the syrup need not be kept ready prepared, as its extemporaneous formation is so easy. An ounce contains a quarter of a grain of real prussic acid.

Ishuria Neonatorum.—A child died the thirteenth day after birth, and for the last five passed, while under the care of Dr. Bednar, no urine. It is not known if he passed any on the previous days. Dissection showed that the caput gallinaginis, instead of passing into a prominence, ended in two branches, which again divided into a great number of little folds, and was here branched at its anterior extremity into two mucus valves running along the walls of the urethra, from behind, downwards and forwards, towards the middle space, where they united together. The two crescentic valves, with their concavity looking towards the bladder, included between their combined terminations a very narrow fissure, running necessarily from behind forwards. From the structure it is evident that, whenever the bladder contracted on the urine, the concavity of the valves became filled with it, and the fissure between them being completed by their distention, not a drop could issue beyond. It was easy to pass a thick probe from the anterior part of the urethra into the bladder, but when the probe was passed from the bladder it was impossible to reach the urethra without the assistance of the eye, the probe being otherwise continually thrown back by the valves. The urinary bladder was hypertrophied, its usual thickness being trebled, the thickening being principally in the muscular coat. On the inner surface of the bladder there were an incipient tubercular tissue, some little previous dilatations, and a great sack with a sphincter-like opening at the termination of the left ureter. The remaining portion was dilated and thickened; the renal substance was atrophied.

Iodide of Potassium in Hemiplegia.—The patient was a female, in the Hôpital la Charité, under M. Briquet. The disease had existed for two years, before which she enjoyed good health. When admitted, there were complete loss of feeling over the whole of one side, and, to a considerable extent, loss of motion; the attack had been preceded for a few days by vertigo, and by convulsive movements of the face. The diagnosis was that the disease depended on a syphilitic tumour (exostosis or periostosis) at the base of cranium, and the patient was put under full doses of iodide of potassium. The treatment was continued for two months, in doses increased from ten to eighteen grains a day, with the most striking success. There is now hardly any remains of the disease, except that the integuments over the great pectoral and in the clavicular region of the left side are still insensible, and the tongue still turns a little to the right when put out. The same treatment is still continued, with progressive improvement. The patient denies that she ever had syphilis.

Spontaneous Evolution.—Dr. Keiller related to the Edinburgh Obstetrical Society the case of a woman whom he attended during labour, and to whom he was not summoned till the case had assumed the following aspect:—The liquor amnii discharged, a large swollen arm occupying the passages, the os uteri firmly grasping the obtruded shoulder, and the uterine contractions unusually violent and continuous. Repeated attempts to insinuate the hand, to effect turning, failed; and notwithstanding the free use of opium, the uterine contractions continued, when, during a violent pain, the arm was suddenly withdrawn, and the feet and body almost simultaneously expelled—a rapid and complete evolution having spontaneously occurred. The child was dead, but the mother made a good recovery.

Belladonna in Orchitis.—Dr. Philippe, chief surgeon to the Military Hospital at Bordeaux, uses an ointment, consisting of one part of the extract of belladonna to three of lard, for the cure of inflammation of the testicle, when arising from direct injury, or as the result of urethritis. It is found to be most useful when the acute inflammatory symptoms have been previously subdued, or in cases where induration and thickening of the epididymis remain after other treatment. Half a drachm of the ointment is rubbed into the scrotum twice daily, the inunction being continued for five minutes each time. The mean period of cure was five days, in thirty cases thus treated. The ointment has been also used with great success in the treatment of buboes.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription,* 13*s.*; *Quarterly,* 6*s.* 6*d.*

A Poor-law Medical Officer.—*It is evident that the services of the profession are not properly estimated, or remunerated. No officers connected with unions have such niggardly sums doled out to them as the surgeons. As the lives of paupers appear to be of little value in the eyes of certain parties, they allow but pitiable sums for attendance and medicines in their illness. If the members of the profession would only unite to resist every act of injustice towards them, better remuneration for their services would inevitably follow.*

A Dublin Surgeon.—*The reply of the Lord Lieutenant exhibits the apathy of the authorities to increase the rate of pay. The conflict having commenced, we trust that no medical man will be found to betray the interests of his profession into the hands of its opponents. Patience and perseverance will accomplish wonders.*

A Student. 1. *The matriculation examination is just over.* 2. *The information required may be obtained from Taylor and Walton, booksellers, Gower-street.* 3. *University College is not the University any more than King's; there are other colleges, also, in different parts of the kingdom connected with the University.*

A Regular Reader.—*The information was given in the* Medical Times *a fortnight ago; the appointment is one open to all qualified practitioners, and is sought after not so much on account of the salary connected with it, as the honour.*

M. D., Assistant-Surgeon of the Royal Navy.—*We are much obliged for the compliment; our desire is to see the whole professional body duly honoured and rewarded, and we shall not cease using our best efforts to accomplish this. We thank our correspondent for his information, and shall not fail to make use of it in a short time.*

Mr. Joseph Orton.—*The amount cannot be recovered, and the expenses incurred must be placed among the items of a bad debt.*

M.R.C.S. and L.A.S.—*A gentleman who possesses only the Apothecaries' license is a duly-qualified practitioner; there is scarcely one who, with a single qualification, is not also educated in the art and science of surgery. The council of the College of Surgeons has done a great injury to their diploma by the statements which they have made in reference to it from time to time; and the consequence is that many now refuse to pass an examination for it, though, by not possessing it, they are placed under the disadvantage of not being eligible for Government situations.*

An M. D., of St. Andrew's.—*We have no doubt that the examination is one of a searching nature; the number of rejections is not a true criterion of the amount of information required to possess the diploma sought after. There is a good deal of caprice in examiners as well as others. The fate of Mason Good, and John Armstrong, shows that the rejected are not always the least informed of the candidates.*

Dr. Orpen, Birkenhead.—*The communication has been received.*

H. M. L.—*Midwifery is a part of professional duties undertaken by the general practitioner. The pure surgeon repudiates it. We cannot understand what a person is, with the Apothecaries' license, if he is not a general practitioner. Druggists now occupy the place of the apothecaries of former times.*

Mr. T. Mayhew.—*The steam jet has been employed with success in ventilating buildings. We believe that this method is used for ventilating the new House of Lords.*

S. S., Maidstone.—*We cannot, without considerable alteration, insert the paper, and then it must be authenticated.*

A Bachelor.—*Oxford and Cambridge, as schools of medicine, are below mediocrity. Downing, in Cambridge, is the principal college for medical students. Addenbrook Hospital, we think, contains about eighty beds.*

A Surgeon.—*The information can best be obtained of Mr. Balfour, at the College of Surgeons. It is not within our province to undertake the inquiry.*

Georgius, Hoxton.—*At the Polytechnic Institution there are exhibited experiments on electricity produced by the action of steam.*

Mr. S. Alport.—*Chemical analysis, to be dexterously and successfully practised, should be frequently performed. The law allows only one guinea for a* post-mortem *examination, at a coroner's inquest, if an analysis is connected with it. This is another proof of the liberality of the Government to the profession—much time, trouble, and expense being often required to bring to light facts which are necessary to be known in order to the conviction of the guilty.*

T. S., Greenwich.—*We are sorry for our correspondent, and would recommend him by all means to observe the strictest temperance; at the same time to consult some medical practitioner in the neighbourhood, as we make it an invariable rule never to prescribe through our columns.*

Discipulus.—*For beginners, Comstock's, published by Simpkin, Marshall, and Co.*

Mr. T. Walker, Maiden-lane.—*King's College Hospital.*

W. W., Leominster.—*Danson, published by Hughes, St. Martin's-lane.*

Civis Academiæ Edinburgenæ, Manchester.—*We would advise our correspondent to procure the license. With the education which he possesses, we should think he would not fail to pass an examination without "procuring the most approved text-books now in use amongst embryonic apothecaries."*

Truthseeker *says that "A paragraph in your correspondence of the 5th of June has just met my eye, in which 'Truthseeker' is stated to have recanted the opinions conveyed in the letter alluded to. May I request you to compare the handwriting, and you will easily discover that the* misnamed truthseeker *of the 5th of June is some unprincipled person."*

Letters and communications have also been received from Mr. T. Mayhew; S. S., Maidstone; A. Bachelor; A Surgeon; Georgius, Hoxton; Mr. S. Alport; T. S., Greenwich; Discipulus; Mr. T. Walker, Maiden-lane; W. W., Leominster; An M.D. of St. Andrew's; M.R.C.S. and L.A.S.; Mr. Joseph Orton, M.D., Assistant-Surgeon of the Royal Navy; A Regular Reader; A Student; A Dublin Surgeon; A Poor-law Medical Officer; Truthseeker; H. M. L.; Civis Academiæ Edinburgenæ, Manchester; Dr. Orpen, Birkenhead.

THE MEDICAL TIMES.

SATURDAY, JULY 24, 1847.

THE ARMY AND NAVY MEDICAL SERVICES.

There are officers in the service of their country whose duties are as honourable and useful as any upon whom the highest rewards are bestowed, but who, from peculiar circumstances, are doomed to experience public neglect. The cause

of this injustice is, without doubt, oftentimes to be attributed to the force of habit, by which a science, however beneficial, whose advantages are recently developed, fails to make that impression on the public which one that is ancient and useful does. War has been the employment of men from remote ages, and those who have proved successful in battle, through their skill and courage, have been, for thousands of generations, applauded and honoured. The names of heroes live on the page of history, and even now their exploits are more intensely admired than the actions of those who gave to the world a knowledge of the sciences which are the fountains of prosperity and happiness. We cannot wonder that barbarous nations should consider strength, courage, and success, a trinity of perfections entitled to receive supreme veneration and the most costly gifts; but it is not for nations advanced in civilization to view those attributes as alone worthy of entire regard.

There are benefactors as useful to the commonwealth as military chieftains; and it is the duty of an intelligent people to break through habits engendered by an antiquated barbarism, and to reward every man according to his deserts. The blessings which medical science confers upon mankind are as great and permanent as military conquests, and the successful cultivators of it are as much entitled to reward. There is no class of society—no branch of the public service—that is not dependent upon it for occasional help; and yet, up to the present time, the members of the medical profession have little cause for thankfulness, either to the Government or to the people, on account of what they have done for them. Both have given but sorry rewards to medical practitioners for the benefits which they have been instrumental in conferring upon the community, and both have evinced a reprehensible tardiness in recognising their claims to honorary distinctions.

True it is that, as a science, medicine dates its origin from a period remote in the history of the world; but it was doomed for upwards of twelve centuries to experience a living death, through the baneful influence of error and superstition. Its revivification has taken place in these modern times, and so strange are the demands which it now makes, that, though their justice is tacitly acknowledged, its requirements have been almost disregarded. The cultivators of medical science have yet to overcome the apathy of governments, and to win their way to public honours; and the success of their cause will be in exact proportion to the advance of civilization, affording at the same time no better criterion by which to judge of its progress amongst a people. In our own country the Government can no longer allow their medical officers to remain in a position of contemptible mediocrity, without powerful remonstrances against the injustice. The claims of the army surgeons to the same honours which have been awarded to the heroes of the Peninsula, with whom they served, have been advocated not only by the medical and general press, but by military officers in the British Parliament. If the advocates have not now obtained for their clients all the honours to which they are entitled, they have at least taught the Government a lesson that they cannot much longer withhold from their medical servants that which is their due.

And not only is justice asked for army surgeons, but also for navy assistants. What is demanded for them is the treatment of gentlemen and officers. It may be all very well for the midshipmen to undergo an incubation in the gunroom, in order that they may eventually come forth full-fledged officers of her Majesty's navy; but the assistant-surgeon is something more than an embryo chicken. He wants none of this marine incubation to make him a gentleman, a scholar, and an officer; the attributes of each he possessed the first moment he set his foot on the quarter-deck, or his visit there would be very unwelcome and very brief. He does not go into the navy to learn the first principles of his profession, as his messmates do; already is he in the possession of a diploma which not only authorizes him to practise the healing art, but is a guarantee that he has received an amount of instruction in the academies of medicine calculated to fit him for an efficient discharge of his important engagements. The Government can now offer no valid excuse for consigning him to their naval hades, where he has to remain an indefinite period before he is considered fit for the society of the regions above. What else is this but a cruel purgatory for body and spirit, out of which the earnest entreaties of his brethren alone can deliver him.

In times gone by, when the Government was pressed for the want of medical officers, and when oftentimes it was compelled to accept the services of those whose education had been defective, there was some show of reason for placing the assistant-surgeon with mates and midshipmen, and volunteers and clerks. Now, my Lords of the Admiralty can pick and choose from amongst graduates of universities and members of colleges; and thus, having servants with higher collegiate qualifications, they should certainly give them better treatment. Everything connected with the gunroom marks its inferiority. There the surgeon has for companions the mates, the midshipmen, the second master and his assistants, volunteers, and clerks—naval "gentlemen" by courtesy, but wanting a commission to make them officers. These mess together *under* the wardroom, and close to the cockpit—and, still further to mark their inferiority, their meals are served at the same time as the ship's company generally, at the hour of noon, and the exciting strains of the drum and fife playing the tune of "The Roast Beef of Old England," are not permitted to summon them to their repast. Now, we should like to know the reason why the members of our profession, serving in the capacity of assistants on board her Majesty's ships, are thus to be treated? Why the Government should compel them to companion with boys during the day, and to swing in a hammock by night?—why no opportunities should be afforded them of cultivating their professional studies without the danger of interruption from thoughtless and boisterous youths? To allow such a state of things any longer to exist would be derogatory to the whole profession.

The gentlemen whose cause we now plead are our representatives in a particular department of her Majesty's service; and, if we permit them further to be quietly insulted, it will show not only a spirit unbecoming enlightened and honourable minds, but will assuredly expose the whole medical community to anything but respectable treatment from the members of the Executive. Let the surgeons in the army remember the recent slight put upon them, which should be a powerful stimulus to urge them to untiring exertions for their brethren acting as subordinates in the navy. Let the medical officers in this service, who enjoy the privileges of the wardroom, call to mind their former degradation, and endeavour to avenge the insult offered to themselves by seeking to rescue their assistants from their present degrading bondage. Let the members of the profession, who are civilians under the control of the Government, remember the wretched remuneration which they receive; and, in order to the removal of their own yoke, assist in taking it from the necks of others. Let the general practitioners of the empire treasure up in their bosoms the efforts that have been employed to make them bite the dust, and let them show that they will never have the foot upon their own necks, by coming to the rescue of those who are already prostrate. Let the assistant-surgeons themselves exhibit a regard for their own high calling, by unceasingly struggling to obtain that honourable position to which they are entitled, and which they most assuredly will secure, if they resolutely seek it. While the members of the profession generally come forward to their help, it is expected that no supineness will be manifested by those whose cause is advocated. We shall then speedily see them emancipated from the companionship of those embryo naval officers who, while occupants of the gunroom, "receive for half-pay three farthings per annum, payable quarterly, to puzzle the clerks."

THE IRISH MEDICAL PROTEST.

Fever is, at the present time, raging in Ireland to a fearful extent cutting down, on the right hand and on the left, the high and low, the rich and poor. The hospitals are full, the number of sheds erected are inadequate to contain all the victims of the direful pestilence, and multitudes are lying about the streets, unable to obtain a bed upon which they may lie down and die. At this terrible crisis, the Government has solicited the aid of the medical profession of that country, that their skill may be employed in combating the frightful ravages of disease, and in alleviating the sufferings of those who have the misfortune to be afflicted. The result is, that a misunderstanding has occurred between the members of the profession and the Government, which has led to the presentation of a manifesto to the Lord Lieutenant, signed by 1106 physicians and surgeons. To this medical representation we beg to direct especial attention, as it brings forward the points at issue between the two parties, and enables us to judge of the liberality of the Government in rewarding those who are called to peril their lives in attending upon the sick.

The representation commences with the declaration "that the zeal and efficiency with which the medical profession of Ireland has discharged their duties, together with their importance to the public welfare, eminently entitle that profession to the protection and support of the Government."

It is very satisfactory to observe the spirited and dignified commencement of the manifesto. It utters truths which the Govenment is dared to deny if it can. Throughout the United Kingdoms the medical profession is renowned as a body for the discharge of their duties both zealously and efficiently. The members set their hearts upon their work, which enables them to brave danger, and, their minds being well stored with learning and experience, the various accidents and diseases which they are called to attend are treated in accordance with the principles

of true science. This being the case, they are certainly entitled to the protection and support of the Government. No country can be prosperous or happy without health; and we say deliberately that there is no body of men throughout Great Britain and Ireland who have done so much good in promoting the physical and general welfare of the people, as medical practitioners. They have indirectly secured the enactment of good laws, have been the means of beautifying and rendering salubrious our large cities, and have banished a vast amount of disease from the cottages of the poor. Even now they are the principal champions of sanitary reform, and are backing the Government, heart and hand, against the attacks of inhuman monopolists. If these things do not entitle them to the protection and support of the Executive, then are we at a loss to conjecture what will. But we shall see what protection and support they have received. The statistical returns, for upwards of twenty-five years, exhibit a fearful mortality from fever among the medical men of Ireland; and no class of the community has been exposed to more dangers, or has exhibited more readiness and courage to enter into them. Why, the courage of a military man is nothing to be compared to that which is required from the physician. The roar of artillery and the exciting strains of music, with all the pomp and circumstance of war, stir up the one to a frenzied desire for glory; while the other beholds the ghastly countenance, hears the groans of the sorrowful and dying, scents the foul and pestilential air which introduces into the vital current the germs of disease, that may, perchance, speedily prostrate him in death. And what are the rewards of Government? Does it adopt the same mode of proceeding towards the medical as the military or other professions? There are good livings and bishoprics for the clergy, chancellorships and other nice berths for the lawyer, coronets and costly gifts for the soldier; but, as the manifesto declares, "The members of the medical profession have reason to complain that they sustain hardship and injustice when employed in the public service, in some instances being *denied any remuneration whatever* for such services, or are constrained to accept sums utterly disproportionate to the duties they are compelled to discharge." All the medical men of the empire are thus rewarded—their lives and skill, as we shall presently see, being estimated at five shillings per day in Ireland, and about the same value put upon them throughout England and Wales. "We strongly protest," say the memorialists, "against the amount of remuneration offered by the Board of Health to physicians and surgeons for attending fever hospitals during the present epidemic; as, in some instances, five shillings per day have been offered for the discharge of that onerous, responsible, and dangerous duty." Protest! yes; and we earnestly hope that they will continue to do so, and that the medical practitioners on this side of the water will, for their own sakes, back their efforts to raise themselves from the degrading position in which certain public functionaries would place them. Now, we should like that the gentlemen who entertain such liberal views of the value of medical life and skill should be compelled for an hour each day to accompany one or other of the medical attendants, whom they would thus pay, in order that their eyes may be saluted with the same sights, and their noses with the same scents. Only one hour, we have no doubt, would make them very humbly cry *peccavi*, and would lead them cheerfully to award to the medical attendants *four times* the amount they now do.

We are aware that the members of the profession will have to encounter difficulties of no ordinary kind, in endeavouring to obtain a proper reward for their services. Their philanthropy will be called in question, and they will be accused of a sordid love of gold. They must be prepared to brave unjust insinuations, and to maintain perseveringly their right to fair remuneration. Their knowledge has been purchased at no mean sum, and surely its exercise ought to be paid for in a just proportion. While we thus speak, we are aware that no pecuniary remuneration would be an equivalent in many instances for the services rendered by the profession to the public: it ought not, therefore, to be treated either disrespectfully or unjustly.

We are glad to see that our Irish brethren are resolved not to be insulted, and tamely submit. There is pluck and bottom about them, which, no doubt, have put the members of the Government into a little fluster; and the English members of the profession are equally prepared to assert and maintain their rights. We have been oppressed because we have been divided, and it only requires union to obtain respect, privileges, and rewards. We have been long enough in the school of adversity to teach us this, and there are signs which indicate the arrival of better days. Unity and resolution will make the Government and the public value medical services more, and reward them better.

THE VALUE OF THE APOTHECARIES' LICENSE.

[To the Editor of the Medical Times.]

SIR,—Your remarks in last week's journal on the uselessness of the license of Apothecaries' Hall, as a protection to its members, is most strikingly exemplified in this neighbourhood, where there are two unqualified practitioners to one qualified. Repeated remonstrances have been made to the society, but with no result, as the evil is on the increase; and the chemists are now sending out labels, and giving out to the world that they are qualified to practise; and, to delude the ignorant, place the Pharmaceutical certificate, handsomely framed, in some conspicuous part of their shop, and state it to be a license to practise. This has been done to a great extent lately, in the belief that Wakley's abortion would become the law, which happily is not yet the case, and I with many others trust will not be, as it would to some extent countenance their audacious conduct.

Pray, sir, urge the committee of the National Society to take the matter up, as I know many will secede from it if they do not. They profess to assist their members in checking illegal practice, but they have done nothing; yet they would treble their numbers if they showed a disposition to carry out only that one promise. I have to-day conversed with four members, who I see have subscribed their guinea, and they state their firm determination not to continue subscribers, unless a distinct pledge be held out by the council to assist in carrying out the penal clause of the Apothecaries' Act; while, at the same time, they would willingly double the amount if something be done to assist in extirpating the horde of empirics that practise in this neighbourhood.

As a constant subscriber to your valuable publication, I thank you for the efforts you have made, and trust you will persevere in the course. At the same time, much remains to be done, and, while some of us are calling out for a collegiate establishment, the pirates are destroying the very means which would enable us to give respect and dignity to it. It is the fable of the "Dog and Shadow" with a vengeance; therefore, urge by all means the protection of the members, and then a phalanx will be formed that will put a new face upon matters, and we shall have our rights in spite of college traitors and pettifogging politicians.

Yours most respectfully, in haste,

A GENERAL PRACTITIONER WITH TWO TAILS.

Bethnal-green, July 19.

COLLEGE OF SURGEONS.

PETITION OF GEORGE JAMES GUTHRIE.

THE HUMBLE PETITION OF GEORGE JAMES GUTHRIE, ONE OF THE COUNCIL AND LATE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND,

Showeth—

That your petitioner having petitioned your honourable House, on two different occasions, against any medical legislation taking place until inquiry had been made into the nature of the new charter lately granted to the College of Surgeons, and which inquiry he considers necessary for the due administration of justice, naturally, and he hopes not unreasonably, expected to be examined by the committee appointed by your honourable House "to inquire into the registration of legally-qualified practitioners of medicine and surgery, and into the laws and charters relating to the practice of medicine and surgery in Great Britain and Ireland," in preference to others who had not so petitioned.

Your petitioner, on hearing that your committee had only summoned before them such gentlemen as were known to support the parts of the charter of the College of Surgeons which he had condemned as unjust towards the profession at large, addressed the following letter to the chairman:—

(Copy.)

4, Berkeley-street, Berkeley-square, July 9, 1847.

SIR,—I had the honour of addressing a letter to you on the 10th ultimo, requesting to be examined before the Committee on Medical Registration, over which you preside, against any legislation taking place until the charter lately granted to the College of Surgeons of England should be inquired into, being under the belief that the evidence thus given would demonstrate the defective principles on which the bills introduced into Parliament by Sir James Graham and Mr. Wakley are founded.

My letter was written from my being aware that the president and council of the College had very honourably abstained from making any application whatever, either directly or indirectly, to you or any other member of your committee, for the examination of any one of their members; and I should not presume to draw attention to the fact of two junior members of the council having been selected for examination, in preference to Mr. Keate, Mr. Vincent, and myself, the three seniors, if it were not that, if the approaching termination of the session should bring the labours of the committee to a close, the evidence taken will embrace and bring before the public the views of only one party in the cou[illegible] If the committee should be unable to give me opportunity of proving the very illiberal and unjust nature of the charter and the by-laws emanating from it, and which nine-tenths of the members of the College condemn, I then pray the committee will be pleased to place this letter on their minutes, in order that those officers of the public service, members of the College, who have requested me to maintain those just and vested rights and interests which have been so improperly violated, may at least have the satisfaction of knowing that I have made every effort in my power to obtain for them a public hearing.

(Signed) G. J. GUTHRIE.

Your petitioner humbly prays, that as your committee have not been able to hear him, your honourable House will give him an opportunity of proving that illiberality and injustice with which nearly the whole of the members of the College of Surgeons have been treated, and of which so many have complained by petition to your honourable House.

July 19, 1847. G. J. GUTHRIE.

INQUEST ON MISS SOPHIA DALLETT, AT PUTNEY.

It is right to premise that this inquest was called at the instigation of Dr. Cormack, the attendant of the deceased (the daughter of a most respectable inhabitant of Putney), as there had been much obscurity in the case, not only to justify his own treatment, but even to defend it from a supposition, which it seems had got abroad (by no means an unusual circumstance in these cases), that it had proved more fatal than the disease.

The important facts elicited at the first meeting of the jury were, of course, more fully detailed at the adjourned investigation, when, in obedience to the coroner's warrant, a *post-mortem* examination had been made. This second inquiry took place at ten A.M., on Wednesday the 14th instant, before Mr. Carter, the coroner, and a most respectable jury, at the Rising Sun Tavern, in the town. The medical men present were Dr. Cormack, Dr. Robert Willis, Dr. Wane and Mr. Shilitoe—the two latter having been directed by the coroner to make the examination—and Mr. Bushell, of Kennington, who had been present at the *post-mortem* examination (as we understood) at the request of the friends. Mr. Kempster, the solicitor to the family, was likewise present during the investigation.

On the resumption of the inquiry, Dr. Cormack's former evidence was read over to him by the coroner: it was to the effect that he had been called to attend Miss Sophia Dallett, for the first time, on Tuesday the 6th instant, at ten in the forenoon, when he found her complaining of severe abdominal pain and distressing retching; for which he ordered her a mixture containing a small quantity of the muriate of morphia, one half to be taken immediately, the other half in two hours' time; and subsequently a mixture containing creasote to control the sickness, one half to be taken immediately, the other a short time after, should the sickness not be checked; that he was again sent for about four in the afternoon, when, finding the symptoms not materially relieved, he ordered three pills of pulv opii and ext. hyoscyami, one to be taken every hour, and a liniment composed of sp. terebinth. lin., sesquicarb. ammoniæ, et tinct. opii; to be applied to the abdomen; that he was peremptorily summoned about four o'clock on the following morning, when he found his patient in a state which he conceived to be that of narcotism—she being insensible to questions unless very loudly put, the most utter prostration, with a scarcely appreciable pulse; conceiving this to be the effect of the opiate treatment, both external and internal (although but ʒjss. had been used in the former way, and not more than half a grain administered in the latter), he emptied the stomach by an emetic of sulphate and zinc, and then endeavoured to bring about reaction by means of brandy and wine; that he staid with his patient upwards of three hours, causing her to pace her apartment, when, finding his efforts were altogether unavailing, and that he was himself becoming exhausted, he sent for his friend, Dr. Wane, to relieve him—shortly after the arrival of whom, between eight and nine o'clock, the young lady expired.

These minutes having been confirmed,

Dr. Cormack now stated, in answer to questions put to him, that he was a graduate of the University of Edinburgh, and a Fellow of the Royal College of Physicians of Edinburgh; that he had been in practice upwards of twelve years; that he now considered that the unfortunate subject of the investigation was not labouring under narcotism, as he was at first induced to suppose, but that she was suffering from an attack of fever, to which the symptoms described were owing; that he had had great experience in the treatment of fever, in consequence of his connection for a long period with the Fever Hospital of Edinburgh; that fever was constantly attended by enteritic mischief, in proof of which he read a quotation from a work by Dr. Watson, of King's College, London; considered that his treatment had been careful and judicious; as a *post-mortem* examination had been made, would refer the coroner and jury to the gentlemen who had been deputed to make that examination, for an opinion of what had proved fatal to the patient, founded on the particulars thereby disclosed.

Emma Peto examined: Is servant to Mr. Dallett; remembers being sent for Dr. Cormack, about ten on Tuesday morning, and subsequently to his surgery for some medicine, on which occasion she received two mixtures from the assistant; was sent again about four P.M. for Dr. Cormack, and after his visit for the medicine, when she got from the assistant a vial and a box of pills, which were compounded in her presence. Took these home and gave them to Miss Dallett (the elder sister of the patient), who, finding that the pills were directed to be taken one every night instead of one every hour, as Dr. Cormack had mentioned, sent her back with them to mention the circumstance, when the assistant remarked that the error was merely in the direction, which having altered, he returned the box. The assistant weighed but one of the articles he used for the pills; is sure he did not weigh more.

Henry Hicks was now called in, and examined: Is visiting and dispensing assistant to Dr. Cormack; has been with him about six weeks; is fifty-four years of age; has had great experience in the compounding of medicine; is a member of the profession, qualified by being in practice before the act of 1815; recollects making up the following prescriptions:—

℞. Sol. mur. morphiæ, gtt. xij.; tinct. aurantii, ʒj.; misturæ camphoræ, ℥xij. M. half to be taken immediately, the other in two hours; likewise, at the same time, a mixture composed f creasote, a half of which was directed to be taken if the vomiting continued; and after the second visit of Dr. Cormack the following liniment and pills:—

℞. Sp. terebinth. lin., sesquicarb. ammoniæ, aa. ℥v.; tinct. opii, ʒij. M. to be applied to the abdomen.

℞. Pulv. opii, ext. hyoscyami, aa. gr. $\frac{1}{2}$; mucilag. acaciæ, q. s. fit. pil. iij., one to be taken every hour.

Can swear that these prescriptions were all accurately compounded; that he weighed both articles; omitted the mucilage, the extract being sufficiently soft to make the pills; is confident that there was no error whatever in the dispensing of the pills.

Coroner: How came it, then, that the servant was sent back with them?

Witness: Oh, yes, I believe that I did misdirect them in the hurry of business, but in other particulars they were perfectly correct.

Mr. Bushell: Are you confident that you did not commit the error of supposing that the ingredients ordered for the three pills were to constitute one, and that you did not act upon this supposition?

Witness: I am quite confident that I did not.

Mr. Bushell: You say that you weighed the two articles; pray how did you weigh the extract, as it was soft enough to make the pills without the aid of mucilage, that it did not stick to the scale?

Witness: I weighed it upon a piece of paper.

Mr. Bushell remarked that it was strange this had not attracted the notice of the servant. He then inquired the size of the pills.

Witness replied that they were about the size of a blanket-pin's head.

Daniel Wane was then called: Is a medical doctor, resident in Putney; has been in practice now several years, prior to which, from his official connection with several large institutions, had extensive opportunities of acquiring a knowledge of disease; was sent for by Dr. Cormack, to relieve him in his attendance on Miss Dallett, about seven o'clock A.M.; found her sitting on a chair on the landing, outside her room-door, perfectly insensible; considered her in great danger; conceived, with Dr. Cormack, that she was labouring under narcotism from the opiate administered and absorbed; gave another sulphate of zinc emetic, which, however, produced no alteration of symptoms; applied sinapism over the stomach; administered strong coffee, irritated the fauces with a feather, put the hands and feet into warm water, and intended to use the stomach-pump in twenty minutes after these means, if there were no improvement; about this time, however, the patient expired. Thought at the time, and thinks still, the treatment judicious for the symptoms under the supposition to which they naturally gave rise; on walking with Dr. Cormack, after the decease, he expressed an opinion that the disease had been that of cholera; the treatment would not have been the same had the symptoms been considered to result from morbid and not medicinal action. Dr. Shilitoe was subsequently sent to his assistance by Dr. Cormack; made an inspection of the body in company with Mr. Shilitoe, by the coroner's order, at which the following report was drawn up and signed, as well as by themselves, by Dr. Robert Willis, of Barnes; Dr. Shilitoe, Dr. Cormack, and Mr. Bushell, which witness now read:—

POST-MORTEM EXAMINATION OF SOPHIA DALLETT, MADE JULY 10, 1847, HALF-PAST THREE P.M.

External Appearances.—Integuments of the abdomen of a somewhat greenish hue, from decomposition; there was some lividity of the back, arms, neck, lips, and trunk; the articulations of the upper extremities were flaccid; there was rigidity of the trunk and lower extremities; no emaciation existed; the general habit was slender; the mammæ were well developed; there was hair on the pubes and under the axilla.

Head.—The vessels of the dura mater were turgid, and, when cut, there was free effusion of blood; there was very great congestion of the vessels of the pia mater; a very slight degree of subarachnoid effusion was observed; the consistence of the encephalon was tolerably firm. On dividing the vessels at the base of the brain, there was a copious flow of blood, with fetid air; numerous bloody points were seen on making a section of both hemispheres; there was less than the usual quantity of fluid in the lateral ventricles, and this effusion was stained with blood; the choroid plexus and internal surface of the ventricles were congested. The base of the brain was next examined: there was general congestion of the vessels; the encephalon was very carefully examined in every part, and it was found not to present any further appearance of disease.

Chest.—On opening the left pleural cavity, about two ounces of bloody serum were seen; there was no fluid in the right cavity; general adhesions of old standing existed between the pleura pulmonalis and pleura costalis of the right side; cadaveric congestion of the posterior part of both lungs existed; there was very little serum in the pericardium, which was healthy.

Abdomen.—The intestines, generally, were distended with gas; the small intestines in various parts were of a bright red and blotched appearance, which appearance presented itself in a more marked degree when the intestines were raised; adhesions from bands of very recently effused coagulable lymph were observed, and in one part the intestine was coated with coagulable lymph; a small quantity of turbid, bloody fluid was found in the lower part of the abdominal cavity; the redness of the small intestines was more remarkable towards the lower portions. On slitting open the small intestines, a very marked, congested, red state was noticed on many parts of the mucous membrane—the result or evidence of inflammation. The glands of Peyer and the solitary glands were of unusual size and distinctness. This unnatural state increased as the great intestine was approached, so that the mucous membrane of the upper extremity of the small intestine, to the extent of ten or twelve inches, appeared thickened; this portion of intestine was also the seat of several distinct ulcerations. The mucous membrane of the ileo-cæcal valve was red, and much thickened; the mucous membrane of the large intestines (through

was in a state indicating congestion ...tion; the peritoneal coat of the ...stines was natural; the liver was ...y, and the gall-bladder was distended with ...; the spleen was larger than natural; the kidneys were healthy; the stomach, externally, was of a reddish colour, and internally of the same hue, partly owing to congestion with blood, and partly dependent on (sanguineous?) staining. The stomach contained about an ounce of fluid. The intestines contained little but air.

From what the *post-mortem* examination revealed, witness is now of opinion that the symptoms preceding death were not those of narcotism, but of cerebral derangement or fever, which, together with enteritis and peritonitis, destroyed the patient; considers the plan of treatment adopted by Dr. Cormack the best that could have been devised.

Mr. Bushell inquired of witness if exhaustion did not proceed rapidly under the treatment he had personally witnessed? Witness replied, Not more so than was to be expected.

Mr. Bushell: Pray are cerebral congestion and peritonitis frequently coexistent?

Witness: Decidedly.

Mr. Bushell: From the *post-mortem* appearances, was there not enough to produce speedy death, in all probability, whatever treatment had been adopted? I ask this in fairness to Dr. Cormack.

Witness: I really cannot say.

Mr. Shillitoe and Dr. Willis confirmed the opinion of the last witness, both indubitably expressing their conviction that death had resulted from no improper or injudicious treatment, but was consequent upon intestinal and peritoneal mischief set up by fever.

The Coroner hereupon addressed the jury, and expressed his belief that any doubts previously entertained relative to the unsoundness or unsafety of the medical treatment which had been adopted towards deceased must, after the investigation that had been made, be entirely removed from the mind, and submitted to them the propriety of returning a verdict in accordance with this view: a recommendation which the jury instantly acted upon; in what precise words, however, we are unable to state; and thus terminated an inquiry of much professional interest in more lights than one.

HALIFAX UNION.

A Summary of Visits and Medicines supplied to Poor-law Patients for a period of Thirty-one Days, commencing May 20, and terminating June 19, 1847.

HALIFAX DISTRICT.

Date.	Visits.	Mixtures.	Pills.	Powders.	Lotions.	Liniments.	Ointments.	Plasters.
1847, May 20	13	11	49	5	1	0	0	1
21	10	16	17	13	0	0	1	1
22	10	17	46	20	0	0	2	2
23 Sunday	5	7	12	5	0	0	0	0
24	11	17	22	20	0	0	1	0
25	9	15	14	9	0	0	0	1
26	11	7	18	8	0	0	0	0
27	10	18	94	12	2	0	3	1
28	10	19	69	16	0	0	0	1
29	14	17	30	24	0	1	1	0
30 Sunday	2	7	0	9	0	0	0	0
31	15	19	50	9	2	0	1	3
June 1	11	11	44	1	2	0	0	0
2	16	18	27	19	0	0	0	0
3	13	12	34	1	0	0	2	2
4	14	12	28	6	2	0	2	6
5	11	13	30	3	0	0	2	2
6 Sunday	1	2	8	0	0	0	0	0
7	15	23	52	14	3	0	1	1
8	16	11	24	0	0	1	0	1
9	17	21	41	3	0	0	0	1
10	22	15	20	3	1	0	2	2
11	23	17	30	5	0	0	2	0
12	27	21	21	5	0	0	0	1
13 Sunday	0	3	4	0	0	0	0	0
14	29	32	37	8	0	0	2	1
15	21	11	18	13	2	0	[illegible]	0
16	17	15	50	9	0	0	0	2
17	22	8	24	3	1	0	0	1
18	16	17	58	8	1	0	1	1
19	17	12	21	0	0	0	1	1
	427	417	992	254	17	2	25	32

HALIFAX DISTRICT.
Area............990 Acres.
Population 19,881

OBSERVATIONS.

Remuneration £80 per annum; that is 4s. 4¼d. per day; or for the attendance and medicines here enumerated, being for a period of 31 days, £6 15s. 7½d.

This scale of remuneration is equivalent to 3¾d. for each visit, the medical officer having also to supply, for this sum, the requisite medicines. These, it will be seen, form an item of considerable magnitude, and the house of the medical officer who distributes medicines in this way is no longer a private establishment, but a public dispensary.

There is enough here to speak for itself; and I am not ashamed to submit this paper to the patient and candid consideration of the Board of Guardians of the Halifax Union.

Figures are incontestible; and I vouch for the accuracy of this document in every particular.

(Signed) FRED. SMITH GARLICK,
Medical Officer for the Township of Halifax.

GOSSIP OF THE WEEK.

ROYAL COLLEGE OF SURGEONS.—The following gentlemen, having undergone the necessary examinations for the diploma of this college, were admitted members on Friday evening, the 16th inst., viz.: Messrs. J. T. Jones, Farthingstone, near Weedon, Northamptonshire; John G. Winstone, Bouverie-street, Fleet-street; James Leslie, Armagh, Ireland; John Octavius Dukes, Shrewsbury; Frederick Greenwood, Huddersfield; Thomas Balle Forster, Plymouth; Fred. Farmer, Dublin; William George Gill, White Lion-street, Pentonville; James Lancashire, Stand, near Bury, Lancashire; William Thomas Domville, Royal Navy—this gentleman passed as naval assistant in July, 1842; William Foot Vidal, Aveley, Essex; and Herbert Shelley, Epsom.

THE MEDICAL PROFESSION OF IRELAND—THE BOARD OF HEALTH.—At a meeting of the physicians and surgeons of Galway it was resolved "that any person holding the diploma or degree of any recognised college, who will so far degrade his own character and forget that of his college, as to accept of the paltry sum of five shillings per day offered by the Board of Health to a medical man for his services in a temporary fever hospital, forfeits his right to be considered a medical gentleman, and that, consequently, we decline to meet him in consultation. That we would prefer giving gratuitous attendance in these hospitals, rather than stoop to receive the remuneration offered by the Board of Health."

LUNATIC ASYLUMS OF THE UNITED STATES.—On the 1st of January, 1846, the number of patients was 3377. Recently several new physicians have been placed at the head of some of these establishments: these are Dr. Andrew M'Farland, New Hampshire; Dr. Chandler, for the state of Massachusetts; Dr. John Jouerdon, Maryland; Dr. J. W. Parker, South Carolina; Dr. T. F. Green, Georgia; Dr. John S. M'Nary, Tennessee. Two new asylums have been erected: one at Indinopolis, in Indiana, to which, Dr. John Evans has been nominated physician; the other at Trenton, in New Jersey.

EGYPTIAN SURGERY—TETANUS CURED BY ETHER.—A young man, named Abdul Gebian, was admitted into the hospital for traumatic tetanus, characterized in the clearest manner. M. Franc administered the ether in large doses, and he succeeded by this sedative remedy in curing the disease. The opisthotonos and tetanic spasm gradually yielded, and in twenty-eight days the malady was cured.

APOTHECARIES' HALL.—Gentlemen admitted members July 15: Henry Alfred Warburton, James Braid, Chappell May Empson, James Lancashire, Oliver Pemberton, and Hugh Robert Rump.

OBITUARY.—At Liverpool, Nova Scotia, on June 24, in his 27th year, Ebenezer Annan, Esq., surgeon, only son of Robert Annan, Esq., surgeon, Kinross. He was an old pupil and much attached friend of Dr. Knox.—On the 10th inst., at Primrose-hill, Coventry, Henry Ronalds, M.D., aged 59.—On the 10th inst., at 53, Pall-mall, George Buckley Bolton, Esq.—At Broadwater, Sussex, on the 10th ult., much lamented, Charles Maybery, Esq., surgeon, R.N., in the 57th year of his age.—On the 19th inst., in Craven-street, Dr. Tobin, R.N., surgeon of her Majesty's Dockyard, Devonport.—On Tuesday, the 18th, William Masters, Esq., curator of King's College Museum of Anatomy, of an attack of pericarditis. He was deservedly esteemed by those who knew him, both for his general character and scientific attainments.

MORTALITY TABLE.

For the Week ending Saturday, July 17, 1847.

Causes of Death.	Total.	Average of 5 Summers.
ALL CAUSES	944	940
SPECIFIED CAUSES	940	935
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	229	226
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	108	103
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	140	157
Diseases of the Lungs, and of the other Organs of Respiration	245	226
Diseases of the Heart and Blood-vessels	32	25
Diseases of the Stomach, Liver, and other organs of Digestion	101	94
Diseases of the Kidneys, &c.	8	8
Childbirth, Diseases of the Uterus, &c.	9	10
Rheumatism, Diseases of the Bones, Joints, &c.	8	7
Diseases of the Skin, Cellular Tissue, &c.	1	2
Old Age	40	50
Violence, Privation, Cold, and Intemperance	19	28

THE MEDICAL TIMES.

No. 409. **SUMMARY.** July 31.

SUGGESTIONS

FOR A MORE SIMPLE ARRANGEMENT OF THE

MATERIA MEDICA,

BASED ON ITS PHARMACEUTICAL AND THERAPEUTICAL RELATIONS.

By GEORGE LEITH ROUPELL, M.D.

Cantab., F.R.S., Fellow of the Royal College of Physicians, Physician to St. Bartholomew's Hospital, Lecturer on Materia Medica at the College of St. Bartholome

(Continued from p. 386.)

LECTURE IV.

Next to morphia on my list is placed—2. Atropia, the active principle of the belladonna.

Atropia, now in extensive and daily use, appears in the form of small white crystalline prisms, soluble in all proportions in alcohol, in fifteen parts of ether, and to a certain extent in water. It volatilizes in close vessels at a temperature of 212°. It is inodorous, and is described as having a bitter, disagreeable taste.

It has an alkaline reaction, its symbol is $\overset{+}{At}$, and its formula $C^{34} H^{23} O^{6} N$. The root, the berries, and the leaves of the belladonna all contain it.

Strong alkalis decompose atropia, but it combines with acids. It exists naturally in the form of a malate, but the sulphate is the salt commonly made artificially. It is to be remembered that its salts are to a certain extent volatile at the ordinary temperature of the atmosphere, and to a much greater degree by heat.

Sulphate of atropia, made by adding sulphuric acid to pure atropia, usually appears in the form of minute white grains, but, if alcohol containing it in solution be allowed to evaporate slowly, it exhibits masses of crystals radiating from a centre.

The sulphate of atropia is solely employed as an external application, and its chief use is for the purpose of dilating the pupil of the eye. This property is enjoyed by several of the natural order Solanaceæ, but none possesses it in a more remarkable degree than atropia, $\frac{1}{1000}$ of a grain of which suffices to produce this singular result.

The objects for which the dilatation of the pupil is resorted to are—

1. In order to obtain a better view of the parts of the eye behind the iris.
2. To enable persons labouring under cataract in certain stages to enjoy vision.
3. To prevent adhesions of the iris in cases of inflammation of that part.
4. For the better performance of certain operations upon the eye.

When the pupil has been well dilated by atropia the interior of the eye may be rendered visible, even to the bottom of the orbit. In central cataract, both lenticular and capsular, dilating the pupil enables the patient to use a sound portion of the capsule or lens for vision.

By dilating the pupil in iritis the formation of adhesions will be prevented, and when of recent date they may be broken down. Atropia should be used in conjunction with the active measures for subduing inflammation, and for promoting the absorption of lymph.

It is essential that the pupil of the eye should be dilated previously to the operation by solution or keratonyxis, and that by depression or couching. Some operators, however, prefer, others object to, its use in the extraction of the lens.

The internal use of the pure alkaloid atropia is not yet in the hands of the regular practitioner; but great benefit would be conferred on the community at large were the dose well ascertained in which this and other powerful bases could with safety be exhibited, and should the symptoms resulting from its employment in appreciable quantities be accurately observed and recorded. Atropia, as prepared by Brandes, when given to animals, occasioned an action as rapid, and produced death as instantaneously, as hydrocyanic acid.

At present we are required to employ internally the officinal preparations of belladonna, which, as ordinarily made, are not unfrequently inert, for reasons obvious enough when we perceive that heat is employed in the processes directed, and when we recollect the volatility of the salts of atropia.

The officinal preparations are the dried leaves, the extract, and the plaster.

Belladonna acts upon the nervous and muscular systems rather than upon the vascular and secerning ones. Still we find some results from its exhibition which show an influence over the vessels and the secretions from certain portions of the mucous tissues.

The action of belladonna upon the nervous system, when taken internally in small doses, is that of allaying pain and checking spasm; its action upon the vascular system is that of occasioning an efflorescence on the skin. In larger doses it produces active, furious, or mirthful delirium, ending in coma, alternating again with wildness, accompanied by great and permanent dilatation of the pupil, by impairment of sight, and other disturbance of vision.

Dryness of the throat is much insisted upon as characteristic of the action of belladonna; this, however, is not invariably present, though

The indications for its employm upon observation of its effects, are—

1. The prevalence of a certain inf tive disorder.
2. Certain painful affections.
3. Some forms of spasmodic dise
4. Certain profluvia or discharge

Belladonna has been vaunted as a against scarlatina; and the questi cacy cannot yet be considered a therefore deserves a trial in those infection when scarlatina is p fatal.

The painful affections benefited b under consideration are those chief character, that is, unaccompanied such as are less urgent in degr chronic in duration than those exhibition of morphia. The loca of belladonna, it may here be obs often under such circumstances sing cious.

Nervous and other palpitations spasmodic cough, whether with otherwise, are some of the spasm relievable by belladonna; and the its local application in spasmodic the sphincters of the urethra an as well as in rigidity of the os uter of parturition, is undoubted.

The ancient employment of inha of the leaves of belladonna has b vived on the Continent. The leaf placed on a heated coal, gives off be highly sedative in coughs, and hemorrhage from the lungs.

The subject of belladonna canno without noticing the high suscepti persons to its influence, or witho the fact that its external applic sufficient in some cases to produ constitutional symptoms.

Belladonna differs from opium sioning the disposition to sleep, in the secretions from the bowels, a upon the eye, in which, with regar it is exactly antagonistic.

3. Hyoscyamia or hyoscyami from the hyoscyamus niger. It is crystallizing in long prisms, l disagreeable qualities both of sm

by heat. Its formula has not been ...ed.
...e crystalline principle just named, an ...lone has been detected by some ...in hyoscyamus, alkaline also in its ...id resembling hyoscyamia in its ...hether these two principles are only ...ms of the same substance, or distinct ...s, is not yet decided.
...f hyoscyamia dissolved in a drachm ...ed by some continental practitioners of dilating the pupil of the eye—a ...ident to several of the solaneæ. ..., indeed, was used before bella-...thalmic surgery, the merit of intro-...ng due to Professor Himly.
...t prepared from the fresh leaf of ... the dried leaf, a tincture from ... seeds are all employed in medicine. ... acts in small doses upon the ...em, allaying pain, controlling irri-... producing sleep. In larger ones, ... occasions great excitement, with ... coma.
...g indications for its employment ...
... sleep.
...forms of mental excitement.
...n in some of the mucous passages. ...s chiefly benefited by hyoscyamus ..., especially in those unpleasantly ... opium, and in children; delirium ... which cases camphor may use-...bined with it; cough, and irrita-...s membrane of the lungs, kidneys, ...n some of which latter affections, ... with uva ursi and liquor potassæ, ... be called a specific.
...only added to purgatives, both in ...mixture and extract, the operation ...mollifies, aiding, however, rather ... their activity.
...gent in neuralgia, and as a dis-... yielded to belladonna and other ... remedies.
...an alkaloid, is found in the solanum ...d exhibits fine needle-like crystals, ...e, sparingly soluble in alcohol, ...ll in water. Its formula is ·— ... Solania, when pure, is narcotic, ...imals when exhibited in small ...ducing the following symptoms:— ...wsiness, paralysis, and coma.
...l preparation, however, of the ...he decoction, which is chiefly used ...te, and has been found serviceable ...ous affections, in lepra, psoriasis, ...syphilitic disorders.
...rarely employed, and needs no ...t this time.
... is obtained from the datura ... It appears in large brilliant ...ed in radiated groups. These are ...le in cold, more so in hot, water, ...ohol. It combines with acids, ...llizable salts, which possess very ...nergetic properties. The formula ...ot yet been agreed upon, but its ...idedly alkaline. It is not em-...ure state, but very minute quan-...ered to animals caused urgent ...death in six hours.
...resembles hyoscyamus and bella-...y in its leading effects upon the ...o in its action upon the pupil of ... it strongly and permanently ...
...ria, a poisonous oil has been ob-...ructive distillation from stra-...this the name of pyrodaturia has ... but the exact nature and pro-...il do not appear yet thoroughly ...ramonium is, at all events, a very ...y, producing very marked effects ...us and muscular systems; the m-... use being—
...xcitement.
...nful affections.
... action.

With respect to the forms of nervous diseases relieved by stramonium, some maniacal disorders must be mentioned. Whether the name μανικο (insane) has reference to the effects of stramonium as a means of exciting or allaying madness is left for us to conjecture. Some may perhaps, suggest that it was given to it for both these properties; and certainly it does seem to excite in some, in others to calm, delirium.

As examples of painful affections which it has been said to relieve, rheumatism and neuralgia may be quoted. But the circumstances under which this remedy is of the most unquestionable efficacy are in spasmodic irritation of the bronchial tubes. In certain forms of asthma, and in some cases of the dyspnœa so distressing in emphysema, stramonium, either exhibited in the form of vapour, or given in that of extract, will be found of inestimable benefit.

The limits of a lecture require that I should stop here: more extended observation, however, is clearly desirable upon the subjects alluded to to-day. We have had to notice remedies of great power which are rarely used, comparatively, as medicaments, from the uncertainty of their preparations, and from our want of accurate knowledge for their exhibition. They have been grouped together from the similarity of their effects, which, indeed, will admit of still further condensation.

Corrections in Lecture III., page 333, in the list of Alkaloids:—

Line 9, for "hera," read "flava."
Line 10, for "pelude," read "pallida."
Line 11, for "hepellus," read "napellus."
Line 14, for "cephœlis meecueppe," read "cephaelis ipecacuanha."
Line 15, for "jabacum," read "tabacum."

A COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the Theatre of Queen's College, Birmingham.

By SAMUEL WRIGHT, M.D.,
Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Paralysis apparently unconnected with organic lesion; organic causes of paralysis; relation of these to their effects; paralysis in which no morbid appearances are observable after death; death from poisons, in which there are no post-mortem evidences of their action; death from lightning; effects of emotion; loss of memory from vehement passion; paralysis and fatuity produced by fright; altered function perhaps always connected with altered structure, though this may be too subtile for our senses to recognise, reflections upon this subject; case of paralysis of the leg, apparently from local debility; recovery under local stimulation; return of the ailment from gastro-intestinal disorder; recovery under the use of tonics; paralysis of arm and leg from poor living; relief by tonic treatment; diminution of power from rapid growth; treatment; paralysis of the arm from local causes, and cure by local treatment; similar paralysis of the leg; paralysis occasioned by the position of a limb; case of this kind successfully treated by galvanism.

Gentlemen,—You have lately seen some cases of paralysis, apparently unconnected with organic lesion. To-day's lecture shall embrace their consideration, with a few comments.

Paralysis consequent upon evident organic lesion is not of uncommon occurrence. Ordinary practice introduces you to many examples of it, and you find that the pathological causes are various. These are manifested either in, or upon, the brain, or spinal cord, or both. They consist chiefly of congestion, subacute inflammation, extravasation, effusion, tubercular deposit, tumours; thickening of bone, or depression of it from injury; spiculæ of bone passing into the nervous substance, hardening or softening of the latter, &c. These several sources of paralysis we discover in *post-mortem* examinations, and so ascertain the relation which holds, or has held, between the morbid cause and the morbid effect. We observe, during life, a deviation from what experience tells us is a normal function; we ascertain after death, that there is a corresponding change in the anatomy of the organ or organs ministering to such function. Hence we conclude that the alteration in the organism was the cause of the altered or lost organic action. And the results of this necroscopical experience are perfectly consistent with *à-priori* reasoning. Were we to prejudge a case, unbiassed or uninfluenced by any induction from ascertained facts, I think we should come to very much the same sort of conclusion as that which we reach through the agency of observation: perhaps not in *minutiæ*, but in generalities. We could hardly suppose that an error of circulation in the brain—an alteration of its substance, or mechanical pressure upon it—would not more or less interfere with its functions. And such we find to be the case, except in certain notable instances which constitute deviations from the general rule.

Again, we meet with evidences of paralysis which is not traceable to any obvious cause. It is not rare to find examples of partial or general loss of motion or sensation, but without any seeming proof, further than such condition of altered cerebral or spinal function. Nor is it rare to meet with instances of death from paralysis, and of which necroscopy can give no account. The brain, its investing membranes, and the spinal cord, present in every respect the appearance of healthiness. You sometimes meet with this seemingly normal condition, after poisoning by substances which are known to affect either or both of the great nervous structures. I have examined the bodies of animals killed by strychnine, but without finding any change in the condition of the spinal cord; I have examined others killed by aconite and by belladonna, and have found nothing in the brain to indicate that poison had affected it. In these instances, the proof that one or other organ had been injured rested solely upon functional evidence: there were convulsions, or there was coma, and this was all the index to the poisonous action, or to the part that was especially the seat of it. Anatomy revealed nothing. Apart from the testimony of symptoms during life, there was nothing to authorize a conjecture concerning the mode or the cause of death.

Such has also been observed after poisoning by lead. Nothing has been seen in the intestines to account for the tormina that troubled them; nothing in the spinal cord or brain to tell why sensibility or motility had deserted the organs of locomotion. Yet there had been an agonizing colic, and a paralysis that had ended in death. Observe, again, in death from lightning. The muscles are flaccid, and the blood fluid, and often these are the only anomalies the body presents. Yet a shock has passed through the nervous structure of it, paralysing its functions, and in a moment arresting every movement of life. Sudden emotion of terror or of joy has caused instantaneous death, and defied the scrutiny of the pathologist to give any account of it. I had a dispensary patient some time ago, who, in a fit of vehement passion, lost her memory. So complete was its loss that neither the events of childhood nor the occurrence of the previous moment was known to her. She would look at the clock and note its time, and in an instant afterwards forget what she had done. If you pinched or pricked her, she suffered pain, but with this, there passed away all knowledge of it: the pain over, she had no remembrance of its infliction. Every other faculty but that of memory was intact, and all the bodily functions were healthy and regular. What was the injury in this case? Would the brain have told, on inspection, the mischief that had happened to it? I think not. After the lapse of about five months the woman's memory returned as suddenly as it had left her, and she became the being she was before her bereave-

ment: the faculty she recovered was as perfect as it had ever been, but the interval between its loss and its restoration was a perfect blank—she might not have lived during that time, so ignorant was she of the events of it.

About nine months ago, I attended, with Mr. Carter, a little boy, six years of age. A few weeks previously to our first seeing him he was a fine healthy little fellow, full of energy, and in the enjoyment of more than an average share of intelligence. In the absence of his mother, one day, a brute in human shape thrust the child into a dark cellar, in punishment for some trivial offence. He was incarcerated for two hours, and his poor mother, on her return, liberated, not the child she had left, but *an idiot*. The silly gabble of fatuity was all the welcome she had from the boy that, two hours before, had been her rational companion! In a few days speech entirely left him, and there was nothing but the vacant stare and grimace of idiocy. Within a week he lost the power of locomotion; and, when we first visited him, he was paralyzed as well as foolish.

Gentle aperients, and diffusible stimulants, with good living, and, subsequently, strychnine and change of air, considerably restored his physical powers, and in some measure improved the condition of his mind. The latter, however, is still weak and wandering, and I fear will ever remain so.

Had this boy died when at the worst, would anything have been discovered in the brain or spinal cord to account for the loss of intelligence and of the power of locomotion? It is not improbable that some organic alteration or other might have been recognised, but it is, perhaps, more probable that there would have been no appreciable change of structure whatever. I say *appreciable*, because I do not wish you to understand that I am speaking in absolute terms. The expression "discovery," or "non-discovery," bears reference to our physical aptitude of making it in the cases I have referred to. The absence of change in any part, according to the evidence of our senses, must always be taken with a qualification derived from the fact that our senses are not infallible. We know nothing of function, except in connection with structure —function is not an entity, or an abstraction, but a manifestation of matter. We cannot, therefore, imagine any change to occur in the *effect*, except as a consequence of some change in the *cause*. Hence we infer that, in the instances of paralysis apparently unconnected with organic lesion, this latter is not absent, but is too delicate for our senses to appreciate it. Late researches in organic chemistry, and the microscope, have revealed to us many minute shades of difference in the composition and structure of organs that were previously not known to exist; and the anticipation is rational enough, that future investigation will introduce us to yet more subtile secrets of our organism, and of the actions that issue from it. But, with all that we have done, and with all that we hope to do, there are truths that pass our comprehension, and *minutiæ* into which we shall never pry. There are certain errors and eccentricities of function which we can no more hope, in all our pride of scrutiny, to scan, than we can expect to question any of those final causes which are wisely excluded from the limits of our knowledge.

In the humility, then, which an assurance of our imperfect understanding ought ever to impose, we must be satisfied with approximative truths when absolute ones are denied us: content with partial evidence when plenary is unattainable. This is an obedience to unavoidable difficulties which it is often the wisdom of a medical practitioner to pay. Your first object, as I have often told you, in treating a case, is to search for its cause; but, failing to find this, do not, therefore, desert your charge, but be satisfied to act upon a rational surmise, and upon the testimony of symptoms. The metaphysical practitioner, the finality-man, who affects to see deeper into the depths of things than can his more honest and straightforward neighbours, is often very much in the way at the bedside. Many a philosophical-headed fellow has let a patient slip through his fingers by some medicable means, whilst disputing with himself about some elemental fact in the case that would just as well have been left alone. Let me caution you against the grand impertinence of being thought wise over much.

But I must leave this digression for the cases that have called it forth.

About the latter end of October, last year, a middle-aged man, named Price, came to the hospital as an out-patient, complaining of paralysis of the left leg, from the knee downwards. He was a button-maker by trade, had led a steady life, and always enjoyed good health until the occurrence of his present ailment, for which he could in no wise account. About three weeks before we saw him he felt some little difficulty in walking, from a sensation of weight in the left foot. Shortly its sensibility began to diminish, as also did its temperature: the numbness and coldness rose to his knee, but did not go beyond it. The occurrence of these things was quite unconnected with any other appreciable disorder or suffering. He had no pain in any part of his head, or in any part of his body. He ate and drank, and slept and worked, and was in as good spirits as usual; and his excretory functions were regular and natural. On the occasion of his first visit to the hospital, it was with the greatest difficulty that he contrived to walk, even with the assistance of a friend's arm and a stick. The manner in which he threw the leg forward showed clearly how imperfectly he could command it. This leg was very sensibly colder than the opposite, and was very little susceptible of external impressions. It was neither swollen nor shrunken, nor in any part discoloured. The man had no pain in his head, or elsewhere; no confusion of mind; no irregularity or imperfection of vision, or singing in his ears; no tenderness of the spine on pressure; his tongue was clean; appetite and digestion good; pulse substantial and steady; sounds of the heart natural; and all the secretions appeared to be healthy. Apart from the local ailment, it was impossible to say that the man laboured under the least manifest disorder.

Taking into consideration all the items I have specified, there was no ground for the inference that there was any organic mischief in the brain or spinal cord; and I told you, the conclusion seemed warrantable that the affection was purely local, and perhaps due to some loss of power, merely, in the nerves distributed below the knee. There was no evidence of pressure on any nervous trunk, from tumour or other cause, and the circulation was not radically at fault, for it had become weak secondarily to the impairment of the nervous function. I regarded the case simply as one of diminished power, from no assignable cause, and as requiring nothing more than local stimulation. The following liniment was ordered:

℞. Liniment. saponis comp., ℥ijss.; tincturæ lyttæ, ℥ss. Misce fiat linimentum applicandum parti affectæ nocte maneque.

This was assiduously applied for the space of a week, but without producing the least sensible effect. The linimentum camphoræ compositum was then substituted for that of soap, and the proportion of tinct. lyttæ increased to six drachms.

In two days after having begun to use this, a tingling sensation was felt in the toes, gradually spreading thence over the foot, and at length over the leg, as high as the knee—taking just the same course, and keeping within the same limits, as the original numbness. This, I told you, was a favourable symptom—it is a frequent precursor of recovery in cases of uncomplicated paralysis. The liniment was ordered to be continued, and, before a week had elapsed, its application occasioned considerable pain. The returning sensibility was now very apparent. The quantity of tinct. lyttæ was reduced to one half—the liniment to be applied only once a day: this degrees, sensibility and power were restored, and on the patient's last visit, within a month of his first, he had no complaint to make. In every appreciable respect, the limb which had suffered was equal to its fellow.

During the following seven months the man continued in the enjoyment of his usual good health, and his leg was as well as it had ever been. At the beginning of June, however, he came to the hospital again, complaining of diminished sensibility and power in this limb. The affection was much milder than the previous one, and this time was obviously connected with gastro-intestinal derangement. His tongue was furred; appetite bad; digestion tardy, painful, and always accompanied with much flatulence; urine scanty and high-coloured; bowels costive. This state of derangement had existed for a fortnight, and about a week after its occurrence his leg began to fail, and had continued to do so up to the time of his second application at the hospital.

After carefully examining the man, there was nothing, as I told you, to lead to the suspicion that his gastric disorder arose from serious causes, or that ordinary treatment would not relieve it. The recurrence of the partial paralysis was no matter of surprise. I looked upon his second visit as one of the many proofs we meet with of an injured or an impaired part suffering proportionately to a deterioration of the general health, or a defect in the function of nutrition. The object in this case, as I said, was to correct the state of the stomach and bowels, and it was not improbable as those improved that the leg would improve also. With prescribed diet, the following medicines were given:—

℞. Inf. cascarillæ, ℥viij.; ammon. carb., ℈ss.; sp. eth. nit., ℨiij. M. ft. mist. cujus cap. coch. ampla duo ter die.

Cap. omni nocte, pil. rhei comp., gr. x.

In a few days the gastro-intestinal condition began to improve under this treatment, and coincidently with the amendment the leg began to recover its power and sensibility. The relationship of the reparatory processes continued, until the digestive function had become quite natural, at which time the leg was as well as at the best it had been. In this instance we used no local application whatever. Up to this time, the man has remained in excellent health.

You remember a patient named Sutcliffe, who occupied the top front ward about two months ago. His left arm and leg were paralyzed. The paralysis was not complete, but it was with the greatest difficulty the man could walk across the room—he could not raise his hand higher than his shoulder, nor close it with any degree of force. He was a shoemaker by trade; had enjoyed pretty good health up to six months previously, when his business declined, and he suffered many domestic privations, consequent upon which came his paralysis. This had existed about eleven weeks, and had gradually got worse. The affected limbs were colder than natural, and the pulsation in them more feeble than on the opposite side. The man had a very pale, emaciated look, and his muscles were generally very flabby; tongue trembling when protruded, indented at the edges, and covered with a white fur; pulse 96, small and soft; systolic sound of the heart scarcely audible; appetite bad; troublesome gastric flatulence; urine copious and limpid.

In this case there was no evidence whatever of appreciable organic lesion in the great nervous structures. I told you that we could only call it lesion of innervation, in the absence of knowing the precise condition from which this might arise. The leading manifestation was one of debility, and, not knowing the intrinsic morbid state from which this might spring, we could only take the symptomatic condition for our pathological guide and authority for treatment. He was ordered full diet, a glass of wine daily, and the following:—

℞. Infusi cuspariæ, ℥viij; ammon. carb., ℈ij. M. ft. mist. cujus cap. coch. larg. duo ter die.

℞. Pil. rhei comp., assafœtidæ, aa. ʒss. M. divide in pil xij. quarum cap. ij. omni nocte.

Not many days elapsed, after commencing this treatment, before the appetite and digestion began to improve; this amendment was shortly followed by augmented strength and warmth in the affected limbs. At the end of a fortnight the man could walk with some comfort, and occasionally strolled into the garden: he could raise his hand above his head, and give a tolerable grasp. During the following week he continued to improve, and the last time we saw him I remarked, that in a few days he might become an out-patient. Before our next visit, however, he took some offence at a fellow-patient and left the hospital without any ceremony, or expression of gratitude. This manifestation of sauciness, like the peevishness of children, was, perhaps, the best testimony we could have of his improved health and vigour.

There is a little girl at this time under my care in the top ward: she came in, three weeks ago, the subject of general weakness, and of very diminished sensibility and motility of the right leg. She has lately grown fast, and her mother considers this weakness to be the result of the rapid growth. From the first I believed the mother to be right, for there was none other assignable cause for the manifest debility. The girl was put upon full diet, and ordered a bitter infusion, with muriate of iron, three times a day. When we last saw her she walked with little difficulty; her appetite has vastly improved, and her complexion is getting ruddy. I have no doubt that in a few days she will be fit for dismissal.

About eighteen months ago, I had a dispensary patient under my care, the subject of dyspepsia. In the process of her recovery she lost the use of her left arm. There was nothing whatever to account for it, and I therefore treated the affection as purely local. She was ordered fomentations of hot mustard and water thrice daily; these soon produced signs of amendment, but it was not effectual until after the application of a stimulating liniment, under which the restoration became complete.

I had once a case of paralysis of one leg, which supervened upon suppressed menstruation. The uterine function was restored by purgatives and chalybeate tonics, but the paralysis remained the same. It was cured by a succession of blisters to the hip.

You often meet with imperfect paralysis from a limb having been placed during sleep in some particular position. In most cases of this kind, the affection is only temporary, and either passes off spontaneously, or is readily relieved by some stimulating application. Sometimes, however, these cases are very troublesome and almost set treatment at defiance. I have seen more than one, in which recovery, after various means had been used, was incomplete. This generally happens to old subjects. I have a case at this time under my care at the dispensary, in the person of a middle-aged man, who awoke one morning with his arm twisted under his head. He had never had a symptom of paralysis in his life, and had gone to bed in his usual good health, but on getting up he found his arm useless. He tried friction, and various stimulants himself, but to no purpose: these were repeated more energetically at the dispensary, for upwards of a week, but without effect. Galvanism has since been employed, and with good results Mr. Carter galvanizes the limb, well, every other day, and the progress is so satisfactory that I have no doubt only a few more applications will be necessary.

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.

By Professor MATTEUCCI, of Pisa.

PART VII.

ARTERIALIZATION—NUTRITION—ANIMAL HEAT.

By arterialization we understand the modification in the constitution of the blood which takes place in the act of respiration, and is accompanied and indicated by change of colour, evolution of carbonic acid, and absorption of oxygen from the inhaled air, as has been fully stated already in the preceding part. We will now endeavour to investigate this modification in its details.

Which of the organic elements of the blood suffers this modification?—and in what does it *chemically* consist?

It must be confessed that these are questions which, although studied by many distinguished physiologists and chemists, have not yet met with anything like a full and satisfactory solution. Amidst the immense number of conflicting facts and deductions that have been furnished on the subject by its investigators, we will here select those which appear least imperfect and contradictory.

Microscopic observers of the present day define the blood as an aqueous liquid holding *in solution* various salts, albumen, fibrine, fatty matter, and *in suspension* a great number of red globules of definite form, and greater or less size, according to the divers respective animals.

These globules may be separated from the blood by filtration through bibulous paper. The globules will remain on the filter; the filtrate, which is of a yellowish colour, coagulates soon after filtration; the clot consists of fibrine. In unfiltered blood, drawn from the living body, the fibrine coagulates, enveloping in the clot the suspended globular matter. The coagulation of the blood is accelerated, promoted, and otherwise influenced by purely physical circumstances, such as its temperature, the density of the serum, the respective proportion between the globules and the fibrine, &c.

The coagulum of blood drawn from the living body assumes a vermilion tint when treated with oxygen. When exposed to the air, and subsequently cut, it is found externally of a florid red, and in the internal part of a blackish colour. The cut surfaces, exposed to the air, acquire speedily a red colour. That it is the globules of the blood which undergo this change of colour is unquestionable. Baudrimont and Martin St. Ange have recently shown that absorption of oxygen and exhalation of carbonic acid take place through the calcareous envelope of the egg at the period of incubation, and have proved that, if these phenomena are prevented, the undeveloped embryo does not, as usually, present small red globules. Whether the globules of the blood acquire their florid tint simply by the absorption of the atmospheric oxygen or loss of carbonic acid during respiration, or whether, on the contrary, the arterial blood is changed to venous by the accession of carbonic acid, or separation of oxygen, is not yet clearly established. Magnus has proved that the separation of the largest possible amount of carbonic acid from venous blood, although brightening the dark hue of the latter, fails to produce the florid arterial tint. This would lead us to assume a joint influence of the two causes in the change of colour which the blood suffers in the act of respiration. We may add here, that a coagulum that has been carefully freed from every trace of serum adhering to it does not quite acquire the usual fine vermilion tint upon exposure to oxygen. If a saturated solution of sea salt be dropped upon a coagulum, perfectly freed from serum, and guarded against access of air, the spots touched by the solution will exhibit a vermilion tint, whilst the rest of the coagulum will continue to present a dark venous hue. Thus it would appear that the salts of the serum likewise exercise a certain influence in the modification which the colour of the blood undergoes in presence of oxygen. We know that serum absorbs a quantity of carbonic acid, much more considerable than the water of this fluid can possibly dissolve. We might, therefore, assume that the influence which the presence of the serum exercises in the change of colour of the blood consists in the absorption of the portion of carbonic acid which the oxygen subsequently removes from it.

In what does the change of colour of the globules of the blood *chemically* consist? Upon this point science is still altogether in the dark. The large proportion of iron (five to six per cent.) constantly present in the globules of the blood, and which exists to the same extent in no other animal substance, has led to the supposition that this metal—which is found in the globules sometimes as protoxide, and at others as carbonate—performs a part in the change of colour of the blood. We know that oxygen expels carbonic acid from carbonate of iron, and that, on the other hand, carbonic acid may replace the oxygen of the peroxide of iron, according to the relative proportions of oxygen and carbonic acid present.

Mulder and Liebig seem to adopt this notion. Clinical experience seems to prove that the administration of iron in certain diseases revives in some sort the colour of the blood. Scherer, however, has lately asserted that he obtained the colouring matter of the blood entirely free from the slightest admixture of iron. Should this be confirmed—and should it be proved, moreover, that the colouring matter thus deprived of iron undergoes, in contact with oxygen and carbonic acid, the same modifications as the globules of the blood—we shall, of course, be forced to renounce the notion, that iron performs a part in the change of colour of the blood.

The arterial blood, propelled by the incessant contraction of the heart and the successive dilatations and contractions of the walls of the arteries, is carried to the last capillary ramifications, in which it traverses all the tissues; it then loses its vermilion tint, returns to the heart through the venous vessels, and passes again through the lungs. It is in the passage of the arterial blood through the capillaries that the phenomenon of nutrition is effected. Physiology assumes that all parts of the animal tissues are incessantly being renovated and transformed, and that this renovation and transformation vary in intensity according and in proportion to the greater or less degree of activity possessed by the respective capillary systems of the divers tissues. The correctness of this assumption, although by no means proved *experimentally*—for the coloration of the bones of animals fed upon coloring matter, and its cessation upon the discontinuance of that diet, cannot well be looked upon as sufficient proof—is yet sufficiently demonstrated by physiological facts. The red globules—not forming part of any tissue, and yet essential as they are to nutrition—may be looked upon with a certain appearance of probability as the catalytic body which solicits or induces the transformation of the tissues and their incessant renovation; the fact that the absorption of oxygen is necessary to impart this catalytic property to the red globules speaks in support of this view. Let it be remarked, moreover, that in the same way as diastase converts starch into dextrine, &c., so the red globules of the blood may convert albumen into fibrine; and this conversion certainly occurs in the embryo.

In the act of nutrition a portion of the arterial blood disappears, and is replaced by an excess of carbonic acid in the venous blood. In the capillary vessels the oxygen combines with the carbon; and, if we find subsequently that the volume of carbonic acid exhaled is smaller than that of the oxygen that has disappeared in respiration, we are led to the conclusion that, besides the carbon, the hydrogen, which forms part of the organic elements of the blood and tissues, combines with the oxygen to form water.

The acetates, tartrates, and oxalates, which enter the circulatory current in a state of solution, are eliminated in the form of carbonates through the urinary organs. Benzoic acid, introduced into the circulation, is eliminated through the same organs in the form of hippuric acid. The author and Professor Piria introduced a solution of salicine into the blood of a living animal: after a certain time they detected in the urine a body which derives from salicine, and possesses the property of forming violet precipitates with salts of iron.

Dessains found that, upon boiling hippuric

acid in a solution of hydrochloric acid, benzoic acid precipitates, and the solution contains now the hydrochloric acid in combination with a nitrogenized saccharine substance (Braconnot's sugar of gelatine). We know that this substance is produced by treating neutral nitrogenous substances (gelatine, proteine) with acids; we know, likewise, that the secretion of hippuric acid replaces in the herbivora the secretion of urea in the carnivora; we may, accordingly, assume that the sugar of gelatine is one of the first products of the transformation of the neutral nitrogenous matters which form the materials of the tissues; which would account for the elimination of hippuric acid subsequent upon the introduction of benzoic acid into the circulation.

All these facts prove beyond question that the principal chemical action observed in the circulation of the blood and in the process of nutrition consists in combustion, viz., in the combination of oxygen with carbon and hydrogen. We must, however, repeat here, that our knowledge of these phenomena is very limited and unsatisfactory indeed. What difference exists between the chemical composition of all the elements of the arterial blood and that of all the elements of the venous blood? Of what nature is this difference in the blood before and after its passage through the kidneys, the liver, and the divers tissues? These are some of the numerous questions that ought to be solved by the most precise experiments and researches, before we can venture to proceed to investigate the phenomena of nutrition and secretion.

We saw, in a preceding part, that the food passes into the blood after having undergone divers modifications in the process of digestion. Of the various aliments, many are identical with the organic elements of the animal tissues: this is the case, for instance, with the neutral nitrogenous matters, and also with the fatty matters which are found in the organism, either unaltered, or, as in the adipose tissue, but very slightly modified. It is not natural, and would even appear strange to admit, that urea, carbonic acid, and water - the ultimate products of the transformations suffered in the process of nutrition —proceed from the organic elements of the blood introduced into that fluid by alimentation. These products are to be considered rather as resulting from the transformations of the tissues, where they are replaced by fresh supplies of organic elements furnished by the food; and, in fact, the production of urea continues in animals fed for a long time upon sugar, starch, or gum the same as before that alimentation was resorted to. The same continued production of urea has been observed in the case of animals altogether deprived of food, and which subsequently died from inanition. A serpent that has been deprived of food for some time, and is subsequently supplied with a goat, a rabbit, or a fowl, voids the excrements, hair, and bones of the devoured animal, exhales carbonic acid and water, and eliminates through the urinary organs urate of ammonia alone: it recovers, subsequently, its usual weight, and there remains not the slightest trace of the devoured animal.—(Liebig's "Organic Chemistry applied to Animal Physiology.")

Let us analyze this simple case of nutrition. Urate of ammonia contains one equivalent of nitrogen to two equivalents of carbon; the muscles and blood of the devoured animal contained eight equivalents of carbon to one of nitrogen; and, if we add to this the carbon of the fat and brains of the devoured animal, we find that the serpent has taken above eight equivalents of carbon to one of nitrogen. In the excrements are found only two equivalents of carbon, the remaining six equivalents must have been eliminated in the form of carbonic acid.

The same is the case with the lion and all the other carnivora: urea alone is found in their urine. As these animals feed upon flesh—a substance in which the proportion of carbon to nitrogen is like eight to one;—it follows that the excess of the carbon introduced into their organism over that eliminated in the urine is consumed in the act of respiration, being converted into carbonic acid. The respiration of the lion is certainly more active than that of the serpent.

The fifteen or twenty grammes of nitrogen eliminated daily in the urine of man, and the excess of nitrogen exhaled, proceed from the neutral nitrogenous matters in the food, or, to speak more correctly, from the transformed tissues replaced by the alimentary substances.

Boussingault has proved experimentally that the urine of the horse does not contain the whole of the nitrogen contained in the food of the animal; and he argues thence that the excess of nitrogen exhaled proceeds likewise from the food.

In the actual state of chemistry and physiology, it is impossible to say, with any degree of precision, through what series of modifications and intermediate products the muscles, cartilages, &c., have to pass, preparatory to their final conversion into urea by the action of the oxygen of the globules of the blood. If we add to the formula of proteine (which is equally that of albumen, fibrine, caseine, &c.) as much oxygen as is required to convert this substance into urea, and the excess of hydrogen and carbon into water and carbonic acid, we obtain quantities of the latter substances much smaller than those produced in the act of respiration. The following figures, deduced from Boussingault's experiments, will clearly show that the proportion of the carbon contained in the nitrogenous aliments (which are ultimately converted into urea) is greatly below that emitted in the form of carbonic acid, in the act of respiration. A perfectly healthy horse consumed per diem $1\frac{1}{2}$ kilogramme (above three pounds English) of hay, and $2\frac{1}{4}$ kilogrammes (above $4\frac{1}{2}$ pounds English) of oats. Analytical examinations show that the proportion of nitrogen contained in hay is 1·5, and that contained in oats 2·2, per cent. Admitting that the whole of the nitrogen contained in the food passes into the blood, in the form of albumen and fibrine, this would mould make 110 grammes of nitrogen introduced into the blood, and destined to replace the nitrogen which separates in the products of the transformed tissues. The quantity of carbon introduced, in conjunction with the nitrogen, amounts to 440 grammes, of which only 238 are free to combine with oxygen to carbonic acid in the act of inspiration, since the horse eliminates in the urine 93 grammes in the form of urea, and 109 grammes in the form of hippuric acid. But Boussingault's experiments show that a horse exhales in respiration, in twenty-four hours, 2151 grammes of carbon, in the form of carbonic acid, which clearly proves that the carbon of the nitrogenous principles of the food forms only a small portion of that which is contained in the carbonic acid exhaled in respiration. Hence arises the necessity for the animal to supply by other articles of food -such as starch, gum, sugar, fatty substances—this deficiency of carbon in the nitrogenous matters. The food of young animals contains a larger proportion of those matters that furnish carbon and hydrogen, and are eliminated in the act of respiration; by this means the nitrogenous substances intended for the growth of the tissues are husbanded.

Dr. Capezzuoli determined successively the weight of the fatty matters and neutral nitrogenous substances contained in hens' eggs during the period of incubation, and ultimately in the newborn chicken; he found that towards the seventeenth day of incubation, and accordingly a short time before the birth of the chicken, there occurs a sensible diminution in the quantities of fatty and neutral nitrogenous matters, and that this diminution goes on slowly increasing in the young animal.

With regard to the fatty matters, it would appear that they likewise are made to subserve the exclusive purposes of respiration only in cases where the amount of starch, gum, or sugar introduced into the organism is insufficient. Thus, animals left for a long time without food—as those, for instance, that sleep during the winter months—lose their fat during these periods of abstinence. The fatty matters seem primitively intended for the formation of the cerebral and nervous substance, and to fill up the meshes of the cellular tissue, which is not without importance for the functions of life, and forms, as it were, a kind of reserve depôt for the materials required in the process of respiration.

With regard to the bile, no physiologist of the present day fancies that this substance is simply an excrement. Berzelius found in 1000 parts of human excrements only nine parts of a matter similar to bile; accordingly, an individual who secretes from 500 to 700 grammes of bile per diem, rejects in his excrements only the 1-50th or 1-75th part of the bile secreted. On the other hand, it is difficult to believe that a matter so slightly nitrogenized as bile is, can be useful for the purposes of nutrition. We saw, in a preceding part, that bile has no, or only a very trifling, share in the process of digestion. Liebig asserts that the bile flowing into the duodenum forms a soluble compound with soda—that it is absorbed and converted into carbonate of soda—yielding thus a portion of its carbon to the oxygen. This view is not supported by experimental proofs; and it is, moreover, only in some pathological cases, and under the influence of certain atmospheric constitutions, that traces of biliary matter have been discovered in the blood.

It has been stated in a preceding part, that an adult absorbs 1015 grammes of oxygen per diem; it results from the observations of Dumas, Andral, and Gavarret, and the more recent ones of Scharling, that an adult exhales in twenty-four hours, 224 grammes of carbon in the form of carbonic acid; that males exhale more carbon than females, and children more than adults; and that more carbon is exhaled during day than at night. A horse eliminated in the form of carbonic acid 2165 grammes of carbon, for which purpose it consumes 6501 grammes of oxygen. A milch cow exhales 2212 grammes of carbon in form of carbonic acid, consuming 5833 grammes of oxygen. Thus we see that there exists a relation between the quantity of food consumed, and the amount of oxygen absorbed and carbonic acid exhaled. The activity of the respiratory movements, the density of the inhaled air, and the quantity of carbon introduced with the food, must be in proportion to one another, in order to preserve the materials of the animal economy. Letellier has recently shown, by experiments made with birds and guinea-pigs, that the amount of oxygen consumed in respiration is less in proportion as the temperature of the air is higher. At 32° Fahrenheit, this observer found the quantity of carbonic acid exhaled to be double that eliminated at a temperature of from 59° to 68°.

Animals with active respiratory movements, rapid capillary circulation, and blood rich in red globules—such as birds, hyenas, tigers, &c.—present in their tissues only a very trifling proportion of fatty matters. If such animals be prevented from moving about, the fat will be found to accumulate in their tissues. We learn from the experiments of Treviranus, that cold-blooded animals consume ten times less oxygen in proportion to their weight than mammiferous animals, and nineteen times less than birds.

Boussingault made a great many experiments with a view to establish, by comparing the composition of the food with that of the excrements, whether nitrogen is exhaled in the respiration of the granivora; the results obtained led this observer to the following conclusions:—A turtle-dove consumes in twenty-four hours, 5·1 of carbon; it emits in the same space of time 18·7 grammes of carbonic acid (9·441 litres), and 0·16 gramme of nitrogen (0·126 litre). It consumes 0·07 gramme of hydrogen per diem. From these data, we find that a turtle-dove weighing 187 grammes, and breathing freely at a temperature of from 46°·1 to 50° Fahrenheit, is able—in consuming 5·1 grammes of carbon, and 0·07 gramme of hydrogen—to generate the amount of heat necessary to maintain its body at a temperature of

from 105°·8 to 107°·6 Fahrenheit; and this whilst exhaling, moreover, about three grammes of water through the lungs and skin.

It is unquestionable, therefore, that the animal organism is a real apparatus for combustion, in which carbon is constantly consumed and converted into carbonic acid, and heat generated. It is perfectly clear that the source of animal heat lies solely in the chemical reactions of respiration and nutrition, and, more particularly, in the combination of the carbon with the oxygen.

Dulong, Despretz, and others, have endeavoured to ascertain whether the amount of heat generated by animals corresponds in direct ratio to the amount of carbon and hydrogen consumed. If the carbonic acid and the water exhaled by the animal are the products of the combustion of carbon and hydrogen, the heat generated by the animal ought (according to the reasoning of some philosophers) to be equal to that which the combustion of the same quantities of carbon and hydrogen in the open air would generate.

The amount of heat generated by an animal may be determined by that which the animal imparts to surrounding objects—to water, for instance. Dulong and Despretz placed animals in an apparatus constructed for the purpose; they measured the amount of carbonic acid and water exhaled by the animal, and noted the temperature acquired by the surrounding water. They found that the combustion of the carbon and hydrogen, as deduced from the amount of carbonic acid and water evolved, would only account for eighty or ninety per cent. of the heat generated by the animal. Certain manuscript notes found after Dulong's death show, however, that this celebrated physiologist had subsequently made a series of further experiments, of which the results proved that the amount of heat generated by the combustion of the hydrogen in the animal organism is much more considerable than he himself and Despretz had at first calculated. The results of these latter experiments of Dulong have been fully corroborated and confirmed by those obtained by Fabre and Silbermann. If we adopt the new figure for the heat generated by the combustion of hydrogen, deduced from the corresponding results of Dulong's, Fabre's, and Silbermann's experiments, we find that more heat is actually evolved by the animal than is marked by the calorimeter.

But, even supposing the contrary to be the case, it would be easy to account for the excess of heat marked by the calorimeter without having recourse to the assumption of a particular power or vital property as an additional source of heat. Let us simply reflect that the temperature of the animal placed in the calorimeter is invariably higher than that of the surrounding water, and that, consequently, the animal cools during the experiment. In fact, Despretz found in his numerous experiments that the excess of heat marked by the calorimeter is the greater the younger the animal, and the higher its temperature. We know, moreover, by Edwards' experiments, that the temperature of young animals sinks much more rapidly than that of grown-up animals.

Besides, it seems very doubtful whether ordinary combustion effected in a calorimeter can be considered an exact type of the combustive process that may take place in the organism; and we think the notion which would select, amidst the numerous chemical reactions occurring in the organism, a single one as the exclusive source of animal heat cannot well be sustained.

And, indeed, if we look somewhat more closely into the subject, we cannot help observing that the carbonic acid with which the venous blood is charged—and which is unquestionably a product of the combination of the atmospheric oxygen with the carbon of the organic elements of the divers tissues—does not proceed from free carbon, but from the various compounds of carbon present in these tissues; and these compounds are, as yet, but very imperfectly known to us.

Now, Dulong's experiments have placed it beyond doubt that the combustion of bodies in a state of combination fails to generate the same amount of heat as the combustion of the same bodies in the free state.

It would be difficult to reconcile the results of Andral's and Gavarret's recent experiments on the exhalation of carbonic acid in the respiration of man, with the notion that animal heat is produced exclusively and alone by the chemical action of the carbon and hydrogen with the oxygen. The very extensive and, to all appearance, precise experiments of these distinguished physiologists show that the quantity of carbonic acid exhaled in respiration may vary greatly with the sex, age, and peculiar physiological disposition of the individual—the difference lying between the figures 5 and 14·4, which express in grammes the amount of carbon that concurs in the formation of the carbonic acid exhaled in the space of one hour. The former of the two figures was found in the case of a child eight years old, the latter in that of a young man of twenty-six. It ought to be borne in mind here, that the temperature of children being notably higher than that of adults, and the mass of surrounding objects to which heat is imparted being greater with adults than with children, the loss of heat must be proportionally greater in the case of adults than in that of children.

Andral and Gavarret found, also, that the period of puberty in woman does not increase the amount of carbonic acid exhaled, but that this exhalation becomes more active when age or other causes put a stop to menstruation.

Notwithstanding this, no sensible difference of temperature is observed in the body of a woman neither before nor after, nor during menstruation, nor during pregnancy. We know, moreover, that certain diseases are attended with a rapid lowering of the temperature of the body, whilst others exhibit among their symptoms a very considerable elevation of temperature throughout the whole body; and yet in neither case do we observe a corresponding variation in the respiratory function.

To sum up: In the actual state of our physico-chemical knowledge, we must assume that the animal heat is generated by the chemical actions occurring in the organism during the transformation of the tissues, under the influence of the atmospheric oxygen; that the combustion of carbon and of hydrogen is the principal, but not the only and exclusive, source of the heat generated; and that we do not possess experimental data sufficient to enable us to discover and establish the exact relation between the heat generated by the chemical reactions occurring in the living organism, and that generated by those chemical reactions which we are able to produce in our apparatus.

The heat generated during the germination of vegetables has its source likewise in a chemical action, viz., the combination of oxygen with the carbon of the germinating grain. We know that germination is attended with absorption of oxygen and evolution of carbonic acid; and also that diastase converts starch into dextrine and sugar, which upon continued fermentation is further converted into alcohol, with disengagement of carbonic acid. The evolution of heat which attends the fecundation of plants may be explained upon the same principle.

DUMAS ON ORGANIC CHEMISTRY.

No. XXVI.

(Continued from page 429.)

ON THE MILK—(*continued*).

Now that we know the chemical nature of the milk, and the varied circumstances which influence its production, we shall proceed to regard it in an economical point of view, indicating, in the first place, the usual quantity of milk which is furnished by the cow in the normal state. The following table gives us, on this point, the result of various observations made in different countries.

Table of the Quantity of Milk which may be produced by the Cow.

Localities.	Authorities.	Weigh[t of] Cow	Hay [co]nsumed daily.	Milk produced annually.	Milk given daily.	Observations.
France.—La Feuillasse (Ain)	Perrault de Jotemps	400	12·5	1700	4·7	Kept in cowhouse.
Lompries (Ain)	D'Angeville ..	275	6·3	915	2·5	Do. do.
Roville (Meurthe)	De Dombasle ..		10·0	1416	3·4	Do. do.
Lyonnais (Montagnes)	Grogmer		..	730	2·0	Indifferently fed, in winter.
Bechelbronn (Bas-Rhin)	Le Bel and Boussingault .		15·0	..	..	
England	Low			3,406	9·3	Do. do.
Do.	Curwen			3,739	10 2	Do. do.
Belgium.—Anvers	Schwertz		13·0	2,558	7·0	Do. do.
Do.	Schwertz		12·4	2,254	6·2	At grass, and in cowhouse.
Holland.—Low Country ..	Schwertz		12·4	1.932	5·3	Do. do.
Do. ..	Aiton	312	..	4,015	11·0	
Saxony.—Moosen	Schweitzer	258	9 4	1,527	4·2	Kept in cowhouse.
Altenbourg ..	Schmalz		14·0	1,950	5·3	
Austria.—Carinthia ..	Burger		..	1,561	4·3	Well fed.
Prussia.—Mæglin ..	Thaër		10·0	1,505	4·1	Confined to cowhouse.
Environs of Berlin	Thaër		..	1,707	4 7	
Switzerland	D'Angeville	475	12·5	1,700	4·7	Do. do.
Hofwyl ..	D'Angeville	600	17.5	2,662	7·3	Kept in various ways.
Paris and its environs ..	Quévenne, *Mem. sur le Lait.*				11·0	

In M. Le Bel's experiments, he measured, night and morning, the milk given by each cow. Seven cows, each consuming fifteen kilogrammes of hay, or an equivalent to the above in green fodder, furnished, in the course of a year, 17576·5 *litres* of milk, which were distributed as in the opposite table:—

Months.	Milk yielded per month.	No. of days in which milk was given (for the 7 cows).	Daily product (per head).
January ...	1063·0	186	5·7
February .	759·0	158	4·8
March	759·0	155	4·9
April	942·5	138	6·7
May........	1436·0	155	9·3
June	2117·5	190	11·1
July.......	2375·0	195	12·2
August ...	2080·5	186	12·8
September .	1769·0	180	9·8
October ...	1490·5	184	8·1
November .	1443·5	200	7·[illegible]
December .	1341·0	191	7·0
Total.	17576·5	118	

At a mean calculation, each of the above cows produced, in the year, 2511 *litres* of milk; the number of milking days was, for each cow, 302⅓. The daily average for each, therefore, according to the foregoing estimate, was 8·3 *litres*. This quantity is, however, reduced to 6·8 *litres*, if we make no allowance for the days of respite, and thus take the mean of the entire year.

All the observations made tend to prove that the quantity of milk secreted diminishes in proportion as we recede from the period of parturition.

In measuring the quantity of milk, given by a cow, from the moment of its calving up to the time at which it ceased to yield any more of this secretion, it was found that it produced between these two periods 16·049 *litres*, in 2167 days' milking; this gives a mean of 7·4 *litres* per day.

A precisely analogous result was attained with another cow, which furnished 2293 *litres* in 310 days; the mean product of each day was, consequently, 7·4 *litres*.

It is often of great importance to determine the quantity of butter contained in the milk. The data which we possess as to the proportion of butter and cheese in this fluid are, however, of a very unfixed character. M. Boussingault gives us the following, obtained under his own eyes? One hundred kils. of milk furnished:—

Cream	15k.60
White cheesy matter ..	8. 93
Whey	75. 47
	100. 00

The 15 kils. of cream gave on churning—

Butter	3·33, per cent. 21·2
Buttermilk ..	12·27

Thus, the 100 kils. of milk yielded—

White cheesy matter	8k.93
Butter	3. 33
Butter-milk	12. 27
Whey	75. 47
	100. 00

By examining the milk drawn at different periods of the year, the same observer found that 16·391 kils. of this fluid produced 491 kils. of fresh butter, or three per cent.

M. Quévenne obtains numbers slightly different: he agitated 54k·633 of cream in a churn, the temperature being at about 20° C.; this quantity yielded 15k·100 of butter of a good quality, and 39 kils. of buttermilk, having a density of 1·031. The foregoing butter furnished, on analysis—

Pure butter	77.50 per cent.
Caseum	1·60 „
Water	20·90 „
	100·00

The buttermilk contained—

	In the decilitre.	In the litre
Butter	0g.25	2g.50
Caseum	3. 92	39. 20
Sugar of milk, extractive matters in pretty abundant quantity, and salts ..	5. 30	53. 00
	11· 07	110g.70
Water	91. 95	
	103g.00	

We see, then, that in 15k.100 of crude butter thus obtained, corresponding to 11k.713 of pure butter, we lose 39 times 21g.5—that is to say, 838g.5 of pure butter. Besides the loss just stated, M. Quévenne has pointed out another—namely, the butter which remains in the milk after its being thoroughly deprived of its cream; this he values at 2g.30 per *litre*.

In addition to the foregoing data, we will give the analysis of skimmed milk made by Berzélius:—

Water	928·75
Caseum and butter	26·00
Sugar of milk	35·00
Alcoholic extract and lactates ..	6·00
Chloride of potassium	1·70
Alkaline phosphate	0·25
Phosphate of lime, lime combined with caseum, magnesia, and traces of iron	2·30
	1000·00

The cream, analyzed by the same chemist, produced—

Butter obtained by churning	4·5
Caseine procured by the coagulation of the buttermilk	3·5
Serum	92·0
	100·0

The salts, which M. Berzélius found in the milk of the cow, were chiefly, as we see, those of potass. But we have already stated that these salts may vary according to the nature of the aliments. M. Haidlen gives the following analysis as that of the salts of normal milk:—

Phosphate of lime ..	0·231	0·344
„ magnesia ..	0·042	0·064
„ iron	0·007	0.007
Chloride of potassium ..	0·144	0·183
„ sodium ..	0·024	0·034
Soda	0·042	0·045
	0·490	0·677

MM. Pfaff and Schwartz have found that 1000 parts of milk furnished 3·742 of ashes composed of:—

Phosphate of lime	1·805
Ditto of magnesia ..	0·170
Ditto of iron	0·032
Ditto of soda	0·225
Chloride of calcium	1·350
Soda	0.115
	3·697

The earthy phosphates are drawn along by the caseum in its coagulation. The concentrated acids remove them from it. The caseum may contain as much as six or seven per cent. of these salts.

Milk entering largely into the diet of the inhabitants of towns, and passing through many hands before arriving at those of the consumer, is often the object of frauds, of which the most common consists in removing a certain proportion of the cream, and adding water to the milk, thus impoverished.

Albuminous substances, such as the serum of blood or of eggs, which are added to the milk for the purpose of augmenting its density, are at once discovered by applying heat, which coagulates the albuminous matter. We have, however, seen that, at times, the milk may itself be albuminous.

Gummy matters give a degree of viscosity to the milk; to discover them, we must have recourse to a somewhat delicate analysis. But, according to M. Quévenne, it requires not less than 90 *grammes* of gum arabic to give to a *litre* of water a specific gravity of 1·030—the ordinary density of the milk of Paris; this fraud cannot, therefore, offer any real advantage to the practiser.

When pure milk has been coagulated by acetic acid, and a little alcohol is poured upon the filtered serum, we have formed abundant, light flakes, of a bluish-white colour and transparent. If we make the same experiment with milk which contains gum arabic, the precipitate will be more abundant, of a dull white, and opaque.

Milk has sometimes been adulterated with gum tragacanth; but this substance, in the proportion in which it can be employed, does not alter its density. Should it, however, have been added, the milk, on being treated as in the former instance, will furnish, with alcohol, a light flaky precipitate, which may be drawn out in long threads.

To discover dextrine in milk, we should throw down the caseum by acetic acid, precipitate the filtered serum by alcohol, and treat the precipitated matter with a little water, which dissolves the dextrine. The polariscope will, in like manner, serve to detect this fraud.

Sugar, when added to milk in the proportion of one per cent., gives to it an unnaturally sweet taste; in the proportion of two per cent., the fraud is at once recognisable by the tongue. Glucose, being less sweet, would be more difficult of discovery. But, in either case, a little beer-yeast, when added to the milk, will, in a short time, excite the alcoholic fermentation; whereas we know that the sugar of milk ferments with great difficulty.

We may easily detect the presence of fecula, or the infusions of amylaceous matters, as rice or oatmeal, by rendering the milk slightly acid, and then adding to it tincture of iodine.

The emulsions of oleaginous seeds would soon betray themselves by the taste or odour which they would communicate to the milk, and also by the debris of the cellular tissue of the seeds themselves.

It has been imagined by many that, in large cities, like Paris, the milk has at times been adulterated with emulsions made of the cerebral substance of various animals; such a fraud would, however, at once be revealed by the microscope.

Undoubtedly, the most common manœuvre consists in removing the cream from the milk, and then adding a certain quantity of water. The milk, when thus diluted, besides being less nutritive than in its pure state, becomes readily curdled and sour, and keeps a much shorter time.

As, ordinarily, the cream entirely separates at the end of twenty-four hours, we may judge, up to a certain point, of the quality of the milk, by measuring the quantity of the cream. This means, long since employed in England, has been recently introduced into France. We are to take a graduated measure, pour into it the milk, and then set it aside: if it be of good quality, we usually obtain as much as 8 to 8½ per cent. of cream, when compared to the volume of milk employed. We must, however, acknowledge that this proceeding furnishes but uncertain data: for, even with pure milk, the volume of cream separated varies according to the temperature to which the milk is exposed. It is greatest at a temperature which does not exceed 8° C. At from 12° to 20°, according to M. Quévenne, the volume of cream appears to remain pretty stationary.

The following table presents us, at one view, with the results of all the analyses which have been made on the different kinds of milk.

Milk.	Composition of the Milk. Caseum, Albumen, and insoluble salts.	Fatty matters.	Sugar of milk, and soluble salts.	Water	Dry matter in 100 parts of milk.	Remarks.	Authors.
Cow ..	3·6	4·0	5 0	87·4	12.6	Mean of 12 analyses. Bechelbronn.	Le Bel & Boussingault.
Do. ..	3 8	3·5	6·1	86·6	13 4	Mean of 6 analyses, in environs of Paris.	Quévenne.
Do. ..	4·5	3 1	5·4	87 0	13 0	Do. do.	Henri and Chevallier.
Do. ..	5·6	3·6	4·0	86·8	13·2	Do. do.	Lecanu.
Do. ..	5·1	3·0	4·6	87 3	12·7	Milk from environs of Giessen.	Haidlen.
Ass ..	1·7	1·4	6 4	90·5	9.5	Mean of 5 analyses.	Peligot.
Woman	3·1	3·1	4·3	89·2	10·8	Of good quality.	Haidlen.
Do. ..	2·7	1·3	3·2	92·8	7·2	Of middling quality.	Haidlen.
Do. ..	2·2	5·1	7·8	85·8	14·1	Mean of 3 analyses.	Payen.
Do. ..	3·8	2·5	4·8	88.4	11·6	Mean of 14 analyses.	F. Simon
Goat ..	9·0	4·5	4·5	82·0	18·0		
			Extractive matter and salts.				
Bitch ..	16·0	14·75	2·95	66·3	33·7	Mean of 2 analyses; traces of sugar of milk.	F. Simon.
			Sugar of milk, and soluble salts.				
Mare ..	1·6	A little.	8·75	89 63	10·37	The weight of the cream in this milk was only 0·80 per cent.	Stipriann, Luiscius, and Bondt.
			Sugar, extractive matter, and salts				
Cow ..	7·0	3 9	3·5	85·9	14·1	Mean of 2 analyses.	F. Simon.
Do. ..	6 8	3·8	3·6	85·7	13 2	Do.	Herberger.
Goat ..	4·5	4·1	5·8	85·6	14·4	One analysis.	Payen.

In a memoir published on the fattening of animals, and on the formation of the milk, by MM. Boussingault, Payen, and myself, we showed that a milch cow can extract, for the benefit of man, from a given pasturage, a quantity of alimentary matter more than double that drawn from it by a fattening ox; and we further drew a conclusion, that the establishment of the commerce in milk upon a system capable of inspiring general confidence, is a subject in the highest degree deserving the attention of the public administration.

The milk of the cow is liable to various alterations, and offers, in such case, remarkable differences both in its qualities and in its composition. Among these alterations, some depend on an affection of the animal itself, while others manifest themselves in the milk, only after twenty-four or forty-eight hours' rest.

Cows are subject to a disease known in France by the name of *cocotte*; the milk which they furnish in this state is usually less fluid than natural; when examined by the microscope, it invariably presents adherent muriform globules, sometimes mucous, at other times purulent. If treated by ammonia, it becomes viscous. It quickly presents marked phenomena of putrefaction. Sometimes, the pus gives to it so great a degree of fetidity that all examination becomes useless, and it should then be wholly rejected from consumption. The prevalence of this disease around Paris does not seem to prevent our milkmen sending their commodity to market; nor have we known any serious injury done to the public health in consequence thereof.

M. F. Simon made a comparative analysis of two portions of cow's milk taken from different teats of the same udder—the one of which was sound, the other covered with variolous pustules. The milk drawn from the diseased teat was strongly alkaline, and possessed a saline taste; when examined by the microscope, he discovered in it purulent or mucous globules; caustic ammonia rendered it gelatinous. The milk proceeding from the sound teat had a feebly acid reaction.

The following was the composition of these two kinds of milk:—

	Milk of the sound teat.	Milk of diseased teat.
Water	91·21	93·51
Butter	1·96	1·20
Caseum	4·06	.
Caseum, pus, mucus, albumen	.	3·14
Sugar, alcoholic extract, lactates and chloride of sodium ..	2·94	
Extractive matter, chloride of sodium, lactate of soda, and a little sugar . ..	..	1·62
Aqueous extract .	..	0·03
Salts soluble in water.. ..	0·39	0·61
Salts insoluble in water .	0·32	0·24

M. Herberger examined the milk given by cows affected with disease of the hoof. In the first stage of this disease, the milk was alkaline, and rennet coagulated it but imperfectly; the butyrous globules did not present their usual clear outlines, but seemed to be confounded together. In the second stage, also, the milk was but incompletely coagulated by rennet; it was viscous and had a putrid and disagreeable odour and taste. It contained carbonate of ammonia. The fixed salts were found there in double the proportion to what we observe in normal milk. The following are the results of his analyses:—

	First stage of disease. I.	II.	Second stage. I.	II.	Sound milk.
Water	86·90	87·24	87·48	87·93	85·75
Solid residue.	13·10	12·76	12·58	12·07	11·25
Butter	3·90	3·85	3·82	3·79	3·82
Caseum.. ..	5·24	5·10	5·00	4·90	6·84
Sugar	2·28	2·40	2·40	1·90	2·88
Salts	1·68	1·71	1·66	1·39	0·71
Density.. .	1·0336	1·0330	1·0331	[illegible]	1·0337

The milk arising from healthy animals occasionally presents, after the lapse of twenty-four or forty-eight hours, certain modifications in its colour, which passes to blue; sometimes, this change is not shown until after the lapse of several days. Ancient observers had already directed attention to this fact, which M. Bailleul has likewise remarked in the arrondissements of Hâvre and d'Yvetot. The blue coloration appears at first in isolated patches, in which some believe to have noticed tufts of *byssus*, or hair.

The milk is subject to another alteration of the same kind, but, in place of becoming blue, it here turns yellow.

M. F. Fuchs has paid great attention to these phenomena: he has observed that the blue milk contains a particular species of *infusoria*, to which he has given the name of *vibrio cyanogenus*. This insect appears to be itself colourless; but we can turn every kind of milk blue by placing it in contact with it. These animalcula may be generated in an infusion of mallows, and they will thus give to it a pale blue colour. We may preserve them for a long time in this liquor.

The yellow milk contains the *vibrio xanthogenus*—an insect which behaves precisely as the foregoing. Sometimes, also, we find it in the blue milk.

Occasionally, we see in large cowhouses, where the same kind of regimen is used throughout, that the milk of certain animals alone presents these phenomena of coloration. The employment of chloride of sodium appears to obviate the particular state which gives rise to these insects.

ORIGINAL CONTRIBUTIONS.

ON THE PHYSIOLOGICAL AND PATHOLOGICAL CAUSES OF SUDDEN DEATH IN CONNECTION WITH THE VASCULAR OR CIRCULATORY SYSTEM.

By M. W. HILLES, Esq.

(Continued from p. 333.)

Having considered the physiological and pathological phenomena, apparent in cases of sudden death, produced by a deranged state of one or other of the two great centres of life, namely, *respiration* and *circulation*, I shall proceed to inquire into those cases of sudden death which appear to be produced by a destruction of the influence of the third great centre of life—the *nervous system*.

This is, indeed, the most important division of our subject, as the nervous influence is so extensive, and so necessary to all the functions of life—both those which minister to the physical wants of the individual, and those which produce the development of his moral qualities—that it may be regarded as universal, and as well taking its share in the action of the two great centres of life already treated of, as in the maintenance of that over which it immediately presides.

This extensive influence of the nervous system, in all the vital actions, would render such an inquiry as the present extremely complicated and unsatisfactory, if we had not adopted a certain division of the subject which, although, strictly speaking, it may be somewhat artificial, is sufficiently based on natural laws to justify its adoption, and sanction the conclusions derived therefrom.

Such a division is necessary in all similar inquiries: for the vital actions are so mutually dependent on each other, and the vital phenomena so closely linked together, that it is impossible to regard any one without some reference to the other. Respiration, for example, could not be carried on without the agency of the nerves, in causing the contraction of the respiratory muscles, and influencing the change of the venous into arterial blood, in the air-cells of the lungs; nor could the circulation be continued, unless the heart and bloodvessels received their due supply of influence from the nerves.

I shall confine my observations, in the present inquiry, to those cases of sudden death in which the destruction of the nervous influence appears as the evident cause of the immediate suspension of the vital powers.

To the perfect organization of his nervous system, *man* is indebted for his superiority in the natural world; not only does it, as in the lower tribes of animals, preside over the functions and offices which contribute to the supply of his physical wants, and to the preservation of his material being, but it also endows him with a superiority of reasoning power which places him, in the scale of the animal creation, immeasurably beyond all other living beings.

Numbers surpass him in the power of their muscles, or in the strength of their bones; many excel him in all those acts which are produced by the mechanical exercise of their physical abilities; but in one does he surpass them—one only, and yet one sufficient to set at nought the swift flight of the rapid eagle, the towering strength of the majestic lion, or the overwhelming force of the monstrous whale: that one is REASON. Confiding in this, and armed with the weapons he has already devised for his use, he faces the lion in his den, the monster of the deep in the recesses of the frozen seas, and stops the soaring powers of the king of birds.

There can be no doubt that the *intellect* or *reasoning powers* of man reside in the nervous system, and depend as completely on the organization and perfection of this, as any one of the more simple acts of the animal depends upon the integrity of the structures engaged in its execution.

Many are inclined to attribute this superiority of the reasoning faculties of man to a spiritual cause, and reject the doctrine of the connection between mind and matter as untenable and dangerous. But such are unquestionably in error: all the phenomena of life and disease prove, beyond a doubt, that the mind is intimately connected with the material structure of the brain; they increase, flourish, and perish together: what tends to the development of the one, promotes the growth of the other; what annihilates this, consigns that to destruction.

It would be out of place, here, to enter fully into the discussion of this subject; but there is no difficulty in bringing forward numerous proofs of the opinion that the intellectual perfection depends upon the physical organization.

Some learned writers have, with great force but very little ability, opposed the dissemination of such an opinion, as opposed to the spiritual existence of man; but there is no reason why the *spirit* or *soul* of man, and his *intellect* or *mind*, should be regarded as one and the same. The spirit or soul may be, and I believe is, something added to our material being, but of which we have no distinct knowledge; the presence of which we may believe, but cannot demonstrate. What the nature of its connection may be, with our material organization, is far beyond the reach of our inquiries, and rather forbids than encourages us to analyze its being, or to attempt to fix its seat.

The absurd doctrines of modern times should not, must not, compel us to shut our eyes against facts, and refuse the admission of truths beyond question. We need not fear such investigation; nay, advance only leads us the more to contemplate the greatness of our Creator with respect, and to convince us of the littleness of our intellect compared with His wisdom.

The untutored savage may fall down before the spirit of the winds or the genius of the elements, and witness his god in the raging of the furious storm, where all seems destruction, and threatens annihilation; but the philosopher and physiologist behold His presence revealed in the perfection, and greatness, and beauty of His works; acknowledges His power with admiration even where their intellect fails to follow, and cease only to admire when they no longer continue to exist.

I have been led to this, which may be considered as a digression, by the circumstance that many cases of sudden death occur from impressions made on the moral feelings, as well as on the physical functions, through the agency of the nervous system.

The impression, in such cases, is made on the

feeling or passion affected, through one or more of the external senses, most frequently the eye or ear, whence it is carried to the seat or organ of the feeling or passion influenced, where the impression acts so injuriously as to destroy life and, in other cases, impair reason.

Fear, anger, and ma y other passions of the human breast, have been known to cause sudden death. How are we to explain such an occurrence, except through the agency of the nervous system? The feelings or passions must reside in some part of the frame, and all observation leads us to refer them to the nervous centre, rather than to any other part of the human structure. All the other functions minister to the intellectuality, the moral essence of the individual; this, in turn, presides over and regulates these, and so controls the actions of man as to lead to his safety and preservation.

I cannot understand, therefore, why reason should be assigned an immaterial nature, or why it should be set apart as the spirit or soul of man, more than any other of the ap arently immaterial essences forming the passions which link him to the external world; especially as this is equally affected by those material changes which take place in the human organization, as any other of the properties with which man is endowed.

The nervous system, then, presides over all the actions of the animal economy, whether internal or external.

It controls the growth and nourishment of the corporeal structures.

It regulates the physical functions of man, and influences the several secretions.

It is essentially necessary to the perfection of the respiratory and circulatory functions—two of the great centres of life.

It connects man with the external world through the agency of the senses.

And, finally, it is the seat of the moral qualities of which man is possessed, and which enable him to perceive, feel, judge, and reason.

We need not be surprised, therefore, at the numerous diseases produced by derangement of the nervous system, or any part thereof, or the sudden fatality which attends more violent impressions made upon it.

How these latter act so as to produce a rapidly-fatal effect is difficult to decide; we can only conjecture that the impression so made deranges in some manner the nervous current, and thus tends to a suspension and ultimate destruction of the nervous influence, and the remaining functions on which life depends.

That such is the correct explanation of the phenomena observed in such cases is supported by the swooning or fainting of persons on the receipt of painful intelligence or of serious injury. Here an impression is made sufficient to produce a temporary suspension of the nervous influence and the remaining vital functions; it requires but a more powerful impression to cause similar but permanent results.

It is not necessary that any lesion or disorganization of tissue should exist in such cases; derangement of function is sufficient to produce the fatal termination.

But in what consists this functional derangement; how or by what means it is produced; how the nervous influence is checked, or altered, or perverted, so as to lead to a destruction of life, are matters wholly beyond our examination at present, as we are still ignorant of the real nature of the nervous fluid, or other agent by which it operates, and of that *life* which falls a sacrifice to its derangement or destruction.

Diligent investigation may and will, doubtless, disclose many things of which we are at present ignorant; but I fear much that we shall never fully comprehend the intricate phenomena which the agency of the nervous system and the vital principle presents.

In order to explain more clearly the mode in which impressions are made on the nervous system, so as to induce a suddenly-fatal termination, it will be necessary to recal to mind the anatomy of this part of the human frame.

The nervous system is evidently composed of divisions, namely, the cerebro-spinal and the sympathetic: the former, as its name implies, embracing the cerebral mass, or brain, and the spinal marrow, together with the several nerves proceeding from both these structures.

The *cerebral mass*, or *brain*, consists of two principal portions, the cerebrum and cerebellum. The former of these is much the larger of tl two, and contains numerous bodies, varying both as to size and shape, all of which have their peculiar offices to perform, both as isolated structures and as parts of the general mass.

The cerebum, properly so called, presides over all those actions and functions which connect man with the external world. Thus, for example, proceed from it all the nerves of special senses, viz., the first, or olfactory, in which the sense of smell resides; the second, or optic, which form the retina, and are the seat of vision; the fifth, which supply the nerves of taste to the tongue, and the portio mollis or acoustic portion of the seventh, to supply the organ of hearing. The only exception to this is in the sense of touch, which is supplied to all surfaces chiefly by the spinal nerves. This may be and is, no doubt, owing to this sense being less connected with the intellectuality of the individual than the other senses, which derive their supply of nerves directly from the cerebral mass.

The remaining cerebral nerves, viz., the third, fourth, part of the fifth, the sixth, and the portio dura of the seventh, are distributed to supply the special organs of sense, some with motion, others with sensibility, and seem to be derived from this portion of the cerebral mass, in order that they may be the more intimately connected with the special nerves of sense supplying these organs, and thus maintain that sympathy of action so essentially necessary.

Sir Charles Bell's theory (a) regarding the use of the portio dura being associated with the respiratory nerves, is opposed to this view; but more recent investigation has called his theory into question, and has thrown considerable doubt on the true use of this nerve. That it is associated with the special organs of sense, in its actions, is evident from its origin, course, and distribution.

The eighth and ninth nerves are not, correctly speaking, cerebral nerves, although classed as such; they more properly belong to the spinal nerves, as they arise from the upper extremity of the spinal marrow, the medulla oblongata.

But the great office of the cerebrum is to contribute to the intellectuality of the individual; it supplies man with all those faculties which enable him to receive impressions from the external world, whether these are applied physically or morally, through the agency of the senses; and, subsequently, to reflect, judge, and act.

It is the seat of *Reason*—the centre of that *Mind* to which he is indebted for his superiority over all other animals—which raises him above the brute creation, and links him more closely to the Creator.

All observation tends to this conclusion: its comparatively greater size in man—in the adult than in the young—in the educated than in the ignorant—in the inhabitant of civilized countries than in the uninstructed denizen of savage wilds—in the enlightened sage than in the untutored child of nature—in the individual marked by the possession of great intellectual faculties than in him who is deficient in mental qualifications.

Disease is equally powerful in support of these opinions. The pressure of a piece of bone, or a clot of blood, or other extraneous body, destroys the mental faculties; inflammation of the brain renders the man of reason a violent ...., disorganization, abscesses, &c., reduce the talented statesman, or th great writer, or the profound philosopher, to a driveller and a show."

(a) "The Nervous System of the Human Body," by Sir C. Bell, K.G.H., &c.; p. 54. Edinburgh: 1836.

It is in vain for those who consider themselves *natural* theologians (a), but who are, in my estimation, most *unnatural* theologians, to endeavour to support their opinions in opposition to a host of facts; their attempts to do so rather injure than serve the cause they undertake.

If the mind be dependent on material structure, it by no means follows that the soul or spirit is equally so: this is spiritual and eternal, that material and perishable; of the former we have physical evidence, of the latter, none, save that which is derived from the sacred and other writings of antiquity.

The cerebellum seems to preside more over the instinctive faculties or animal instincts of man, and is especially connected with the sensibility of the individual, and receives from, or contributes to, the spinal marrow the continuations of the corporæ restiformiæ, from which the sensitive roots of the spinal nerves arise.

It is intimately connected with the *animal life* of the person; hence injuries, accidents, &c., to this portion of the brain are much more dangerous than those affecting the cerebrum.

The *spinal marrow* appears to be a prolongation, from the cerebrum and cerebellum, into the spinal canal, and does not possess, as it is generally supposed, any power of action in man independent of them. In some of the lower tribes of animals it is otherwise.

The cerebro-spinal nerves act as the chords which convey the necessary impressions to and from the great nervous centre, the brain.

The *sympathetic* forms a distinct system of nervous influence, although connected with the preceding by numerous anastomosing filaments.

Almost exclusively confined to the trunk, it presides over the great functions of respiration and circulation, on which life depends, and also over those of digestion, secretion, &c.

It has little connection with the brain, and is, therefore, but little related to the intellectuality of the individual. Nature has assigned to it the office of regulating the functions just stated, which she has thus taken, as it were, from the control of the intellect of the person, placing them under the superintendence of a distinctly independent nervous system, which sustains these functions in action without the concurrence of the will or senses of the individual.

The sympathetic system thus presides over the organic functions, or, as they may be considered, the *vegetative* life, as distinct from the *animal* life of the species.

This is a wise provision of nature, as thereby the functions on which the sustentation of the frame depends are independent of the condition of the intellectual organs, and continue their action when these are otherwise engaged or sunk to rest, as in sleep, stupor, &c.

This division of the nervous system enables us to understand more completely the *modus operandi* of injuries, disease, or other injurious agents, in producing a fatal termination, according as one or other, or all, of these various portions of the nervous system may be affected.

In order to simplify, as much as possible, the consideration of our subject, I shall divide it, as I have previously done, when considering the causes of sudden death in connection with a deranged state of the respiratory and circulatory functions, into two parts, namely.

FRACTURE OF THE CERVIX FEMORIS AT AN EARLY AGE.

By C. H. HALLETT, Esq., University of Edinburgh.

The following instance of fracture of the cervix femoris within the capsular ligament of the hip-joint is chiefly interesting on account of the age

(a) We have, therefore, evidence of the strictest kind, induction of facts the most precise and unerring, to justify the conclusion that the mind exists, and is different from, and independent of, matter altogether.—"A Discourse on Natural Theology," p. 107. By Henry Lord Brougham, F.R.S., &c. London: 1835.

of the individual, but is also worthy of notice on account of the remarkable changes which had taken place in and around the fractured portions of the neck of the femur, and which must undoubtedly have allowed the individual the full and perfect use of the limb, as far as progression is concerned.

Jane Mason, aged twenty-three, stated in the medical certificate to have died of paralysis, was brought to the dissecting-room of this university in the beginning of May, 1846, for the use of the practical anatomist. My attention was directed to the condition of the body before the dissections were commenced, in consequence of the shrunken appearance of the whole of the right half of the body, which strikingly evidenced that the paralytic affection had existed for a considerable period of time before the death of the individual. The superior extremity was diminished considerably in size, its circumference being scarcely one half of that of the opposite and well-formed limb. The fingers and wrist were permanently flexed and distorted. The lower extremity also bore evident marks of the prolonged existence and of the effects of the paralysis. The whole limb was much decreased in bulk; and the ankle-joint and toes were in much the same condition as the wrist and fingers. The affected leg was also observed to be shorter by about two inches than the other. This shortening I at first referred to the condition of the foot and leg, but subsequent dissection showed it to be caused, at least partly, by changes which had been induced in and about the neck of the femur, after fracture within the capsular ligament. As soon as the fracture was detected I examined the parts which had been removed from the trunk, and found they exhibited great alterations both in their form and in their disposition—alterations which differed somewhat from those usually found after similar lesions.

The upper and inner part of the shaft of the femur presented, between the greater and the lesser trochanters, a deep fossa passing from above obliquely downwards and inwards, wide and deeper below than above, and divided into two unequal portions by a slight ridge crossing it transversely. The portion below the ridge was covered with cartilage and a synovial membrane; the portion above afforded attachment to strong ligamentous fibres. The anterior lip of this fossa was smooth and somewhat convex. A little below and anterior to this fossa, a smaller one, also covered with cartilage and synovial membrane, existed; and above and posterior to it was another—the trochanteric fossa—separated from the large abnormal one by a projecting ridge of bone. The lesser trochanter was greatly enlarged, and presented an oblong smooth surface running obliquely downwards and forwards, which was tipped with cartilage. On the anterior and posterior intertrochanteric lines were a number of small irregular nodules of bone, which indicated an attempt at the enclosure of the fractured extremities of the neck of the femur in an osseous case. The surface of the neck immediately in front of the abnormal fossa also presented a development of osseous matter in the form of a thin plate elevated above the level of the neck. In all other respects but those mentioned the shaft and outer portion of the neck of the femur were normal. The alterations which had been induced in the head and, more especially, in the inner portion of the neck of the femur were even more considerable. The head had lost its spherical form, in consequence of the bulging backwards of the upper and posterior part of its circumference; of the removal of a portion of the lower and posterior part of the same, and of the development of a bony crest projecting from the centre of the head immediately above the fossa for the ligamentum teres, which divided the head into an anterior and a posterior segment. Only a small portion of the inner part of the neck existed as a *prismatic* process projecting outwards from the upper and outer part of the head. The upper surface of this part of the neck was convex; the anterior was slightly concave and smooth; the posterior was also concave but irregular: both the latter were covered with cartilage. The remainder of the neck had been removed by the absorbents, its inner and lower part where it is continuous with the head of the bone being excavated into a deep fossa of a semilunar form, constricted in the centre, but expanded at either extremity.

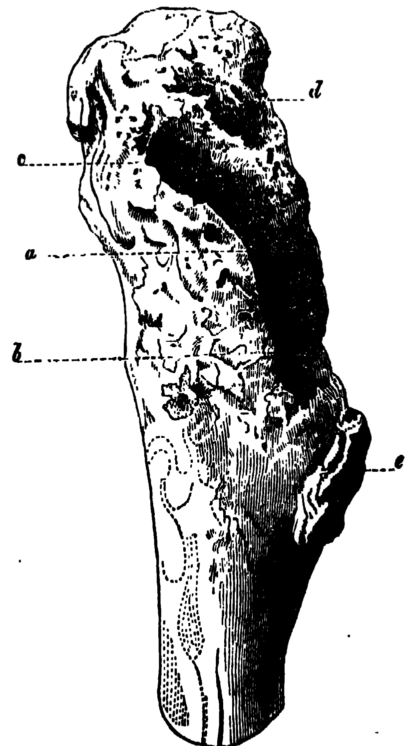
The head and inner segment of the neck were applied and articulated to the shaft in a peculiar manner. The neck had been tilted upwards so as to bring the trochanter minor and the head of the femur in close apposition—the former occupying the fossa in the inner and lower part of the neck, the production of which might, therefore, be referred to the friction of the trochanter minor against it. The neck itself, or rather the anterior and posterior surfaces of the prismatic process which alone remained of it were lodged in the abnormal fossa in the shaft. There was thus a double locking of the shaft into the head and neck of the femur. The fractured extremities were retained in their position by ligamentous fibres, a strong band of which passed between the upper portion of the abnormal fossa in the shaft, to the upper surface of the neck, whilst others held the head to the trochanteric lines. The whole was enclosed within the capsular ligament of the hip-joint which was entire and presented no traces of having been ruptured at the time the neck of the femur was fractured.

There were two joints enclosed within the capsular ligament—the hip-joint and the abnormal one developed between the fractured extremities of the neck of the femur; for these were provided with cartilage and a distinct synovial membrane, which had secreted a large amount of a viscid serosity, which lubricated the parts. The motions permitted by the latter joint were very slight. Before the ligaments were divided, it was observed that motion of the inner segment downwards was entirely prevented by the upper fasciculus of ligamentous fibres, and by the trochanter minor, which acted as a buttress to sustain the head of the femur; and that lateral motion was permitted to a slight extent. From the nature of the changes which had occurred in the fractured extremities of the neck, and the manner in which they were adapted to each other, it will be seen that the individual must have been able to stand firmly in the erect posture on the injured limb, and must have had the use of the limb for the purposes of progression, although the gait would be necessarily unnatural in consequence of the shortening of the extremity. In the erect posture, the weight of the trunk would necessarily be transmitted directly from the head to the shaft of the femur, through the trochanter minor; the trochanter minor and the head of the femur would be retained in close contact, and prevented from separating by the weight of the trunk, and by the ligaments; and the greater the amount of pressure applied to the head of the femur, in the longitudinal axis of the bone, the more firmly would the trochanter minor and the head of the femur be locked together, and the more secure would be the column of support afforded by the extremity to the body. These conclusions, made at the time, can easily be proved on the dried bone in my possession.

The age of the individual is one of the most interesting points connected with the case. It is well known to the profession that fracture of the neck of the femur generally happens in persons advanced in life, and has seldom been met with in individuals below fifty years of age. Three cases have been recorded in this country in which it happened before that period: one of these was seen by Sir A. Cooper, in a patient aged thirty-eight; another is spoken of in his work on Fractures and Dislocations, as having been shown him by Mr. Herbert Mayo, without the age of the individual being mentioned; and the third occurred to Mr. Stanley, in a boy aged eighteen. In my own case, which makes the fourth, the individual was aged twenty-three at the time she died. The precise time at which the bone was fractured could not be ascertained, but I am led to believe it must have taken place a considerable period of time before she died; that it must have occurred before the limb had commenced wasting away under the paralysis: for it is difficult to suppose that reparative action, especially such as rendered the limb fit for progression, could have been set up and carried on in one part of the limb whilst the remainder of the extremity and indeed the whole of that side of the body were undergoing great changes from want or deficiency of assimilative power, and were being rendered totally useless to the individual. I have been unable to procure any information respecting the history of the woman, and am therefore reluctantly obliged to leave the case in an imperfect state.

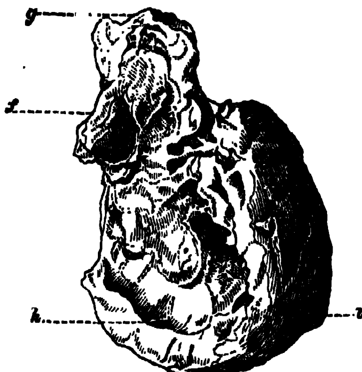
Before leaving this case, it may not be uninteresting to mention one circumstance unconnected with the fracture, but probably connected with the paralysis. It was discovered during the dissection of the head and neck, that the "left" internal carotid artery was completely obliterated (apparently by inflammation), and reduced to a thin fibrous cord from the point of division of the common carotid to its termination by the side of the sella turcica; and that the right internal carotid was not enlarged, but, on the contrary, smaller than usual. May not the paralysis have been caused by a disturbance of the balance of the circulation within the cranium, induced by obliteration of one internal carotid artery, and a deficient collateral circulation, since no other lesion was detected during the dissection? If we connect this observation with others of a somewhat similar nature, made known to us of late years by different surgeons, namely, that paralysis of one side of the body sometimes ensues on ligature of the common carotid artery of the opposite side, we may be justified in answering the question in the affirmative.

The following plate is a faithful representation of the parts :—



a. The fossa in the outer segment of the neck and shaft of the femur.
b. The lower part of the fossa which received the inner segment of the cervix femoris.
c. The upper part of the same which afforded attachment to a strong ligament.
d. The trochanteric fossa.
e. The trochanter minor, somewhat enlarged and covered in the recent state with cartilage.

The anterior trochanteric line is seen studded with numerous small spiculæ and plates of bone.



f. The prismatic remnant of the inner segment of the neck of the femur.

g. That portion of it which afforded attachment to the strong ligament coming from the fossa (*e*).

h. The fossa in the head and inner segment of the neck of the femur which received the trochanter minor.

i. The ridge on the head of the femur, lodged in the recent state, in the notch in the acetabulum.

A SINGULAR CASE OF PARTIAL ERECTION OF THE PENIS.

By Dr. C. CLAY, Piccadilly, Manchester.

The following case is one of those that occasionally fall under the notice of a general practitioner, the cause for which defies all our attempts to unravel; and, in the treatment, former experience, however extensive, offers no guide of any certainty for its cure.

Mr. A. applied to me in the early part of May last: he appeared to be suffering much from nervous excitement; pale and emaciated; and, according to his own representations, had lost much of his physical powers, having been but a few months before a stout and vigorous constitution. He had been under the treatment of a very respectable practitioner for three months, that is, from the commencement of the attack to the present time, without the slightest relief; rather, on the contrary, he supposed himself going worse and tending, as he thought, to a hopeless condition. The symptoms now present were nearly the same as they had always been, and consisted of excruciating pain in the perineum, and about the neck of the bladder. The urethra, commencing about an inch, or from that to an inch and a quarter, from the usual orifice at the glans penis, and extending for an inch towards the base of the penis, was much hardened and thickened, and had the feel as though a broken piece of bougie or catheter had been left in it. When the penis was excited, the lower part, up to where the hardened urethra commenced, had a firm and vigorous erection, whilst the hardened portion and the remainder, including the glans penis, were not in the slightest degree affected by the erection of the lower part, and presented a most odd appearance. At the time of excitement the pains were most severe. I examined the penis carefully: first, however, I may mention, there was a malformation of the parts—the orifice of the urethra, instead of opening on the glans penis as usual, had its opening about an inch, or rather better, below the glans, and from that opening to the glans not the slightest remains of a urethral canal were observable; this feature, however, could not have influenced the case, as the gentleman was at least fifty years of age, and the father of a family. The hardening of the urethra commenced at the abnormal orifice. My patient was of strict moral character; had never had any gonorrhœal affection, chancre, or bubo in his life. The calibre of the urethra was not in the least diminished, as might have been expected by the hardening, for, on passing a large sized bougie down, not the slightest obstruction was offered to its progress. These, then, were the particulars of the case: the medical gentleman under whose care he had previously been had taken great trouble to ascertain the cause, but without success, and every mode of treatment adopted was equally unsuccessful. I felt not a little puzzled with the case, and determined to watch it carefully. I ordered a pill of ext. conii, gr. ij.; ext. hyoscy., gr. j.; hydr. chloridi, gr. ss., every night and morning, and passed a soft wax bougie smeared with ung. hydr. nit. every night. After continuing this for some days without any benefit resulting, I discontinued the use of the bougie, and submitted warm emollient fomentations to the parts; continued the pills, and gave also a mixture of liq. potassæ ʒ ij., with infus. gentianæ ℥viij., a wine-glassful three times a day; still no good arose from it. It then occurred to me that it might possibly give way to an improved tone in the system; acting on this suggestion, I ordered the genitals to be rubbed gently with a mild soap liniment, and a quinine mixture, grs. xx. to the ℥viij. mixture; the pills to be discontinued. I saw my patient the second day after the alteration of the medicine, and fancied I had found out the means of relief; my patient was equally elated; the pain had entirely ceased, and he fancied the erections were affecting the whole length of the penis more than for some time; we were doomed, however, to be disappointed. On the fourth day after the commencement of the quinine, the pains returned with greater violence, and the erections to their former state. I increased the dose, but with no better result; subsequently I tried plaisters made of the ext. conii round the relaxed portion of the penis, and along the course of the urethra, and to cover the perineum: still no benefit arose from them. My patient was now very low, excitable, and extremely irritable, and I saw the necessity of supporting the constitution, and again ordered the quinine mixture, with an expressed wish to see him the next day at an hour when I should have a little time to devote to him, when I determined in my own mind to have him stripped of his clothing, and make another careful examination. Accordingly he came next day prepared, and, when his clothes were removed, I observed a discoloured patch and slight depression of skin over the spinal lumbar region, and a similar patch in either groin; these patches were of the size of a crownpiece. I examined the parts carefully to find if any rupture showed itself, but observed no indication of anything of the kind. I remarked to my patient that I had been looking for a rupture, because I could not account for the discoloured patches, except by supposing he had worn a double truss; but, as there was no rupture, it must have arisen from some other cause. My patient now looked at me with some surprise, and stated *that he had worn a double truss for near four months*. I immediately asked for what purpose; when he stated that a friend and himself were taking a bath together, and his friend insisted that he must wear a double truss, because his groins were too full, and there was every fear that he would be at some future time ruptured, and that he ought to wear a truss as a preventive. I inquired if his last medical attendant knew of this, but he declared he had never mentioned it, as he thought one ailment was sufficient to trouble him with, and had, therefore, studiously avoided the matter. The whole mystery of the case now appeared to be cleared up; I felt no doubt that the mischievous symptoms arose, in the first place, from the pressure of a strong double truss, for the use of which there was not the slightest necessity. I, therefore, insisted on its being immediately laid aside; and without any other treatment, save the quinine mixture to restore him to his usual strength, the case rapidly recovered. It will be recollected that the first time the quinine was ordered, a cessation of pain and other unpleasant symptoms occurred. On making strict inquiry, I found the relief then experienced arose from his putting the truss aside for two or three days, in consequence of a small pustule on the skin, where one of the pads pressed upon, which sufficiently accounted for the relief.

It is not, however, so easy to account for the symptoms characterizing this case—that is, why simple pressure should have caused a partial erection of the penis, or a hardening of the urethral canal, *also partial* (only affecting a small portion of it), and, I may add, the excruciating pain at the neck of the bladder and in the perineum. The gentleman is now well, and the erections perfect.

A case of this nature shows the necessity of being particular in inquiries into the history, lest some important point should be hid from the medical attendant, which, if known, might greatly enhance the chances of cure.

PHLEGMONOUS ERYSIPELAS FROM SLIGHT WOUND IN THE HAND.—AMPUTATION OF THE ARM.—SECONDARY HEMORRHAGE.

By CHARLES EDWARDS, Esq., M.R.C.S., &c., Christian Malford.

John Hannam, a hale old man, seventy years of age, whilst cleaning out an empty sugar cask, ran the point of a rusty nail into the palm of his hand; the wound was trifling, but was quickly followed by violent inflammation of the phlegmonoid erysipelatous kind. For the first fortnight he was attended by a neighbouring practitioner, who used only palliative treatment. At the end of this time he came under my care, with the hand, wrist, and lower third of the forearm enormously swollen; the skin was of a dark crimson colour, and there were evident signs of extensive disorganization of the cellular tissue. I made two free incisions, five inches long, on the back of the forearm and hand, and let out a large quantity of matter, mixed with blood; the hemorrhage from the engorged vessels was profuse, but was easily checked by pressure. The patient was much relieved by this treatment, and for a time went on well, excepting that I was twice sent for during the week following on account of rather free and sudden bleeding; but as ulceration had extended to the carpal bones, and suppuration continued profuse, the man became hectic, and I found it necessary to remove the limb, which I did on the 8th of May, by the circular operation, above the elbow. Two arteries required ligatures, the humeral and another of considerable size, both of which were partially ossified; the stump was dressed in the usual way, and the patient put to bed. At two o'clock A.M., nine hours after the operation, there was considerable oozing of blood, and, as the usual means were insufficient to check it, I was obliged to remove the dressings and open the stump; the hemorrhage ceased, however, on exposure to the air, and matters went on well for a week, excepting that there was little disposition to heal. On the eighth day I was sent for, and found the old man quite exhausted from the effects of sudden and profuse hemorrhage; the tourniquet had been applied by his son, whom I had instructed in its use; on loosening it, and washing away the coagula, the bleeding did not return, nor could I discover whence it had come; the ligatures were firm. Cold-water dressings were applied; the patient gradually rallied and went on well until the thirteenth day, when the ligature came away from the smaller vessel, and six hours after another alarming hemorrhage occurred, which again reduced him much; it was checked, however, and treated in the same way as before, and did not return till the twenty-first day; the stump in the meantime looking better. On the morning of this day the principal ligature came away; and in the evening, during a violent fit of coughing, the vessel gave way and bled profusely; the patient's son, who was in constant attendance, quickly arrested the hemorrhage by pressure on the arterial trunk; on my arrival this pressure was for a moment withdrawn, and a jet of arterial blood followed; I,

therefore. at once proposed to cut down to and secure the vessel; but the old man, who was very weak, and his friends, were so determined that the operation should not be performed, believing that he would die under it, that I was obliged, much against my will, to trust to pressure, and leave him for a time; it so happened, however, that during the night the tourniquet slipped, and in a moment the patient was deluged with blood. On my arrival he was in a state of extreme exhaustion, pulseless, and apparently dying; the bleeding had ceased; after readjusting the tourniquet, all our means were directed towards restoring animation; for twelve hours there was no disposition to rally, the patient lying in a state of lethargy, and only indicating by his breathing that he lived; from this time he rallied slightly, but for three days he had involuntary discharges from the bowels, and the bladder was only relieved by means of the catheter; the stump was assuming an unhealthy appearance, the matter discharged dark and offensive. The tourniquet, which had been applied with gentle pressure near the axilla, was now removed; there was no bleeding; lint, soaked in equal parts of lemon-juice and spirit of wine, was applied to the stump, and the patient allowed a generous diet. Under this treatment he gradually improved; the stump sloughed a little, and left a tolerably healthy granulating surface. There has been no bleeding from that time to the present (ten weeks from the operation); the stump is almost entirely healed; the man has had general anasarca, but is now nearly free from it, and is able to walk a mile without assistance. The arterial trunk seems to be completely obliterated from the point near the axilla, where pressure was made.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of July 19; M. Brongniart in the Chair.

Sparkling Synchisis.—M. Bouisson, professor of the University of Montpellier, offered, in a short communication, another explanation of the singular phenomena, to which we have already on various occasions referred, under the names of "sparkling synchisis." According to M. Bouisson, the vitreous humour of the eye contains a certain amount of fatty matter, which may, under the influence of accidental circumstances, be deposited in the shape of minute bright particles.

Effects of Quinine on the Bladder.—M. Duchassaing, physician at the Guadaloupe, stated that he had in several instances noticed strangury and hematuria consequent upon the exhibition of sulphate of quinine. The powder of the cinchona bark did not produce these effects; and M. Duchassaing was inclined to attribute its innocuity to the presence of tannic acid. It would be, therefore, sufficient, in his opinion, to add some acid substance to sulphate of quinine in order to prevent its injurious action on the urinary organs.

ACADEMY OF MEDICINE.

Meeting of July 20; M. Bricis in the Chair.

Election of a Secretary Perpetuel.—The entire meeting was occupied by an uninteresting debate on the expediency of electing a successor to M. Pariset. It was decided, however, that the election would take place in one month.

The meeting adjourned at five o'clock.

Treatment of Hiccough by Pressure on the Epigastric Region.—We mentioned, some weeks since, that, in one of his clinical lectures, M. Rostan had recommended this very simple method for the purpose of relieving obstinate hiccough. Dr. L. Boyer, in the last number of the "Medico-Chirurgical Review" (of Paris), relates three cases of painful and obstinate hiccough in which the symptoms were instantaneously dispelled by compression of the epigastrium with an appropriate bandage. Bordeu had already recommended this plan, which had fallen into oblivion, and which deserves to be made known for the double merit of its efficacy and of its simplicity.

CHORIONITIS.

Professor Forget, of Strasbourg, describes, under this name, a disease of the skin which seems hitherto to have escaped the attention of pathologists. In January, 1837, a woman, aged thirty-three, who had for several years suffered from articular rheumatism, was admitted into hospital. The wrists and ankles were in a state of partial ankylosis, due less to the disease of the joints than to a singular thickening and induration of the skin, which was hard, stretched, brownish, and closely resembled in appearance the inodular tissue of scars. The same alteration of the skin was noticed in most parts of the body; thus, from the tension of the integument the countenance had lost its expression and its mobility, the movements of the neck were interfered with, the skin of the abdomen was in the same condition; in one word, the envelope of the body seemed to have become too tight for the subjacent parts. Emaciation, doubtless, produced by the compression of the tissues by the diseased skin was present. The various functions were, however, performed with regularity, and the patient underwent, without any benefit whatever, several forms of treatment. A second case of the same sort was observed in February, 1847, by Dr. Grisolle, at the Hôpital Saint Antoine. The patient, a woman, aged fifty, had presented the first symptoms of the disorder at the period when she ceased to menstruate. The arms and face were chiefly affected, the skin of these regions being in a considerable state of tension; the sensibility, temperature, and colour of the integument were not modified. Some improvement was derived from the use of alkaline baths and the exhibition of hydriodate of potass.

Placing these two cases in juxtaposition, Professor Forget concludes that they belong to a hitherto undescribed form of cutaneous disease, to which he gives the name of chorionitis, or seléro-sténosis (from σκλερος—hard, and στενος—narrow).

Signs indicating the Presence of Worms. By Dr. Hubsch.—The dilatation of the pupil, the itching of the nose; trismus, constipation, or diarrhœa; umbilical colic, derangement or depravation of the appetite, subsultus tendinum, &c., are the signs generally considered to indicate the presence of intestinal worms. M. Hubsch calls the attention of medical practitioners to three symptoms of another nature, and which he considers as very important. The first is the particular appearance of the tongue, which is generally covered with a white deposit interspersed with red specks, usually confluent at the edges or towards the apex of the tongue; the second is increased salivation; and the third, a special kind of chattering, produced during sleep by the spasmodic grinding of the teeth. The latter symptom is, according to Dr. Hubsch, present in nine cases out of ten.

THE INVENTORS OF ETHEREAL INHALATION.

Ethereal inhalations have now literally travelled round the world; but if surgeons do not altogether agree upon their mode of action—if their results are not equally appreciated by all—still most physicians are of one mind on the undoubted utility of the method in certain specified cases. It is, therefore, not uninteresting, at this stage of the history of the invention, to endeavour to ascertain to whom the credit of the discovery is really due, particularly as a considerable degree of discord appears to prevail in all places, particularly in America, on the subject.

Mr. Morton, Dr. Jackson, and Mr. Wells lay claim to the invention, and in the midst of contradictory statements it is no easy matter to wade towards the truth. In a somewhat lengthy pamphlet "On the Origin of the Letheon," published in Boston by Mr. E. Warren, Dr. Jackson is accused (to use a popular but graphic expression) of introducing his fingers into every body's pie. Dr. Jackson, however, on Mr. Morton's own admission, appears to have been repeatedly consulted on the substance to be employed, the apparatus, &c.; and his suggestions were sufficiently valuable to induce Mr. Morton to offer him a share in the profits to be derived from the invention. It appears equally certain that Mr. Morton, acting upon those suggestions, did successfully employ the ethereal inhalation, and was the first to publish the results and claim their reward. In the *Boston Medical and Surgical Journal* of June 18, 1845, we find, however, the following passage, in which the discovery, professed to have been afterwards made by Messrs. Jackson and Morton, is spoken of as a matter of sufficient notoriety to require only a cursory notice:—

"The nitrous oxide gas has been used in quite a number of cases by our dentists, during the extraction of teeth, and has been found by its excitement perfectly to destroy pain. The patients appear very merry during the operation, and no unpleasant effects follow."

In a subsequent affidavit, signed by Dr. Ellsworth, the author of the article, it is stated that the expression, "our dentists," applied to Dr. Wells, who to his full knowledge administered the nitrous oxide gas in 1844, and that many teeth were extracted without pain under its influence.

If, therefore, the merit of the discovery lies in the establishment of the principle that pain may be prevented during operation, by the inhalation of medicated vapours or gases, and not in the use of one particular substance, be it nitrous oxide or ether, it is clear that the credit of the invention and of its earliest application must be awarded to Dr. Wells, in preference to his two competitors. But how are we to couple Dr. Wells's pretensions with the fact of his having for so long a time kept to himself a discovery of this importance, and claimed it only after it had become successful in other hands? How are we to judge of them when we read in his letter to Dr. Morton, dated Oct. 20, 1846:—

"If the operation of administerigg the gas is not attended with too much trouble, and will produce the effect you state, it will undoubtedly be a fortune to you, provided it is rightly managed."

Must we not forcibly conclude either that Dr. Wells had completely given up his previous researches on the subject, finding the exhibition of the gas too troublsome to be practicable, or productive only of unsatisfactory results; otherwise, how could we understand his abandoning a system which (in his own words), if rightly managed, would be an undoubted source of fortune?

We think, however, we can set these various claims at rest by the following extract from the printed reports of the Academy of Medicine of Paris:—

"*Meeting of September* 23, 1828—('*Archives Générales,' vol.* 18, *first series, page* 453).—*Painless Operations.*—M. Gérardin reported on a letter written to his Majesty Charles X., by Mr. Hickman, a London surgeon, in which that gentleman asserted he had discovered the means of performing the most troublesome and dangerous operations without pain. The method consisted in producing temporary insensibility by the methodical introduction of certain gases in the lungs. Mr. Hickman had made numerous experiments on animals, and was desirous of obtaining the co-operation of the leading physicians and surgeons of Paris, in order to make the same experiments on the human subject."

This passage is sufficiently explicit; no doubt can be entertained; the *principle* was discovered by Mr. Hickman, and it is in the *principle* that the invention resides. Mr. Hickman took, in our opinion, the safest and best measures for the carrying out of *his* invention: they failed, but not by his fault. A scientific body was, by him, put in possession of the facts; the communication was made generously and freely; no ... was taken out, no attempt made to

pecuniary profits to himself; it was the gift of a man of science to the world. In all probability Mr. Hickman is no more, or he would, doubtless, have arisen to defend what we must, in justice, consider as *his* property—the discovery of the method of performing operations by the inhalations of medicated vapours.

CHEMICAL COMPOSITION OF THE BLOOD.—M. Poggiale, surgeon of the Military Hospital at Lille, forwarded to the Academy of Sciences, at its last meeting, some researches on the composition of the blood in man, and in domestic animals. The results of his investigations do not differ from those of M. Lecanu, as far as the human blood is concerned; with regard to animals, the following are the chief conclusions of M. Poggiale analytical inquiry:—The blood of birds contains a larger proportion of globules than that of mammiferæ, and in carnivorous animals globulin is more abundant than in herbivorous tribes. In the latter, albumen is found in greater quantities than in the blood of carnivorous animals or of birds. Fatty matter constitutes 2·1000 of the mass of blood of animals. Human blood is the least watery of all; birds present less water in their circulating fluid than other animals. The soluble and insoluble elements of the blood vary between 8·45 and 11·84 for 1000 parts.

D. M'CARTHY, D.M.P.

Diet in Infancy. Dr. Klencke calls attention to the important deterioration which the milk of stall-fed cows undergoes, and is inclined to attribute the production of scrofula in children in many instances to its direct transmission, through the medium of that fluid. "Although the direct production of scrofula," says Dr. West, "by the contagious properties of the milk is assumed rather than proved in this pamphlet, still the fact is very important, that stall fed cows often become tuberculous, and that their milk loses much, or even the whole, of its sugar; that the butter and casine diminish, while the albumen is found sometimes in as high a proportion as 15 per cent., and elain in the proportion of 1·1 per cent.; and that in some cases lactic acid is likewise present." Dr. Marotte draws attention to the error often committed in placing infants on a spare diet, who have been observed not to thrive at the breast, but to suffer from diarrhœa. The real means of cure would consist in obtaining a wetnurse, and thus providing the child with more instead of less nutritious food. Many instances of gastro-intestinal disorder in childhood depend on the want of a more highly amamalized diet. It is, therefore, as a general rule, undesirable to dilute the milk of the herbivora, already poor in animal constituents; while, in those cases where it is necessary to supply deficiency in the nutritive qualities of the nurse's milk, chicken or other broth, either alone or mixed with milk, should be used for that purpose.

Singular Termination of a Case of Uterine Polypus. - It occurred in the practice of Dr. James Johnson, of the State of New York. The patient was a married lady and had been afflicted for twelve months with the symptoms usually consequent upon the occupation of the womb by a tumour. This had existed during the period, and was found to be attached to the cervix uteri. It having been decided to remove the morbid growth, the medical gentlemen proceeded to the house for that purpose, when they found that the polypus had entirely detached itself a day or two previous, just at the period she looked for her regular menstrual discharge, which had never been interfered with until the two preceding menstrual times. The tumour had the appearance of bloody coagulum, and melted away, as it were, under the touch.

Blindness caused by the Use of Sulphate of Quinine.—Dr. M'Lean, professor of materia medica in Rush Medical College, U.S., relates four cases in which blindness seems to have been produced by large doses of the quinine. In the first case, sixteen grains were exhibited every hour, in a case of low remittent fever. Before [the med]icine was discontinued the patient be[came] perfectly blind, which was slowly and gradually removed during the first year. In the second case, the quinine was also prescribed in large doses, producing blindness, which, however, was removed in a few weeks. In the third case the quinine was prescribed in three-grain doses every hour, and continued for three days. The blindness took place on the third day. After some weeks the sight became partially restored. In the fourth case three drachms of quinine were taken in thirty-six hours, in doses of six grains, and at the end of that time the patient became perfectly blind. On the two succeeding days his sight, although very imperfect, was considerably restored.

Rheumatism, with Hypertrophy of both Eyes.—The patient was a negress, fifteen years of age, under the care of Dr. William M'Pheeters U. S. She was first attacked with intermittent fever, which continued for some months, accompanied with a severe pain in and over each eye. The pain continued from the fall of the year till the approach of fine weather, when it gradually ceased. The eyes exhibited no unhealthy appearance either in size or colour. In the following winter the pain returned with increased severity, occasionally throwing her into convulsions. From the commencement of this pain, the eyeballs began to enlarge and protrude, increasing as the pain continued, until they became so large as to create alarm lest they should burst. When the distention was very great, an emetic of ipecacuanha was prescribed every morning for ten or fifteen days, without any material improvement; indeed the effort of vomiting rather increased the swelling of the eyes. By the middle of March, the pain was very severe, continuing day and night; the eyes immensely protruded, standing out an inch beyond their ordinary level, and presenting a hideous appearance; left eye larger than the right; a constant and copious flow of tears from both eyes; light very painful, and sight imperfect. The eyelids could not reach entirely over the balls. No appetite; skin dry and husky; emaciation great; tongue covered with a thick, dark-coloured coat. The patient was ordered to take five grains of the hydriodate of potash three times a day; to paint the eyelids daily with tincture of iodine; to keep a cloth wet with mucilage constantly over the eyes; chronic blisters to the back of the neck, occasional aperients; and a mild nutritious diet. Under this treatment the patient rapidly improved. At the beginning of May the pain had almost gone, the eyes were very much reduced in size, and her general condition improved. By the middle of the month he was free from pain; eyes the natural size, sight perfect, and was enabled to resume her ordinary duties as house-servant.

Cyanosis.—A young man, twenty years of age, by trade a baker, was admitted into the Cincinnati Hospital, under the care of Dr. J. P. Harrison. The patient said he had been subject for the last five years to some degree of blueness of the general surface of the body. When admitted into the hospital there was difficult respiration; much lividity over many parts of the surface, especially the ears, the lips, and the fingers; great protuberance of the eyeballs; slight œdema of the eyelids; tongue very hard; the external jugular, and smaller veins of the neck, much enlarged and varicose; pulse irregular and indistinct; and general temperature of the body, especially on the extremities, low. A slight movement of the patient caused increased lividity of the countenance. The bowels were regular. The patient lived but three days after admission, the blueness augmenting till his death. The autopsy showed the heart much enlarged in size; the right ventricle was hypertrophied to a great extent, and its cavity much dilated. The right auricle was expanded into a bag sufficient to contain half a pint of fluid. The foramen ovale was imperfectly closed, there being several openings through it, large enough each of them to admit a small quill. The tricuspid valve did not close up the auricular ventricular space. The right lung was healthy. The left lung exhibited a singular appearance: partial emphysema was obvious in different portions of the interlobular tissue, but in a most remarkable degree there were exhibited three large collections of air, each of the size of the urinary bladder when containing about a pint of fluid. These collections were obviously produced by the air escaping from the cells of the pulmonary structure, and collecting within the pleura pulmonalis.

Removal of the Superior Maxilla for a Tumour of the Antrum. - Return of the Disease.—The patient was a negro, aged eighteen. The disease first manifested itself as an excrescence from the gum, which was several times removed and cauterized, being always reproduced soon after. In the course of five or six months the cheek began to bulge out. Early in January, Dr. Sims, of Montgomery, United States, saw him. The tumour had then become as large as a good-sized orange, occupying the entire extent of the left upper jaw, and involving to some degree the the molar bone. The mouth was in a bad condition; the gums purple, tumid, and bleeding on the slightest touch; teeth decayed, with the fangs here and there exposed, while at other points they were firmly ankylosed with their alveoli. The operation was performed after the teeth had been extracted, the gums scarified, and his general health improved. The cheek was opened by the curvilinear incision, according to the process of Warren and Velpeau, taking particular pains to avoid the parotid duct. The facial artery being secured, the anterior flap was dissected up to the edge of the orbit. The ala nasi and frenum of the lip were cut up to admit the more easy elevation of the flap. The origin of the inferior oblique was divided, and the contents of the socket separated from the orbitar plates of the maxillary and molar bones. The zygomatic face of the maxilla was freed by a downward dissection of the lower flap. It now remained to attack the hard parts. The left lateral incisor being extracted, an incision was made through the mucous membrane near to and parallel with the longitudinal palatine suture. Two or three nips of Liston's bone-forceps easily divided the alveolar and palatine processes. The eye and its appendages were then supported by the handle of a light silver spoon bent at right angles, while the nasal process was divided obliquely downwards, so as to avoid injuring the nasal duct. The broad part of the molar bone was next divided into the spheno-maxillary fissure, which was more easy than the section of the nasal process, simply because it was more accessible. The separation of the palate plate from the palate process of the maxilla was effected by a thrust with a strong-pointed bone-knife. The other bony attachment, with the pterygoid process of the sphenoid bone, was separated by another thrust with the knife laterally. The diseased mass, being now movable, was slanted slightly downwards, and the operation was quickly completed by clipping the remaining attachments with the scissors. Not a vestige of the disease was left behind. No ligature was applied except to the facial artery, and that was removed before the wound was dressed. The wound was closed by ... interrupted suture and adhesive plaster. There was no stuffing of the cavity, and no other dressing. The recovery was rapid. The tumour was perfectly round, osseous, and scirrhous. The central portions of it were filled with stellations of bony matter, sending off spangled radiations towards the circumference of the scirrhous mass. The disease returned in the short space of two months, a tumour forming larger than the other, which was again removed. It was discovered, after another operation, that it was useless, the disease again returning, and in a few months he died.

Structure and Formation of the Nails of the Fingers and Toes.—Mr. Rainey, in a paper read before the Microscopical Society, stated that the nail consists of at least two distinct structures: one proper to it -the horny structure; and the other the same as the cuticle: and also that the matrix of the nail possesses a set of vessels expressly for the purpose of secreting the horny matter. The matrix consisting in that part

which corresponds with the lunula, or semicircular whitish portion of the nail; of several rows of convoluted and variously-twisted capillaries, their direction being from above to below, which vessels appear to be for the secretion of the horny part of the nail, and may, therefore, be termed the horn-vessels. Other vessels are employed to secrete the cuticular matter of the nail. Between these is situated a plexus of vessels, whose office appears to be the secretion of a substance intermediate in its properties between horn and cuticle, and serving to connect these together, and thus to facilitate the protrusion of the horny part of the nail, properly so called, and to preserve its connection with the surrounding integuments.

Spontaneous Cure of Aneurism of the Arch of the Aorta.—Dr. Bellingham relates, in "The Dublin Medical Press," the case of a woman, sixty-four years of age, whom he attended, in St. Vincent's Hospital, in consequence of gangrene of the right lower extremity, which had commenced six weeks previously upon the anterior surface of the tibia, and had extended gradually till the muscles of the leg were laid bare, and the gangrene had reached to within a few inches of the knee, before she died. Her chest being examined while in hospital, nothing unusual was observed, except a double sound similar to that of the heart, which was audible below the right clavicle, as if the sounds of that organ were transmitted beyond the usual limits. The heart action was perfectly regular and natural. On a *post-mortem* examination, an aneurism of the aorta was found, which sprung from that part of the arch where the ascending joins the transverse portion, and extended across the sternum to the right clavicle, where it formed adhesions to the right lung. It was about the size of the closed hand of the subject, and was completely filled with concentric layers of fibrine, which was very firm, and evidently of some standing. The aorta was dilated, its inner coats much distended with numerous ossific patches, and the orifice, by which the aneurismal sac had communicated with the aorta, would admit the point of the finger. The heart itself was about the normal size; the left ventricle was hypertrophied, its cavity diminished in size, and the left auriculo-ventricular orifice was smaller than natural; the right auriculo-ventricular orifice was normal; the valves were healthy; both coronary arteries were ossified; the femoral and popliteal arteries of the affected side were diseased, and the popliteal vein contained a firm coagulum.

Fatal Hemorrhage from the Umbilical Cord three days after Birth.—Dr. Keiller stated to the Edinburgh Obstetrical Society that he had been called to examine a case of fatal umbilical hemorrhage. It occurred in a fine plump male child, which was affected with vomiting from time to time. On the third day it was discovered that the binder, &c., of the child were soaked with blood from the navel. The cord was not examined for two or three days afterwards, when it was found that the bleeding point was at the root of the cord, to which was applied nitrate of silver, which seemed at the time to be sufficient to prevent the further continuance of the hemorrhage. Before half an hour had elapsed, however, the medical attendant was again summoned, when he tied a ligature around the umbilicus, embracing a portion of the skin which formed its circumference. The treatment proved too late, for the child died in a few minutes after the application of the ligature.

Fungating Excrescences of the Umbilicus in Infants.—Dr. Simpson stated that in infants, after the cord had dropped off, instead of the raw surface contracting and healing, he had several times seen large granulations appear, and a red, elevated, fungus-like excrescence form at the umbilicus. These generally shrink after a time, on being touched with alum or nitrate of silver. In one case he had lately seen, this simple treatment had little or no effect. The excrescence enlarged to the size of a cherry, which it likewise resembled in colour. It was apparently insensible to the touch, but blood oozed from its red surface under slight handling. After several weeks a ligature was passed round its base, and in a few days it dropped off.

Treatment of Inflammatory Induration of the Cervix Uteri by deep Cauterization with Potassa Fusa.—Dr. Simpson states, in "The Monthly Journal of Medical Science," that he agrees with others in regarding the general dependence of leucorrhœa upon inflammatory ulceration and induration of the cervix uteri. The cure by the application of leeches, counter-irritation to the sacrum, &c., is tedious. Various local escharotics—partly to destroy the indurated tissues by direct decomposition, and partly to soften down the remainder by new inflammatory action—had been in modern times employed for the same purpose, and with much more certain and expeditious effect. Dr. Simpson has found the common *potassa fusa* far more manageable, speedy, and certain, than any other method. He used it through the speculum, applying a stick of it freely with a proper caustic holder to the ulcerated and indurated tissues. It required to be rubbed, or held *strongly* for a time, against the part which was to be destroyed. In general a piece, three quarters of an inch or an inch long, was melted down. The decomposition produced by it often caused a hissing sound. If the induration is extensive, and the whole cannot be removed at once, increased action and absorption are set up in what remains, and the parts adjacent become softened and diminished in size. Absorption in this way was truly one of the results of inflammation, though still an undescribed termination. In some aggravated cases, two or more applications of the caustic are required, at intervals of eight or ten days. Pelvic cellulitis, or any other bad result, has never been seen to follow. The appearance after the operation is as if a portion had been clean cut out with a knife. A large quantity of vinegar and water is immediately thrown up through the speculum to neutralize the potassa and prevent it from injuring the sound parts. A copious purulent discharge usually follows for several days, requiring the use of astringent washes, or zinc ointment pessaries. When the whole of the induration is once removed, the remaining ulcer heals rapidly and permanently. An ulcer over a diseased part may be cicatrized, but it is almost sure to break out repeatedly till the induration is reduced.

Scleroma of the Cellular Tissue in Newborn Children.—Dr. Eman Mildner, of Prague, observes that the disease attacking many children who have been treated, when in a state of asphyxia, successively by tepid and cold effusions; its greater frequency during cold or humid cold seasons; its sudden occurrence in many newborn infants, who, after warm bathing, were exposed incautiously to cold; and its presence in children born in the street, and during the first days of life, are facts which indicate the great influence of a change in temperature in producing this disease. In the treatment great care must be taken to prevent the disease, by avoiding as far as possible exposure of the child to any change of temperature. In foot and anus presentations, the parts which first appear should be carefully covered with warm clothes. The employment of cold affusion after tepid baths, for the revival of asphyxiated children, should be restricted to very rare cases. In the first degree, the most successful treatment consists of warm, dry, and aromatic fomentations; friction with flannel sprinkled over with camphor; tepid baths, and diaphoretics. In the second degree treatment is seldom beneficial; cold affusion is suggested at first, and then, having dried the parts, to cover them flannel, and to employ the same means as in the first degree. *Post-mortem* examinations yield satisfactory proof that morbid alterations of deep-seated organs are not connected with the origin of sclerosis, as there are many cases in which no changes but those in the skin can be discovered; that, when such alterations have been found, they, in most cases, are in no way related to the integumentary disease; that their presence, notwithstanding, considerably influences the progress of the case.

Anatomical Lesions discovered in Acute and Chronic Rheumatism.—Professor K. E. Hasse, of Zurich, has made a close investigation into the morbid alterations of rheumatic parts, and obtained the following results:—The cartilages of the affected joints were found of a reddish hue. The surface of the articular bony extremities presented scattered red spots of different sizes, and intensity of colour, extending from 2 to 6''' deep into the spongy osseous substance. The foramina of the bony substance were all filled to about the same depth with dirty-red, soft, and friable pulp, very different from their normal fatty contents. A microscopic examination of this matter was found to consist of aggregated cells of nearly similar size (0·0046 to 0·0056), with turbid contents, and of a globular form, although some appeared to be flattened. Treated with acetic acid, these cells exhibited either a tolerably large nucleus or two or three smaller ones, each of which contained a neucleolus. These could be observed in some of the cells without adding acetic acid. There were, also, numerous blood corpuscles, and, in some places, many capillaries, varying in shape, having sinuous walls and a winding course. There were only a few flat fat cells present, several of which had a particular shape. The whole cell-wall, or a considerable portion of it, was separated from the usually homogeneous contents, and the free interval thus formed was more or less filled with oily granules. Occasionally a little spot of bright yellow was seen among the dirty-red colour, and in these places the cancelli contained fat cells and blood corpuscles. The reddened portions were dotted with lenticular spots of a pale yellowish colour, which were sharply circumscribed. At these points the osseous texture was diminished to a few fragments, and the foramina were filled with a soft yellowish pulpy substance, consisting only of aggregated elementary granules, such as is seen in chronic inspissated abscesses, and in the remains of decayed tubercular matter. In each case the adjacent non-reddened bony substance contained only fat cells, amongst which were seen, here and there, ruptured capillary vessels; but in no instance the before-mentioned polynucleated cells. In many cases the cartilage covering the bone was irregularly attenuated, the attenuation being most considerable at the margin of the joint, and, although apparently dissolved or rubbed off, it retained its smooth surface. Sometimes the bone was deprived of its cartilaginous covering, and perpendicular or flat foramina were exposed, varying from 2 to 4''' in diameter, and from 2 to 8''' in depth. It is thus rendered certain that in rheumatism the cellular tissue, as well as the bony substance, may become the seat of inflammatory exudation. It is even probable that in the great majority of cases, especially the slighter ones, their true morbid anatomy, which was formerly unknown, consists in the alterations of these tissues now described.

Psoitis.—Inflammation of the sheath of the psoas muscle is distinguished from inflammation of the cellular tissue in the internal iliac fossa, by the involuntary flexion, in the former, of the thigh upon the abdomen. Sometimes the two diseases coexist. The first is, perhaps, the less frequent but the more serious affection.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

J. M. Arnott, Esq., F.R.S., President.

FATAL CASE OF DYSPHAGIA, PRODUCED BY A POLYPOUS GROWTH IN THE ŒSOPHAGUS.

By R. Arrowsmith, M.D.,
Senior Physician to the Coventry and Warwickshire Hospital.
(Communicated by Richard Partridge, Esq., F.R.S., &c.)

The patient, a ribbon-weaver, aged forty-eight, not previously unhealthy, came under the author's observation at the hospital, in March last, having much difficulty of swallowing, with

frequent and, at times, severe cough (always excited by attempts to swallow, but occurring independently of them); copious frothy expectoration; fever, but no dyspnœa. The dysphagia gradually increased until deglutition became nearly impossible. Attempts were made to pass a tube into the œsophagus, but without success, and they occasioned at the time so much spasm of the glottis as to endanger life. It occurred to the author that, if tracheotomy were performed, respiration might be carried on through a tube left in the trachea, while more persevering attempts were made to pass instruments into the œsophagus. This operation was therefore performed, and a tube left in the trachea. After this the attempts to pass a tube proved equally unavailing, though the power of swallowing was improved for a few days. The dysphagia, however, shortly increased, and death ensued on the 14th of May, purely from inanition, about fourteen weeks from the apparent commencement of the disease. On examination after death, a polypous growth was discovered at the commencement of the œsophagus immediately behind the glottis; it was rather larger than a walnut, and attached by a short fibrous base, commencing about half an inch from the posterior commissure of the glottis, and extending for the same distance in a straight line in the axis of the œsophagus. The tumour formed, on the one hand, a mechanical obstacle to the perviousness of the œsophagus, and on the other, by passing under the epiglottis during attempts to swallow, prevented the closure of the glottis, and thus allowed fluids to pass down the trachea. The author, in conclusion, refers to various writers who have related cases of polypus in the œsophagus, but remarks that the one now recorded differs from any he has seen referred to, in the dysphagia being complicated with, and greatly increased by, the tendency of food to pass into the glottis.

A CASE IN WHICH A LARGE POUCH WAS FORMED IN THE ŒSOPHAGUS, IN CONNECTION WITH CONTRACTION OF THE CANAL.

By W. C. Worthington, Esq., F.R.C.S.,

Senior Surgeon to the Lowestoffe Infirmary, &c.

The author commences by observing that this lesion has been noticed by Sandifort, Meckel, Copland, and Rokitansky, and refers more particularly to two cases described by Mr. Ludlow, of Bristol, and Sir Charles Bell. The case now related was that of a gentlemen, aged sixty-nine, of robust constitution, who experienced slight dysphagia for three years before his death. In January, 1846, deglutition became more impeded, accompanied with emaciation. In July the author was consulted, when there was great difficulty in swallowing, especially solids, and the passage of any food by the œsophagus was attended with a gulping noise. After consultation with Mr. Crosse, of Norwich, attempts were made to pass bougies, but they proved abortive. From this time the patient gradually lost flesh, though he continued to take food, and it was often observed that a portion appeared to be swallowed, and for a time retained, but was shortly returned by regurgitation, little changed. For some weeks before death the patient was sustained solely by nutritious enemata. On examination after death a pouch was found behind the œsophagus, opposite the cricoid cartilage, hanging down between the trachea and œsophagus, three inches and a half long, and two inches and a half in circumference. Immediately behind the cricoid cartilage, and on a level with the commencement of the pouch, there existed a stricture formed by a transverse fold of mucous membrane, admitting only a large-sized urethral bougie; the œsophagus below was contracted, but the mucous surface healthy. The author concludes with some remarks on the diagnosis of these cases during life, and the best mode of treating them.

Dr. Coley stated, that he had met with a case somewhat analogous to the first case—to that detailed by Mr. Worthington. The patient was a medical man, who suffered from the symptoms of dysphagia for sixteen years. He consulted the late Mr. Cline, by whom the existence of a preternatural pouch in the œsophagus was discovered, but who overlooked the principal cause of disease—a stricture of the upper part of the œsophagus. The patient was under Dr. Coley's care only during the last three months of his life. Whalebone bougies, of a peculiar construction, similar in form to those used by Sir Charles Bell, were employed, but appeared to produce considerable irritation. The patient died from inanition and excessive thirst, he being totally unable to swallow liquids even. There was one symptom which was present in this case, which has not been mentioned by writers—excessive congestion of the velum pendulum palati, the tonsils, and, indeed, of the whole throat. At the *post-motrem* examination, there were found a pouch of three inches long, and one in diameter, at the lower part of the pharynx, and a stricture at the upper part of the œsophagus, in an advanced state of carcinoma. The stricture, Dr. Coley thought, was the primary disease; the pouch of ulterior formation, the result of a process similar to that which takes place in the bladder, by the separation of its fibres, from severe and long-existing stricture in the urethra. A case of stricture of the œsophagus was published in one of the medical journals many years since, which was cured by mercury; and he (Dr. Coley) believed that a similar result would follow the exhibition of mercury and iodine, in the treatment of incipient stricture of the œsophagus, providing it were not dependent on carcinoma. He thought there was some analogy between these cases and the stricture in the lower part of the intestinal canal. Dessault published the particulars of stricture in the lower bowel, cured by the internal use of mercury. The disease was supposed to be of syphilitic origin, but of that there was not any positive proof. He (Dr. Coley) had, at that time under his care a case of stricture of the rectum, with copious offensive discharge, which was getting well under the use of mercury; and in that instance the disease was decidedly not syphilitic. He thought this plan of treatment should be had recourse to in all cases, before employing local remedies, the use of which he deprecated, as likely to cause great suffering and irritation, such as marked their application in the case he (Dr. Coley) had detailed.

Mr. Arnott remarked that the late Dr. Cline had the reputation of being one of the ablest surgeons this country had ever produced. Dr. Coley had stated that Mr. Cline had detected the existence of the pouch in the œsophagus, but not that of the stricture. He (Mr. Arnott) wished to know how long a time elapsed between Mr. Cline's attendance on the case, and that of Dr. Coley, and also how Mr. Cline has ascertained the existence of the œsophageal pouch?

Dr. Coley replied, that the patient was seen by Mr. Cline about sixteen years before his death—before the more distressing symptoms of stricture had occurred. The only symptoms of the disease were, regurgitation of fluids, and difficulty of swallowing. The existence of the pouch was recognised by the bougie.

ON THE STATE OF THE NERVOUS SYSTEM IN PARALYZED LIMBS.

By R. B. Todd, M.D.

In this paper Dr. Todd demurs to the views of Dr. M. Hall, which ascribe an increased irritability to the muscles of paralyzed limbs, where the lesion is in the brain, and make a distinction between spinal and central palsy in the loss of irritability in the paralyzed muscles in the former case, and its augmentation in the latter. Dr. Todd adduces a series of trials, on cases of hemiplegic paralysis, by means of galvanism, in the great majority of which the palsied muscles respond less to the galvanic stimulus than the healthy muscles; while in others, again, they are equally excitable with the muscles of the sound limb. The author adduces proofs to shew that the difference in the excitability of the muscles, in cases of paralysis, is due to the different state of the nervous force in the nerves of the palsied limbs: in one class of cases it is in a minus condition; in the other it is in a plus condition, and in a third it is unaffected by the cerebral lesion. The author further points out that, in truth, the muscular irritability has nothing to do with the phenomena in question; that that power is always in direct proportion to the nutritive condition of the muscles; and that the effects of galvanism, when propagated through the nerves, is not a true test of the state of the irritability of the muscles, but rather of the excitability of the nerves themselves. Dr. Todd offers a new explanation of the tendency of strychnine to affect paralyzed limbs first. According to this view, the strychnine accumulating in the blood is attracted in greatest quantity to the side of the brain on which the lesion exists, and excites irritation there, which, according to the usual law of cerebral influence, is propagated to the opposite side of the body, or to the paralyzed muscles.

CASE OF POPLITEAL ANEURISM.

By W. H. Judd, F.R.C.S.E.,

Surgeon in Ordinary to his Royal Highness Prince Albert, Surgeon-Major Scots Fusilier Guards, &c.

(Communicated by Dr. Webster.)

Corporal D., aged thirty-two, was an agricultural labourer in 1827, when he suffered from a severe fracture of the right thigh, and the bone was again broken before the cure was complete. He came under the author's care in October, 1846, for a pulsating tumour, about the size of an egg, in the right popliteal space. This could be emptied, and the pulsation in it was arrested by pressure on the femoral artery; in short, it was clearly an aneurism. His health was good. He was bled twice to sixteen ounces, and purged; but, the symptoms remaining unrelieved, it was decided to try the effect of pressure, with which view the Italian clamp was employed. This was worn irregularly, in consequence of the patient not being very tractable, for four days; and on the fifth, although forbidden to rise from the horizontal posture, he removed the clamp, and got up, and soon felt something give way, and a hot sensation extending down his calf. This was followed by swelling and pain in the leg, together with faintness and pallor. After a consultation with Messrs. Keate and Guthrie, the author determined on placing a ligature round the femoral artery in the usual position. The operation was forthwith performed (Nov. 1st), and followed by relief to the patient's suffering. On the third day, the wound was nearly healed, except where the ligature hung out; but the pulse was very rapid, and the temperature of the limb low. The calf also was blue, and the foot œdematous. On the fourth day, a blush appeared in the ham, and gangrene speedily supervened. On the eighth day, an incision was made through the slough into the aneurism, and putrid serum flowed out. Tonic treatment and support were continued. On the twelfth day, symptoms of trismus made their appearance; and on the fourteenth, the tetanic spasm had extended to the frame generally, when death put an end to his sufferings. On examination of the limb, the false aneurism was found to occupy the whole calf, and was lined by a dark-red and inflamed membrane. The femoral artery was plugged above and below the ligature. The popliteal artery entered the upper part of the true aneurism, and projected about two lines within the sac, above and below, where it appeared like a tube broken irregularly across. The author concludes by some observations on the cause of mortification and tetanus in this case, and by expressing his opinion that the injury received in 1827 may have laid the foundation of the disease which ultimately proved fatal to his patient.

ON A PECULIAR INJURY OF THE UPPER END OF THE HUMERUS, ENTERING INTO THE COMPOSITION OF THE SHOULDER-JOINT, OBSERVED IN SIX

CASES; WITH A DESCRIPTION OF THE APPEARANCES DISCOVERED SOME YEARS AFTERWARDS, ON THE DEATH OF ONE OF THE SUFFERERS.

By G. J. Guthrie.

(Communicated by the President.)

The author commences by drawing attention to a clinical lecture delivered by him at Westminster Hospital, in 1833, and subsequently published; and to a second, which he delivered in 1837; wherein he made some remarks on cases of an undescribed injury of the shoulder-joint. An opportunity having recently occurred, of verifying the diagnosis by examination after death, in the sixth case, he takes the opportunity of bringing the subject before the public, in consequence of the interest which naturally attaches to such cases, but especially because Mr. Smith, of Dublin, has expressed his belief that the injury in question was similar to one he had the opportunity of examining. After giving the report of Mr. Smith's case, from which it appears that "the greater tuberosity, together with a very small portion of the outer part of the head of the bone, had been completely separated from the shaft of the humerus," the author proceeds to describe the particulars of the sixth case. The subject of it was forty years of age, and his recovery was tedious; he, however, regained sufficient use of the arm for all useful purposes of his trade, except when he attempted to work above his head. In November last the man died, and the humerus was removed for examination. The opinion expressed respecting the nature of the injury, when under treatment, was, that there was a longitudinal split of the humerus, by which the small tuberosity was sep d from the head of the bone, the anatomic l neck of which was broken. This diagnosis pro essentially correct; but, in addition to the above injury, a second split appeared to have extended downwards, partly separating the greater tuberosity, and extending underneath, towards the shaft of the bone. The bicipital tendon was probably torn through at the time of the accident, as the groove was partially blocked by new ossific deposit. The author concludes by referring to some clinical remarks, bearing on the point, by Mr. Hancock, and by repeating his persuasion that Mr. Smith was mistaken in supposing that his (the author's) cases were similar to those which he (Mr. Smith) had described.

AN ACCOUNT OF THE STRUCTURE OF A NÆVUS.

By John Birkett, F.R.C.S.,

Demonstrator of Anatomy at Guy's Hospital.

(Communicated by T. B. Curling, Esq.)

The structure described by the author was a soft, bluish nævus, which was removed from the back of the hand of a young man, and consisted of areolar tissue, epithelium, with capillary and larger vessels. The mass was divisible into lobes, each possessing a distinct fibrous capsule. These lobes admitted of inflation, when isolated and encircled with a ligature; a subsequent section exhibited a reticular arrangement in their interior. The cells thus formed communicate with each other; but many of the lobes are isolated and distinct. The septa are composed of delicate fibrous tissue, covered by a tessellated epithelium; a basement membrane and yellow fibrous element are also present at various parts. The vessels (which were not injected) could not be traced into the septa, nor did they appear to open into the cells. Vessels, however, were discovered, passing from the corium to the sept upon which they were lost. Interspaces, or reservoirs, between the corium and lobes (communicating with each) have veins opening into them, and each lobe appears to possess two or three small arteries, which constitute its independent supply. The author remarks that these tumours are not exclusively entitled to the appellation of "vascular or bloodvessel tumo and he regards them as more closely resembling the corpora cavernosa than any other tissue, an considers that they ought to be classed with tl fibrous tissues, resembling them probably i their development and mode of nutrition. Th author concludes with some practical remarks and an enumeration of the different modes o treatment which should be adopted for the cure of the disease.

ON THE SOURCE OF HEMORRHAGE IN PARTIAL SEPARATION OF THE PLACENTA.

By W. D. Chowne, M D.

The paper defended the doctrine, that in such cases the hemorrhage is essentially and mainly in the veins of the uterus, which become exposed at that part whence the placenta is separated. Several inferences are adduced from the influence of contraction and non-contraction of the uterus—from the relative effects of hemorrhage on the mother and on the fœtus—from the character of the blood effused, and from analogical considerations in relation to the pulmonary circulation in extra-uterine life, and the placental circulation *in utero*. The paper adduces also inferences drawn from the anatomical structures, and the functions of the parts concerned; and, also, from the hemorrhagic phenomena connected with inversio utero, together with the diagnosis founded on these phenomena; and it cites, with regard to the source of hemorrhage, as demonstrated to the observation, the experience afforded by Cæsarean operations.

REVIEWS.

Report on the Climate and Principal Diseases of the African Station. Compiled from Documents in the Office of the Director-General of the Medical Department, and from other Sources, in Compliance with the Directions of the Right Honourable the Lords Commissioners of the Admiralty, under the immediate Direction of Sir Wm. Burnett, M.D., K.C.H., F.R.S. By ALEXANDER BRYSON, M.D., Surgeon R.N. London: 1847. Pp. 260.

We have recently advocated the claims of the members of our profession serving in the army and navy to the respectful attention and honourable rewards of the Government, because of the estimable advantages which they confer, not only upon particular services, but upon every lass of society. No body of men has exhibited reater zeal in promoting the welfare of our ountry, and none has manifested greater intelligence and devotion in endeavouring to trace p to their sources, and there to arrest, whatever s incompatible with the health and prosperity of mankind. We appeal to the work now before us s one of the proofs of the truth of our assertions: he facts which it states, and the manner in hich they are discussed, entitle the author to great praise from the Government, the profession, and the people.

Dr. Bryson informs us, in his "Preliminary Observations," that his pages were compiled in consequence of a minute from the Lords Commissioners of the Admiralty, addressed to Sir Wm. Burnett, the Director-General of the Medical Department of the Navy, requesting him to cause to be embodied in a report such portions of the medical returns from the African station as might be deemed valuable. It required no small amount of labour and patience to examine documents which had been accumulating for twenty-seven years; and great discretion and tact to extract, condense, and arrange, whatever either of information or interest they might contain. In addition to this, his own personal experience on the station was to be used, that the greatest amount of information might be afforded "regarding the diseases contracted there; the localities most injurious to health; the precautions which might be taken to avert or diminish fever; and the mode of treatment regarded most effectual; embracing also the diseases most prevalent amongst the captured slaves." It may be considered that such a work can only be useful to those who, as medical officers in the Government or merchant service, are called to visit those shores where pestilence and death seem to have especially established their dominion. To medical officers on the station, as well as those who are called on occasionally to visit it, the work will be especially useful—enabling them to study more conveniently the nature of the fevers peculiar to the climate, and at the same time enable them to deduce for themselves such plans of treatment as they may consider most likely to be successful. Such a work is not only useful to them, but to every member of the profession: here he may learn how theories the most plausible are oftentimes built on baseless fabrics, and that the treatment of disease according to certain fixed and established rules will never do at all times and under all circumstances. Of the African coast, where the slave trade is principally carried on, it has been remarked that it is "the grave of Europeans"—its jungles, its marshes, its climate, combining to impregnate every breeze with the invisible but energetic principles of disease and death. Scarcely has there been a vessel detained for any length of time on the station, whose crew has not been greatly weakened by the pestilential fever, while all the efforts of medical skill have appeared perfect weakness in coping with the disease.

The Topographical Remarks on the African Station, extending from Cape Verde on the North, to Cape Negro on the South of the Equator," which is the opening chapter of the book, is replete with interest. It is the key to the work, as we have here mentioned the different localities frequented by the cruisers when at sea; the various ports and harbours to which they resort in order to obtain provisions, wood, and water, or for refitting; and also the various slave establishments. Throughout the whole extent of the coast, it is more or less unhealthy; while the arduous duty of the men serves as a powerful predisposing cause for their being attacked with the fever. We are told that the duties performed by the squadron at the present day are executed in the same manner as nearly as possible, with an equal degree of diligence, as during the first ten years of the period included in the report. These duties "were not only at all times arduous and severe, but frequently of a most harassing and dangerous character, particularly to the subordinate officers and men. The chief slave-exporting stations were constantly kept under the strict surveillance of one or more cruisers stationed opposite to them; and, whilst so employed, it was not unusual for such vessels to have their boats detached for several weeks at a time, exploring creeks and rivers at perhaps a considerable distance along the coast, or lying concealed under mangrove thickets in readiness to pounce upon the slave craft the moment she shipped her human cargo, or attempted to leave the land. A strict look-out was invariably maintained from each masthead during the day, and from the bulwarks by six men stationed, two on the bows, two in the waist, and two abaft, on each quarter during the night; while the officer on duty was enjoined to scan the horizon with a night-glass every few minutes of his watch."

Between the Gambia and Sierra Leone, generally, a vessel or two has been employed cruising principally off the mouths of the Nunez and Pongos. Formerly, from defective treaties, the cruisers dodged at a distance from land, ready to chase when any suspicious-looking craft made its appearance. For the last ten years, in consequence of more efficient treaties more energetic methods have been adopted, "for, as soon as it has been ascertained that a slave vessel is at anchor in any creek or river, the cruiser either stands in directly for her, or should there not be sufficient water, or the navigation too difficult, the boats are forthwith despatched to seize her and bring her out. This latter service, when it is protracted to perhaps several successive days or nights in the vicinity of extensive swamps—and when it is, as it always must be, combined with excessive labour, want of sleep, and irregularity of hours—is, as will be hereafter shown, the cause of a fearful amount of disease and consequent mortality." Fatigue and intemperance have always been the precursors of sickness: either the one or the other will not only predispose but produce fever. In our West India colonies we know that from the rum-store to the

hospital is but a single step: the soldiers being able to procure for a very trifling sum enough of the fiery spirit to intoxicate them first, and give them fever afterwards.

The cruisers on the northern division of the station occasionally visit the Cape Verde Islands, to refresh and recruit the health of the men. The settlement of the Gambia is also frequented for similar purposes. It is remarkable that this place should be as healthy as it is, at certain seasons of the year—bounded, as we find it to be on three sides, by vast alluvial swamps. It has, however, an advantage over Sierra Leone, the temperature throughout the year being somewhat lower, chiefly during the winter months, when the morning air is frequently so sharp and bracing as to require additional clothing. Remittent fevers are always present, but do not become formidable unless contracted under peculiarly aggravating circumstances. From July to October, crews are compelled to seek safety elsewhere, the rains falling in such quantities and at such short intervals as to cause the river to overflow and flood the marshy flats behind the settlement to a great distance. When the river withdraws into its proper limits, there are left large shallow lagoons, which, evaporating, become the source of remittent fever of a more virulent character than that which occurs during the dry season. The rivers to the south of the Gambia require the most constant attention of the cruisers: they are the Nunez and Pongos. Only vessels of light draught, or boats, enter them. The streams of these rivers are sluggish; their banks closely fringed with mangrove bushes, around the tangled roots of which there is a thick deposition of blue mud or slime, the detrital sediment of the river water, and mixed with it a large quantity of putrefying vegetable matter. This same putrid mass, left comparatively dry by the receding of the tide and exposed to the heat of the sun, sends forth a most abundant and fetid malaria. It cannot be a matter of wonder that men, on arriving in these rivers from the clear open sea, and with weakened constitutions, should fall an easy prey to the indigenous pestilence of the swamp.

So much has been said and written about Sierra Leone, that we cannot help giving our author's opinions, in his own words, in reference to this portion of the African coast, which has been represented as the charnel-house of Europeans who are compelled to sojourn there for a time. Dr. Bryson states—"That a far greater amount of disease is contracted here by the naval force than upon any other part of the station, at least since the settlement of Fernando Po has been abandoned. It is, also, evident that a great portion of the disease is contracted in consequence of accidental or contingent circumstances peculiar to the locality—from causes common to the whole line of coast, rather than from an increase or an aggravation in the condition of such causes in the locality itself; and of these none seem to operate more powerfully or more frequently than exposure on shore to the intense heat of the sun by day, or to the chilling dews by night, more particularly if accompanied in either case by a state of inebriation, or exhaustion of the physical powers of the body from over exertion." The town, it appears, teems with taverns and grog shops of the lowest description, where intoxicating liquors of the worst quality are sold, or given in barter for the merest trifle. The consequence is that sailors, when they escape only for a short time from the discipline of the ship, abandon themselves to the utmost intemperance and then expose themselves to the burning sun by day; and, exhausted by their debauchery and excesses, throw themselves down to sleep on the naked ground in the bush, or in some obscure corner of the town, until they awake cold and stiff in the morning. Who can wonder that from such excesses, fever results in a tropical climate? The officers and men who navigate foreign vessels suffer most severely, because they are weakened by excessive labour, broken rest, and exposure continually upon the deck of small vessel, probably crowded with slaves in loathsome state of disease. Officers and men, once landed, the latter commit outrageous excesses, and most of them pay the penalty by suffering an attack of fever. Refitting ships is another source of disease, because of the intemperance connected with it. The town, however, will always be of importance, from the facilities it affords of sheltering and victualling the ships that put in there. Off Freetown the vessels remain in the open stream, half a mile from the shore, and five or six miles from the nearest point of the Bullom shore. Here there are open woods and cultivated lands; and the little village of Medona is considerably above the level of the river, near which it stands. We can scarcely conceive, therefore, that malaria emanating from this shore could possibly affect the health of Europeans in the vessels, or resident on the opposite side of the river. Moreover, the bush is cleared; the ground cultivated and dry; and nothing on the southern or eastern side of the town deserving the name of a marsh. Hence the constant succession of sporadic fevers, occurring at Sierra Leone, cannot derive their origin from marsh effluvia, the distance being so considerable that they would become innocuous from their miscibility with the atmosphere.

The rivers Sherbro and Gallinas have banks similar to those of Nunez and Pongos, and a country surrounding them presenting the same physical appearances, and equally injurious to health. Upon the banks of the Gallinas is a notorious slave mart, which renders it necessary to have two vessels generally stationed between Sierra Leone and Cape Mount. The Gold Coast affording no safe roadstead for ships, the crews rarely go ashore, and hence it is difficult to trace the effects of climate upon the naval force employed here. It is supposed to be, however, as inimical to the health of Europeans as any other part of the station within the tropics. The country is hilly, comparatively free from marshes, and the land, with the exception of a few cleared spots around the villages, is covered with jungle. Beyond the Gold Coast is a vast plain, apparently alluvial, through which the river Volta slowly runs: it is shallow and dangerous at the entrance, having a shifting bar across its mouth, and hence seldom entered by our cruisers.

On entering the Bight, the first settlement of any note in this wild region is Quitta, where vessels touch occasionally for provisions. Behind Quitta the branch of the Volta becomes a broad shallow piece of water, with marshy banks covered with grass, gigantic flags, and mangroves. At some distance the country seems fertile. From Quitta to Popoe, and from the latter to Whydah, the shore has the appearance of a low sandy ridge, behind which is another lagoon, of a dark, muddy-coloured, and brackish current, which glides amongst thick reeds and grass, with an almost imperceptible motion, depositing a black ooze most offensive when disturbed. Whydah, situated five or six miles from the beach, is the first great slave mart in the Bight. The river flows behind, and is occasionally fordable; while the road and the town passes through two marshes, and is oftentimes covered with water to the depth of two or three feet. Beyond the marshes the country becomes more elevated. Europeans who visit this part generally suffer severely from fever. Lagos is nearly surrounded with water, and is considered on a par with the other swampy districts. The Benin, a navigable river, is bounded for a great distance with the impenetrable mangrove swamps, the fertile source of fever. The crews of vessels stationed between Cape St. Paul and Cape Formosa generally suffer less from fever while in this locality than upon any other division of the station; not from superiority of climate, but from having little intercourse with the shore.

The Bight of Biafra next comes under observation—the principal cruising-ground of the squadron—a station eagerly desired because of the number of slave vessels frequenting the many intricate mouths of the Niger. The coast, however, from heat, humidity, and morasses, is most prejudicial to health. Prince's Island is a place of exquisite beauty, and is frequented both by officers and men when opportunity offers; nor does it appear that fever is often contracted either in the bay or on the island, except from personal indiscretions. Clarence Cove, on the north end of Fernando Po, is infinitely more unhealthy. This island is represented as being one of the most beautiful on the face of the earth; and, though there are but few marshes within many miles of the settlement, there is not a spot in the whole known world more detrimental to health. The Island of St. Thomas, not often visited, is extremely unhealthy; and so also is Anna Bona, a pretty little place, free from swamps. Here, in May, 1845, a small schooner anchored, and remained for a fortnight. On the 11th of June the crew put to sea, and before the 20th the whole of the white men, seven in number, died. Two officers and a black were attacked with fever; five died, and three were subsequently invalided. The whole of the Kroomen on board escaped. The Gaboon, though nearly under the equator, and bounded by brackish lagoons and mangrove thickets, is considered the most healthy of the large rivers on this division of the station. The native town of Loango is described as being large, clean, and well built, yet with a climate fatal to Europeans. The waters of the Congo, which the ships take on board, is at first of a reddish colour from impurities, which, however, are soon deposited, and it then becomes clear and wholesome; if drunk when impure or brackish it is apt to produce intestinal complaints, which may degenerate into dysentery. At St. Paul de Loanda fevers prevail somewhat different to the remittent of Sierra Leone, being complicated with a certain amount of intestinal irritation; they terminate frequently in true intermittent. Smallpox is rare, but attempts to introduce vaccination have hitherto failed. The native blacks are not subject to fever, but are liable to diarrhœa, dysentery, and dilatation of the rectum. Benguela is considered to be the most sickly of the Portuguese African colonies south of the equator. It is situated on an alluvial flat at the upper part of the bay, with a range of lofty hills at some distance in the rear of the settlement. It is extremely hot, and is destitute of water, with the exception of that brought from a small stream a few miles north of the town, which flows through a marshy flat into Sobito Bay. Old Benguela is the most fertile and park-like land on that part of the station. The harbour of Little Fish Bay (in Portuguese, Massamedes) is landlocked, and abounds with excellent fish. The banks of a small stream which flows into one side of the bay are extremely fertile, and under cultivation. The climate is thought to be healthy.

We have thus given a brief sketch of this interesting chapter, in order that the subsequent part of the work may be understood; to this we shall refer at an early opportunity.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.

Beta.—*The Arabian estimate of female beauty is given by Mr. Kay, in No. 107, as follows:—"Four things in a woman should be black—the hair, the eyebrows, the eyelashes, and the iris of the eyes; four white—the complexion, the white of the eyes, the teeth, and legs; four red—the tongue, the lips, the middle of the cheeks, and the gums; four long—the back, the fingers, the arms, and the legs; four*

round—the head, the neck, the arms, and the ankles; four wide—the forehead, the eyes, the bosom, and the hips; four delicate—the nose, the eyebrows, the lips, and the fingers; four ample—the lower part of the back, the thighs, the calves of the legs, and the knees; four small—the ears, the breasts, the hands, and the feet."

Kâf.—*We are sorry for the omission. The numbers shall be duly forwarded. We thank our correspondent for the promise of the interesting papers, which will receive all due attention from us.*

A Legally-qualified Practioner, London, *writes as follows:—"Upon reference, I find that a gentleman examined in Dr. Cormack's case, on his behalf, calls himself a 'Medical Doctor;' I refer to the 'Medical Directory,' and find the person put down as one practising without any qualification. In justice to himself, Mr. Wane should inform the readers of your valuable journal who and what he really is.*"

O. L. U. *asks (in reference to an answer given to* Medico-Chirurgus, *that there is no law to prevent a licentiate of the Hall practising any branch of the profession)—"Is not every one who practises physic without a license from the College of Physicians infringing their charter? and what clause in the Apothecaries' Act entitles an apothecary to practise physic?" The certificate declares that the candidate has been examined "in the science and practice of medicine;" and we conceive that the general practitioner does not infringe the Physicians' Charter in prescribing for* medical diseases.

Bostonian, Boston.—*The Editor of the* Pharmaceutical Times *will give our correspondent every necessary information in reference to the "new process of the Abbé Baldanmek."*

S. D.—*The former letter being destroyed, we are not certain to what our correspondent refers. If to "Tartar on the Teeth," the authority is Mr. Hassall, in Part IX. of "The Microscopic Anatomy of the Human Body."*

Phlogosis *would, no doubt, like his communication to be published, but we should not like an action for damages.*

Candidus.—*A letter had better be forwarded to the publishers, who will perhaps state the reasons why the publication is delayed. It is a matter not within our province to discuss.*

Questor.—*The communication is now lying at our office, which may be obtained on application. The mass of letters now lying before is so great that it could not be inserted for a considerable time, and then not without curtailment.*

A Hater of Humbug.—*We like to exercise charity; the "touting" and puffing of the parties are well known, not only to us but to the whole profession.*

A Pupil.—*Medical jurisprudence is a most important part of professional education, which should not be neglected. The best work is "Dr. Guy's Medical Jurisprudence."*

Medicus.—*The symptoms of perforation often come on very suddenly after eating a large meal. Violent abdominal pain, vomiting and great prostration of strength, generally followed in a few hours by death. Cases have occurred, however, in which patients have survived for months. Dr. Seymour mentions two cases which came under his notice in St. George's Hospital: one survived the perforation* five months, *and another twelve days, after the most violent symptoms of peritoneal inflammation.*

Stephanas.—*The communication has been acknowledged, and we regret that we have not yet been able to find a place for it in our columns; we hope to do so shortly.*

Mr. Oldfield.—*The parties are liable to prosecution under the Apothecaries' Act, they are arrant quacks, and the Society, we should think, would feel it an honour to rid the place of such mountebanks.*

Dr. Bessborough.—*The paper shall have an early insertion.*

An Injured One.—*Such acts of injustice will, before long, meet with their reward. The profession will not be ridden over "rough-shod" by guardians "who are celebrated for large stomachs and small brains."*

S. T. Jepson.—*The fee cannot be recovered, the magistrates having no power in the matter.*

Philo.—*We are not aware that the Government has determined on doing justice to navy assistant-surgeons. We shall not fail to use our best endeavours to promote the good work.*

Omicron.—*The interest has subsided, and we must, therefore, decline to insert the letter.*

Rusticus.—*A knowledge of Latin is requisite. Celsus and Gregory are the two works read at the Hall, with the London Pharmacopœia and Physicians' prescriptions.*

Sam Slick.—*Witty, but inadmissible.*

A Member of the National Institute.—*We must refer our correspondent to Mr. Ross, Hanover-square Rooms.*

A Surgeon, Portsmouth.—*If our correspondent will forward us a communication in reference to the shabby treatment of the insurance-office to the medical gentleman, it shall be published.*

O. D.—*Patience, perseverance, and promptitude will certainly accomplish all that is desired.*

Will Dr. R. G. D. *be kind enough to forward us the newspaper to which he refers? The other suggestions shall be attended to.*

Mr. W. Brown, Surgeon.—*We will endeavour to accommodate our correspondent at an early opportunity.*

A Subscriber *wishes to be informed "how to go about obtaining a German degree, or what college, or head of what college, to write to on the subject.*

Krites *is thanked for his information. We shall not fail to advocate the interests of the profession whose approbation is expressed in the great sale of the* Medical Times.

Letters and communications have also been received from Candidus; Phlogosis; S. D.; Questor; Rusticus; Philo; Omicron; S. T. Jepson; An Injured One; Dr. Bessborough; Mr. Oldfield; Stephanas; Bostonian, Boston; O. L. U.; A Legally-Qualified Practitioner, London; Kâf; Beta; Sam Slick; A Member of the National Institute; A Subscriber; Mr. Brown; Dr. R. G. D; A Hater of Humbug; A Pupil; Medicus; Krites.

THE MEDICAL TIMES.

SATURDAY, JULY 31, 1847.

THE GOVERNMENT ANSWER TO THE IRISH MEDICAL PROTEST.

We are inclined to suppose that the rousing up of the profession to activity in order to obtain that which is their due is a matter of no small surprise to the members of the Government. It is evident they have long thought that medical men had no clear views of what constituted their rights, and that they would never exhibit union and moral courage sufficient to assert them, if understood. Acting upon this opinion, Sir J. Graham, during the time that he was Secretary at the Home-office, very coolly introduced a bill into the Commons House of Parliament for more effectually degrading general practitioners; and when some of the said parties, to the number of 3000 or 4000, for whom he so kindly offered to legislate, came thundering at the office door, and importuned in such a way that there could be no mistake they intended to fight for their lives, the honourable baronet was lost in wonder and astonishment. He had been so well crammed by the two royal colleges in London, that he was led to believe it would be an unparalleled act of generosity to let loose upon the general practitioners the whole pack of quack bloodhounds, to hunt down and destroy them without any mercy. They were considered little better than a flock of sheep—easily scattered and worried, without uttering any cries of lamentation in the midst of their sufferings. Though they have been spared through the exercise of an indomitable courage, it appears as if the Executive had not yet been taught the value of their services, the army surgeons being denied the honours to which they are entitled, and the navy assistants left to companion with beardless boys, in that plebeian apartment of a man of war denominated the gunroom. The surgeons of the empire are everywhere treated with a sort of left-handed liberality—receiving the lowest possible remuneration for most valuable services.

At the present moment the profession in Ireland is smarting under the insults which it has received from official persons, and, as we have already stated, have sent in a dignified remonstrance to them. We purposely refrained last week from bringing before our readers the answer which had been received from the Castle to the protest signed by upwards of a thousand physicians and surgeons of Ireland, among whom are names of some of the most illustrious medical men in that part of the empire. The reply exhibits a frigid indifference to the just claims of the memorialists, and leaves them the alternative of either accepting the mechanic's remuneration of five shillings a day, or of further troubling themselves by applying to the Lords Commissioners of her Majesty's Treasury. The following is the official document referred to:—

THE REPLY.

"Dublin Castle, July 14, 1847.

"Sir,—I am directed by the Lord Lieutenant to inform you, with reference to your letter of the 9th instant, that by the Act 10th Vic., c. 22, the salaries of the medical officers appointed under the 9th Vic., c. 6, are subject to such regulations as may be made by the Lords Commissioners of her Majesty's Treasury, to whom, therefore, his Excellency has forwarded the memorial to which you refer.

"I am, Sir, your most obedient, humble servant,
"T. N. Redington.

"To W. R. Wilde, Esq., 15, Westland-row."

From this brief letter we arrive at the following conclusion:—That the members of the medical profession are despised by the Government. The facts stated in the memorial were considered unworthy of notice. All the zeal and efficiency which have been manifested by medical men in the discharge of their duties have been passed over in silent contempt. No word of commendation is found for those who have jeoparded their lives and health in the cause of suffering humanity, at the time when Government was paralyzed at the prospect of the stupendous calamities which threatened the sister country. The starving multitude could not be adequately fed; and when disease, the inevitable consequence of famine, invaded the land, hope rested on the members of the medical profession, who, like the little band of Gideon's army, were to deliver their country from the power of the enemy. When a call was made for their assistance, who amongst them were found fearful or fainthearted? Not one. When any fell, others stepped in to stop up the gap; and, though fever has made fearful havoc amongst their numbers, they are as courageously and zealously as ever engaged in their work. The Government might at least have given to such faithful servants an approving "well done," though it might have found excuses to have withheld any further pecuniary bounty for such important services beyond the five shillings a day. When Athens was visited by a direful pestilence, and the "father of physic" employed his skill to check its ravages, a grateful people and Government inscribed his deeds in the

archives of their republic, and thought it but a small token of gratitude to bestow upon their deliverer a golden crown; but the authorities of Dublin Castle, in the nineteenth century, cannot spare time, ink, and paper to notice the excellent deeds of the members of the profession whose skill in the treatment of disease is as infinitely superior to the Athenian deliverer as the light of noon to the first ray of the morning.

In "the reply" the memorial is hardly mentioned, and we should judge from the phraseology employed that his Excellency never read it, but forwarded it unopened to the Treasury; and by this time, in all probability, it has been employed for the ignominious purpose of lighting the kitchen fire. So much for medical memorials signed by rank and talent. Our profession is evidently plebeian in the eyes of some aristocrats, and, as a consequence, it is treated with contempt.

We infer, moreover, from the answer that the Government sets the medical profession at defiance. Mr. Wilde is commanded to take the Act 10 Vic., c. 22, and divide it in *partes equales* for the 1106 gentlemen, to be taken by each as a pill to cure all their complaints. We have heard, however, upon pretty good authority, that not one has been able to get it down, and that as it is now sticking in their throats, producing the greatest irritation, the members of the Board of Health are forthwith to use the probang to make the gentlemen stomach it.

The great grievance of which the profession complains is inadequate remuneration for responsible and dangerous duties:—"Where the amount is left to the discretion of Government, or to the award of officers in public departments, it is often unjustly and degradingly inadequate;" and the official note in answer holds out no prospect of redress. The members of the Executive treat with scorn all medical protests and combinations: the former being considered as mere harmless missiles, and the latter as containing the elements of their own speedy destruction. They have drawn these conclusions from the past history of the profession: its different sections, like the petty states of the ancient Grecian republic, have exhibited too frequently an inveterate jealousy towards each other, and a reprehensible alacrity to wage war amongst themselves for the most trifling provocation. Common dangers have united them temporarily together, but, these once passed, they have relapsed into the same pugnacious spirit. We trust, however, that such a state of things has now for ever passed away, and that, if enemies count upon the internal dissensions of the profession to bring about its own humiliation, they will henceforth be disappointed. A former Home Secretary felt himself balked in attempting a one-sided medical legislation, and it may be that the Lords Commissioners of her Majesty's Treasury may be doomed to the same thing in their endeavours to force the Irish medical practitioners to accept of five shillings a day for the exercise of their skill and the perilling of their lives. Mr. Trevelyan, of the Treasury, may threaten to send over surgeons in the pay of the Government to coerce the refractory into submission; but the proposition is more easily made than carried into execution, if the profession is true to itself.

In conclusion, we would earnestly press upon medical practitioners the necessity of uniting to secure a due respect for their calling, and a just reward for their services. An honourable emulation amongst themselves will be no barrier to this, while it will enforce respect from those who now treat their remonstrances with short and unceremonious replies. And we would further urge upon the profession the necessity of using efforts to introduce some of its members into the British House of Commons. There they have been hitherto unrepresented, and, as a natural consequence, their interests have been little cared for in the deliberations of that august assembly. France has set us an example which ought without delay to be imitated by us, and then we should not fail of procuring from the Government a sound measure of Reform, and substantial tokens of reward for our services.

POOR-LAW GUARDIANS AND MEDICAL OFFICERS.

We last week published a document in reference to the treatment of the medical officers of the Halifax Union by the board of guardians. It is a summary of visits and medicines supplied to poor-law patients for a period of thirty-one days; and from this we learn that the scale of remuneration is equivalent to 3¾d. for each visit, the medical officer having also to supply, for this sum, the requisite medicines. We must acknowledge that the publication of this document has caused us to feel mixed emotions of pleasure and pain—pleasure that the medical gentlemen have resolved to hold up to public view and reprobation the injustice which they experience from the hands of the Halifax poor-law functionaries; and pain that any set of men could be found, called especially by the name of "guardians," who could act so unjustly and cruelly towards their medical officers, as to give them for each visit to a sick pauper the pitiable sum of threepence threefarthings, for which, also, the doctor was expected to furnish medicines. This is the reward for all the skill and patience, and forbearance, and defiance of personal danger which he exhibits; for being brought into contact with the most frightful diseases; and for exposing his life in attempting to arrest its progress, and preventing its dissemination. The Halifax medical officers, touched with a sense of the wrongs inflicted on them, met, on the 6th of the present month, and unanimously passed resolutions, urging in one of them the board of guardians to give them the very moderate sum of 7s. 6d. per case—renewable, in long-continued ailments, every three months. Here was nothing like an unjust demand, and yet there was a guardian with ignorance and impudence enough to propose that the resolutions should be treated with "silent contempt." Such an insult, coming from a low-minded individual, must have been keenly felt by the gentlemen of education for whom it was intended; while it shows that guardians of this stamp, who would take from off their own shoulders the burden of maintaining the sick and place it upon those of the medical attendants, can only be effectually punished by the members of the profession combining together, and fixing the lowest amount of remuneration which they will receive for their parochial duties.

It is to the honour of the medical profession that its members have ever manifested the most benevolent feelings in their attendance upon those who have from their poverty been unable adequately to remunerate their important services; and we trust that the same noble principles will be ever cultivated and displayed. It is for this very reason we strenuously advocate, from time to time, public acts of justice towards them, that in the discharge of professional duties they may have no barriers placed in the way of exercising the best feelings of our nature, which it is their glory to cherish. The public, in acting unjustly towards the medical profession, is not true to itself; many instances being within our knowledge of individuals becoming permanent burdens on society from the exercise of an unwise and unjust parsimony in official persons not seeking the means of obtaining early relief for them. Nothing is more characteristic of a high tone of moral feeling amongst a people than the care which they manifest towards those who have the misfortune to be poor: for their comfort humanity suggests that every provision should be made, and when sickness invades, that no means should be left unemployed to mitigate its virulence and arrest its progress. Hitherto, in this country, it has been thought enough for parishes to grant a niggardly pittance for the support of paupers while in health, leaving to the members of the medical profession the care of them in sickness, without the prospect of anything like adequate remuneration for their efforts. Infinitely better would it be that they at once should make their attendance on the parish poor a "labour of love," with a clear understanding that it is so, than that they should be badly paid and badly treated by poor-law guardians and Government authorities.

The third resolution at the Halifax meeting ought not only to be read by every medical practitioner, but by all parish and Government servants throughout the kingdom; it is as follows:—"That in the opinion of this meeting the public services of medical men are neither properly understood nor duly appreciated, and the award made to them is on a scale wholly incommensurate with the amount and importance of the duties they have to perform. That the stipend they receive does not place them on an equality with an inspector of police, notwithstanding which they are compelled not only to furnish medical advice and attendance, but to supply all necessary appliances and medicines. That the smallness of the stipends now awarded makes it clear that the medical relief of the poor falls, not on the board of guardians, but, very unjustly, on the hard-worked medical officers."

The sooner this state of things is brought to a close the better. It has been too long the fashion to expect medical men to give their services for nothing, or next to nothing. The lawyer cannot sign a document without a fee; the parson cannot preach a sermon without an offering: but the surgeon may physic and bleed and blister "for the love of God," to all eternity, without one offering being cast into his treasury. As long as he chooses to submit to this, the oppressor's hand will be upon him, and his own efforts will alone remove it from him. We are glad, therefore, that the meeting to which we have alluded pledges itself in the sixth resolution "to uphold by every means in its power the honour and dignity of the profession, and on all occasions to advance its best interests and to promote the welfare of every member, thus hoping to receive the approval and support of their brethren at large."

There is something about this resolution truly admirable—it only wants such feelings as are here embodied in words to be generally experienced, to hasten on the jubilee of the profession. Let its members once feel they are "brethren," and be determined to promote the welfare of "each other," and they will then speedily emancipate

themselves from the degrading thraldom of thick-headed poor-law guardians, and will receive from all classes of the community a just reward for their labours.

MEDICAL APPRENTICESHIP.

It was considered necessary by our forefathers that the *alumni* of the profession should be articled to experienced medical practitioners for a limited period, in order that a knowledge might be acquired of the various articles of the *materia medica*, as regards their properties, preparation, and composition.

The wisdom of the ancients in thus causing the medical youth to undergo this kind of professional bondage has been recently called in question, and powerful efforts have been made to do away with the system of apprenticeship. It has been represented as degrading in its influence, a waste of valuable time, and a sort of discipline to which young men ought not to be compelled to submit. We allow that powerful objections have been alleged against it, and that there are many things connected with it which demand revision. It was formerly the practice of requiring a pupil to serve his master for the long period of seven years. The Apothecaries' Act made an innovation upon this ancient requirement, and five years are only now demanded by law. This, however, we consider too long a period to be "behind the counter," and few medical gentlemen now enforce all that is commanded by act of Parliament. It is a question, however, if tl entire abolition of apprenticeship would no be productive of much that is injurious, as it i well known that much useful knowledge may be imparted during this period by an intellige master, which prepares the way for the c tivation of those branches of medical scienc taught in schools and hospitals.

Mr. Martin, of Reigate, has drawn the atten tion of his professional brethren to this subjec in a paper which he read at the annual meeti of the South-Eastern Branch of the Provinci Medical and Surgical Association. He conside that the only real objection against apprentic ship is its length, and that, the time being shortened, it is an institution which ought not to be cast aside as worthless. He thinks that during this period a good knowledge of the various drugs employed in medicine may be acquired— a readiness and quickness of manipulation, and an accuracy and perfection in the combination and preparations of medicine. He, moreover, considers that a useful knowledge of therapeutics may be furnished to the pupil in private practice by the observation of disease and the manner in which it is treated. It is also a valuable time for reading, not, as he observes, "the mere manuals and class-books," as being the short cuts to knowledge, but the works of authors of the highest repute in medicine. The concluding remarks of his address are worthy of especial attention. "I am," he says, "desirous of vindicating the *dignity of labour;* of asserting that the education of the senses, and the education of the hands and fingers, as well as of the head, is perfectly consistent with the highest refinement of mind and manners, and the most gentlemanly conduct Such has been, in fact, the course of early discipline through which have passed some of th most eminent men who have dignified and adorned our profession."

In these times of innovation, medical prac titioners should be especially careful not to de mand any change which experience has not proved to be necessary. In the matter of apprenticeship, it would be well for them very seriously to consider its advantages as well as its disadvantages, and only to demand its entire abolition if the latter are found to prevail.

GOSSIP OF THE WEEK.

UNIVERSITY OF LONDON.

MATRICULATION.—1847.

Examination for Honours.

MATHEMATICS AND NATURAL PHILOSOPHY.

Routh, E. J. (exhibition), University College; Edger, E. R., University College; Bridge, J., University College; Gillett, J., private tuition; Malleson, W. T., University College; Clarc, J., Stonyhurst College; Giles, W., St. Edmund's College, Ware; Bamber, J., St. Edmund's College, Ware; Johnson, J. Stonyhurst College; Odling, William, Guy's Hospital; Ray, J., Wesleyan Coll. Inst., Taunton; Chambers, B. E. C., Wesley College, Sheffield.

CHEMISTRY.

Neale, R. (prize of books), University College; Batts, N. P., University College; Sawyers, , King's College, Aberdeen; Chambers, B. E. C., Wesley College, Sheffield; Payne, W., University College; Fryer, W. H., Queen's College, Birmingham; Beale, L. S., King's College.

ZOOLOGY.

Neale, R. (prize of books), University College; Beale, L. S., King's College; Odling, W., Guy's Hospital.

CLASSICS.

Pringle, G. (exhibition), St. Edmund's College, Ware; Davies, E. C., Homerton College.

Typhus Fever in Leeds.—Typhus is still on ... increase in this town. During the past week about twenty cases have been removed from Wellington-yard to the Fever Hospital, though every possible preventive and remedial measure had for some time previously been resorted to. It is a melancholy gratification to learn that this seat of disease (Wellington-yard) is now entirely cleared of its inhabitants. Mr. Whitehead, chief clerk at the Board of Works, has taken possession of every dwelling, eighteen .. number, and it is intended that they shall not again be inhabited for the space of three months— an interval which will be occupied in thoroughly whitewashing, cleansing, and purifying them. The Rev. W. S. Monck, and Mr. Samuel Sharp, surgeon, have become victims of the fever. We have also to add to the list of those sick, Mr. Richard Hodgson, assistant to the borough surveyor, who, it is supposed, caught the fever whilst attending to his duties in Shannon-street. The police who were ill are improving, and the assistant of Mr. Bulmer, surgeon, is likewise ogressing satisfactorily towards recovery.

Metropolitan Society for the Abolition of Burials in Towns.—On Wednesday week, a meeting was held in the Society's rooms, New Bridge-street, Blackfriars, Mr. G. A. Walker, surgeon, in the chair. Messrs. Atkinson, Hartig, and other gentlemen, adduced several instances of the fatal effects of inter-mural burying, which practice they denounced as being as injurious to morals as it was to public health. It was ultimately resolved to circulate, through the medium of the press, facts illustrative of the evils of inter-mural burials; and also to call a public meeting upon the subject at the close of the ensuing elections.

Milbank Penitentiary.—Woolwich Hulks. Mr. T. Duncombe called the attention of the House to the reports laid before Parliament during the present session, on the state of Milbank Prison, and the treatment of convicts on board the Hulks at Woolwich. The reports on the state of the Penitentiary showed that the prisoners were in a most deplorable state, that scurvy prevailed amongst them to a great extent. He hoped the Government would bring in a bill to put this prison on an entirely new system. The Hulks are in an equally deplorable state.

Sickness and Mortality amongst Emigrants.—From the 21st of April to the 27th of June inclusive, 74,184 emigrant passengers arrived at New York, of whom 2078 were admitted into the Marine Hospital. Of those admitted, four per cent, or 197, died; 1227 recovered, and were discharged.

British Museum.—The British Museum Commission has adjourned for three months.

Munificence.—M. Van Cuneghem has left 100,000 francs for the erection of a hospital for the blind at Gand.

Naval Appointments.—Surgeons: Hugh Jameson, to the Victory; and David Giddes, to the San Joseph.

Obituary.—July 17th, at Leeds, aged 40, Francis Sharpe, Esq., of fever, caught while discharging the duties of district surgeon, which he had undertaken during the illness of Mr. Taylor.—July 19th, Richard Morice Tobin, M.D., surgeon of Her Majesty's Dockyard, Devonport. —Lately at Lynn, John Wayte, Esq., M.D., aged 58. He was an alderman of the borough; twice mayor; formerly physician to the Lynn Dispensary, and also senior physician to the West Norfolk and Lynn Hospital. He died much respected, particularly by the poor, to whom he was always a ready professional friend. —Lately, at Ballyfarnham, of fever, — Hawkesworth, M.D.—July 14th, at Nenagh, of fever, aged 27, J. B. Fletcher, M.D., one of the physicians of the Nenagh Fever Hospital.— July 2nd, at Waterford, of fever, John Price, Esq., M.D.—July 7th, of fever, R. B. Barlow, Esq., one of the union surgeons for the Blackburn district.—On the 12th instant, at his residence, Bronte cottage, Walton-road, aged 61, John Turner, Esq., M.D.—On the 10th of February, at his residence, at Dover, United States, aged 40, Mr. Ellis Sweetlove, member of the Royal College of Surgeons, and licentiate of the Apothecaries' Company, London.—On the 24th inst., at Saffron Walden, Thomas Mickley, Esq., surgeon, aged 38.—On the 26th instant, in Stanhope-street, Regent's-park, three days after his arrival from the United States, Arthur Clark, Esq., M.D., youngest son of the late John Clark, Esq., formerly of Poole, in the county of Dorset.

MORTALITY TABLE.

For the Week ending Saturday, July 24, 1847.

Causes of Death.	Total.	Average of 5 Summers.
All Causes	905	940
Specified Causes	905	935
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	241	[illegible]
Sporadic Diseases.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	116	103
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	127	157
Diseases of the Lungs, and of the other Organs of Respiration	202	226
Diseases of the Heart and Blood-vessels	29	25
Diseases of the Stomach, Liver, and other organs of Digestion	95	94
Diseases of the Kidneys, &c.	8	8
Childbirth, Diseases of the Uterus, &c.	17	10
Rheumatism, Diseases of the Bones, Joints, &c.		
Diseases of the Skin, Cellular Tissue, &c.	2	2
Old Age	34	50
Violence, Privation, Cold, and Intemperance	29	28

No. 410. SUMMARY. Aug. 7.

COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the THEATRE, QUEEN'S COLLEGE, Birmingham.

By [illegible]UEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Case of gastro-intestinal disorder; extent and variety of these cases; value of recording them; case under present consideration first admitted for simple fever; supervention of local congestion of the brain; treatment; recovery; persistence of paralysis after the probable cause of it had been removed; observations upon this subject; subsequent illness of the patient; readmission into the hospital, suffering chiefly from paralysis with cerebral disorder; detail of the symptoms; comments upon them; treatment; relative effects of different remedies; efficacy of the oxide of silver; another case of seeming cerebral disease that resisted every tried remedy except the oxide of silver, under which it recovered; observations.

GENTLEMEN,—You have seen an extraordinary case of gastro-intestinal derangement, with various morbid sympathies, treated by me during the last few months. I will give you its details with some running comments. I am not intending to make this a discourse upon dyspepsia in general; were I to do so, and do the subject even indifferent justice, my lecture must transgress all ordinary limits. The nosological position of indigestion and its complications is, as you are aware, a very prominent one. Than these ailments, there are none more numerous, or more diversified, in the great catalogue of "ills that flesh is heir to." Your daily experience will introduce you to fresh varieties of them, but you may become patriarchs in your profession without knowing the whole. Hence the value of recording any cases in point which are fertile in features of practical interest: they are so many sources of instruction not only to pupils, but also to practitioners who meet with them for the first time. It is this consideration which disposes me, with very little enlargement upon actual detail, to occupy your time to-day with the strange case I have alluded to.

The subject of it, was a woman named Mary Ann Frost, who first came under my care on the 5th of November last year. She was thirty-two years of age, and the mother of three children. She was admitted suffering from simple fever, and under a very simple form of treatment recovered rapidly, until one day, about a week after her admission, when we found her complaining of a severe dull pain on the right side of the head, and slight numbness of the left arm and leg. The right pupil was more dilated than the left, and less sensible to light than natural: it not only did not contract as much as it ought under the influence of light, but it did not begin to contract [illegible] one or two seconds after strong artificial ligh[illegible] fallen upon it. The pulse was 90, and slug[illegible]ut not hard; the tongue had become furre[illegible]e last twelve hours; sickness had also su[illegible]d; and there was some epigastric tende[illegible]. The head was not strongly hot; there w[illegible] restlessness, watchfulness, or irritability; n[illegible]e of the eyes, or vascularity, or intoleranc[illegible]t; no ringing in the ears, or any of the oth[illegible]ptoms indicative of inflammation, comm[illegible] or commenced, in the brain or its membra[illegible]. Added to these negative testimonies, the c[illegible]r of the pain and the condition of the [illegible] referred to local congestion of the brain, [illegible] passive than active in its kind. The di[illegible]uggish pupil was another reason why I [illegible] this diagnosis: in active cerebral conges[illegible] inflammation, you have generally at th[illegible]mencement a contracted pupil.

Looking at [illegible] in all its bearings, and considering the [illegible]cy of the prevailing fever to acquire the [illegible] or depressed type, I thought it advis[illegible]ploy measures as mild as I could, co[illegible] with the state of the patient, and the [illegible] of its becoming worse.

The object wa[illegible]ly to remove the present congestion, but [illegible]nt its recurrence. To this end six leec[illegible] ordered to the seat of pain, and to be f[illegible] by a blister at the back of the neck, if t[illegible]toms were not relieved in two hours. T[illegible]s were rather costive: five grains of ca[illegible]re given immediately, and a turpentine [illegible]hortly afterwards. I visited her after [illegible] of a few hours, and found her somew[illegible]ed. The enema had dislodged a quan[illegible]atus and scybalous fæces, and the ca[illegible] procured a copious bilious dejection; [illegible]els, in consequence, were less tense an[illegible]han in the morning. The leeches bled [illegible] and produced a decided alleviation o[illegible]. The pulse was more free and a little slo[illegible]e was no perceptible alteration in the p[illegible] the paralysis of the left side. This d[illegible]rprise me: in the living economy, th[illegible]hysics—"the cause being taken away, [illegible] ceases"—does not always apply. W[illegible]eet with vital impressions continuin[illegible] to speak:—that is, the impression hav[illegible]made, the original source of it may b[illegible] without the impression coincident[illegible]ing. In nothing do we see this mo[illegible] than in disorders of the nervous syst[illegible] produced upon this system, in whole or in part, are often not easy of subsidence. In the case before us, it was quite clear that the depletive and derivative actions had greatly lessened, if not removed, the local congestion, yet one of its most delicate manifestations—the diminished sensibility of the pupil, and of the organs of locomotion on the left side—had scarcely undergone any change. The persistence of this morbid effect was, no doubt, due to the continuance of the impression which the overcharged vessels had made upon that part of the brain where their pressure had been exerted. I told you that it was not improbable a night's rest would aid the organ to recover its original condition and tone. So it did. The next morning the patient had little complaint to make, except of weakness. The pupil was not quite natural, but so nearly so as to be of no consequence, and the numbness of the left side was all but gone. For two or three days subsequently we merely attended to the state of the bowels, and kept the patient quiet. During this time she continued further to improve, and then we gave her a light vegetable tonic with an alkali, and an aperient pill at bedtime. Under this plan she fairly recovered, and within a month from the date of her admission she left the hospital well.

Some weeks afterwards she again became the subject of severe headache and partial paralysis, for which she was attended by a neighbouring surgeon for a time; but not improving she consulted another, and was under his care several weeks, gradually getting worse. A gentleman in this class kindly called upon me one day, to give me a description of her state, and to inquire whether I should again like to have her for a hospital patient. Judging from his report, which was intelligibly and accurately given, the case seemed a hopeless one, but of course I could have no objection to receive it, and accordingly, on the 21st of March last, Mrs. Frost was again admitted under my care. Not having seen her during the previous three months, I was certainly very much struck with her altered appearance when we met at her bedside. She was greatly emaciated; cheeks sunken and bloodless; eyes hollow, surrounded with a dark areola, and each inclined towards the nose, constituting a very marked squint. This deviation from parallelism had existed for more than a month, and caused her to see every object double: in whatever situation I placed myself, she said she saw two Dr. Wrights. Pupils dilated, and imperfectly

sensible to light. Her general strength was greatly impaired, but her right arm and leg were almost completely paralyzed; she could not close her hand, or lift it more than a few inches above the bed; she could raise her foot about the same distance. There was slight paralysis of the left side of the face, and articulation was thick and indistinct. She complained of a constant, dull, throbbing pain on the left side of her head, extending from the temporal to the cerebellar region: this pain had existed for more than two months. Her other chief complaint was, a feeling of weight at the epigastrium, and excessive flatulence. The frequency and force of the eructations plainly confirmed this. She had scarcely any appetite; tongue completely covered with a thick white fur like flannel, trembling, and remarkably indented at the edges; skin soft and flabby, and constantly bedewed with a cold clammy perspiration; pulse 86, small, and very feeble; systolic sound of the heart scarcely audible; urine scanty, and high coloured; bowels obstinately costive, fæces lighter than natural.

These were the general features of the case; and, as I told you at the time of noting them, they were quite sufficient to give us rational grounds for apprehension for the patient's safety. The cerebral symptoms, the paralysis, and the squinting, and the length of time these had lasted, naturally pointed to the probability of some disturbance in the brain. The symptoms told us that this suspected disturbance was not active, but it still might be serious, and even fatal. I confess that, at the first view of the case, I thought it hopeless, and I told you so. At the same time I told you that it became us not to let untoward apprehensions paralyze our energies, but rather prompt us to seize what few opportunities we had for affording relief to the sufferer. It was quite clear, as I have said, from the nature and duration of the severer symptoms, that whatever cerebral mischief might exist was not marked by activity. There might be local inflammation in the substance or the meninges of the brain; but if there were this, it was very mild and modified in its kind; there might be passive congestion, slowly increasing; or thickening of the membranes; or tubercular or other deposits; or bony accretion pressing upon the brain; or softening of this; or extravasation within its substance—any of these, or other morbid states, there might have been, as the sources of the manifest mischief which the poor patient exhibited. These were the most unfavourable views of the case for us to take: but there were some suppositions of encouragement, withal. It was far from improbable that the condition of the brain might have sympathetically occasioned the debilitated, depraved state of the stomach. A furred tongue, loss of appetite, flatulence, and constipation, are common coincidences or consequences of disease of the brain. But perhaps the opposite more often holds. There is no limit to the sympathy that obtains between the brain and the stomach, when the latter is the organ primarily affected. The instances are numberless of suspected cerebral disease finding its cure in a course of tonics and aperients. We at least, then, had some hope, and this was strengthened by the state of the pulse and the general debility. Local paralysis may exist without a diminution of power in other than the paralyzed parts, or any failing in the force and frequency of the pulse. It was this general weakness and debilitated circulation that led me to hope we might remedy the ailment through the organs of digestion. This was certainly the only view in which we could see a chance of the patient's safety, and I, therefore, determined to act upon it.

Depletion was, of course, out of the question, but I thought we might venture upon counter-irritation, if not with benefit, at least without disadvantage.

A blister was, therefore, applied behind the ear on the affected side, and directed to be kept open by a dressing composed of equal parts of savine ointment and strong mercurial ointment.

The state of the bowels demanded a immediate and not very mild remedy, which was furnished in the following pills:—

℞. Pil. coloc. c., ʒss.; ol. crotoni m. iij. Misce intime et divide in pil. vj. quarum capiat j. tertia quaque hora donec alvus responderet.

Hoping, rather than believing, as I have said, that the stomach was at fault, I determined upon a tonic mixture. The excessive flatulence, flabby tongue, weak pulse, and relaxed surface, suggested ammonia, and the following mixture was given:—

℞. Inf. gentianæ comp., ℥viij.; ammon. carb., ℈ij. M. ft. mist. cujus cap. coch. ampla duo ter die.

She was ordered beef-tea thrice daily, a mutton chop, if she could eat it, for dinner, and arrowroot for breakfast.

On the 22nd we found her in much the same state as before. Her blister had risen well (this was an encouraging circumstance), and was very inflamed from its dressing. The bowels had been freely opened, and the mixture "warmed the stomach" (as the patient said), and dissipated its flatulence, without producing any unpleasant feeling. Contr. mist. et pil. pro re [illegible]

21. No perceptible change, except that the motions are deficient in bile. Cap. [illegible]. hydr. chloridi gr. v. et contr. altera remed[illegible]

27. No alteration, except that, last night, she was seized with severe tenesmus a[illegible]anying violent purging. The tenesmu[illegible]g still troublesome, she was ordered a [illegible] enema with forty drops of tincture of opiu[illegible] the pills to be omitted, and the mixture [illegible]ued as before.

28. Complains of great restlessn[illegible] want of sleep: sees "sparks falling in[illegible]s, and various spectral figures;" wander[illegible]onally, and in the night hooted vociferou[illegible]ulence very distressing; says her stom[illegible] cold, but is relieved by the mixture. [illegible] open. Contr. mist. et adde ad cam sp. [illegible]iij.

℞. Hydrarg chloridi, gr. ss.; h[illegible]r. q.s. ut ft. pil. Cap omni nocte man[illegible] have the feet immersed in hot mus[illegible] water every night.

31. Little alteration; flatulen[illegible]stressing. The blister to be dressed [illegible]e ointment only; the mixture to be c[illegible]

℞. Hydrarg. chloridi, gr. ss[illegible]yoscy., assafœtidæ, aa. gr. iij. M. f[illegible] nocte maneque.

Up to April 10 she contin[illegible]rly the same state; one day being a [illegible]er, and another day rather worse, and [illegible] varying scarcely any at all. On this d[illegible]ter was repeated behind the ear, and [illegible]rial pill substituted by the following:

℞. Pil. coloc. c., assafœtid[illegible]iij. M. ft. pil. cap. omni nocte.

The gums were slightly a[illegible] no benefit resulting from it, the [illegible] treatment was discontinued.

17. No change, except tha[illegible]bility has increased; patient very qua[illegible] especially with the nurse, whom she re[illegible] especial enemy; has strange religiou[illegible]tions, and keeps her fellow-patients [illegible] incessant ejaculations and prayers. [illegible]arb., ℈ij.;

℞. Inf. cuspariæ, ℥viij.; [illegible] tinct. hyoscy., ʒij. M. ft. [illegible] cap. coch. ampla duo ter die.

Up to the 20th she im[illegible]ry slightly with this change of medic[illegible] better appetite and less flatulence. [illegible]owever, she retrograded, up to the 24[illegible] additionally to her other ailments, she [illegible]d of severe shooting pains, seemingl[illegible] in her stomach. The pills suited h[illegible]ll, and were therefore continued, with [illegible]ing mixture:

℞. Inf. quassiæ, ℥viij[illegible]æ solutionis, ʒiij.; sp. eth. sulph., ʒ[illegible] mist. cap. coch. ampla duo ter die.

The solution of strych[illegible]ained in the mixture is from a form[illegible] I use at the Hospital; the dose given[illegible] equal to one-sixteenth of a grain.

This change was prod[illegible] benefit. The paralysis of the leg was certainly a little better, but the arm remained the same, and the squinting, pain in the head, and hallucinations were unchanged.

On the 27th she became excessively uproarious, swore horribly, and, with the arm and leg that she could use, kicked and struck the attendants until they were obliged to pinion her. At ten o'clock at night I was summoned to the hospital to see if she had better not be conveyed to an asylum. I ordered her five grains each of hyoscyamus and camphor, and the strait waistcoat. The pills composed her, and the next morning she was very quiet, but excessively prostrate. The pills were directed to be again given at bed-time, and the following mixture was substituted for the strychnine:—

℞. Ammon. carb., ℈ij.; sp. eth. sulph., ʒiij.; misturæ camphoræ, ℥viij. M. ft. mist. cap. coch. larga duo quartis horis.

This mixture afforded her some relief. You remember how she used to express her opinion of its comforting powers. Certain it is that, within a week of her beginning to take it, she could stand upright, move her arm with tolerable ease, and give a moderate grasp with her hand. The hyoscyamus and camphor pills were discontinued after the second night, and substituted by ten grains of compound colocynth pill, on account of her troublesome constipation.

From the time of this improvement she had no morbid fancies or fears, and her appetite was better, though far from good, and the flatulence remained the same. Still the pain in the head continued, and the squinting; and the tongue was as flabby and furred as ever.

The treatment was pursued until the 18th of May, when, on account of her obstinate costiveness, we gave her ten grains each of scammony and jalap every morning in thick gruel—a good vehicle, let me tell you, for a nauseous medicine. The mixture continued as before.

On the 22nd there were no particular evidences of improvement over what had already taken place, and I determined upon trying the oxide of silver. At this time I felt more convinced than I had ever been, that tonic treatment was necessary,—you will gather from the previous detail my reasons for so thinking—and, strychnine not having answered, I could find no better substitute than oxide of silver. I had often previously employed it in cases of nervous debility with benefit, and therefore felt no hesitation in giving it in this case. I administered it in the following form:—

℞. Argenti oxydi, gr. iij.; extracti taraxaci, pulv. rhei, aa. ʒss. Misce et divide in pil. xij. quarum capiat j. nocte maneque.

The ammonia mixture to be continued as before. From the time of the adminitratiou of the oxide of silver, the patient improved. We first saw the fur leave her tongue, and then heard her speak of the gastric flatulence diminishing. After a time, the pain in her head decreased, and coincidently with this was a diminution of the size of the pupil, and a return of the eyes to their natural axes. Strange as it may seem, and to myself as the narrator and observer it is not less strange than to you as student-observers, the eyes by degrees recovered their natural state and appearance, and, in ten days from the time of her beginning the oxide of silver, she not only could see distant objects clearly, but could read a small bible (as we heard her) without hesitating. At this time she walked about the ward without difficulty; her tongue was healthy-looking; her appetite good, digestion easy, and unaccompanied with flatulence; bowels regular without aperients; and instead of squinting at us, as she had previously done, she directed an intelligent pair of dark eyes at any one of us whom she particularly wished to notice. She also improved in general strength and substance.

From this period we had had no deviation or drawback from rapid recovery. Without noting the course of healthy progression, it is sufficient that I remind you of what yourselves saw—that the woman became convalescent as rapidly as

could be desired. The last time we saw her together she had no pain or numbness of any kind; she could read the smallest print with ease, and the axes of her eyes were parallel; her bowels were quite regular; appetite good, and digestion easy; no flatulence; tongue quite clean, and of a natural redness; the arm and leg that were previously paralyzed she used with perfect freedom; secretions healthy and uniform. In a few days she was dismissed well (June 8), and so she has continued to the present time.

As I told you at the beginning, this case was marked by its various anomalous and perplexing features. It has many equals in the strange histories with which medicine abounds, yet I have thought it curious enough to be made a matter of individual detail. As the sequel proves, there was nothing wrong in the brain which an improvement in the digestive organs did not rectify. The ammonia and the sulphuric ether certainly rendered her much benefit, but diffusive stimulants were not wholly sufficient. It was not until the oxide of silver was given that that suspicious-looking tongue improved and its accompanying flatulence subsided. I might occupy a great deal more time by speculating on the *modus operandi* of the materials that did this singular service, but I am not satisfied that I could theorize to any useful purpose: yourselves, like your lecturer, must be satisfied with the fact. The woman recovered from a most anomalous state, and is now in the enjoyment of excellent health; perhaps this is the best comment, though it conveys no explanation.

I had an extraordinary case some time ago, in the person of a dispensary patient, excellently illustrative of gastro-intestinal influence over the the cerebro-spinal system. It was a little boy, about eleven years old, who became the subject of strange convulsions, alternating sometimes with almost complete paralysis, and again with partial coma. This state of things had continued, in defiance of all remedies, for four or five months, when the boy became Mr. Carter's patient. About three months subsequently I was requested to see him. There were many appearances which seemed to indicate disease of the brain, but there were others that referred especially to disturbance of the stomach and bowels. For months the boy was not able to get beyond the door, and for weeks he was confined to his bed—at one time convulsed frightfully, and at another lying motionless and insensible for hours together. Leeching, blistering, mercurials, vermifuges, tonics, and stimulants were tried, but all without avail. We gave strychnine for some time, but it did no good. At last we gave the oxide of silver, in doses of half a grain, twice a day. He had not taken it three weeks when he became perfectly free from his fits, and capable of walking a short distance alone. One of you saw him with me the other day. At this time, rather more than two months since he began the oxide, he regularly comes to me at the dispensary, unattended, and has to walk upwards of a mile to give me the visit.

I have no commentary to offer upon this case, which, like many similar one [illegible] that is explicable about it. [illegible] certainly produced a wonderful effect. I do not mention the case, however, to vaunt a single remedy, but to show you how close a relation holds between the digestive apparatus and the organs of sense and intelligence; and how these are often to be remedied by relieving the other.

A COURSE OF LECTURES ON SURGERY,

BY

SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London; Consulting Surgeon to London University Hospital, &c.

Lecture XIII.

In the last lecture, gentlemen, we considered mortification as it arises from acute inflammation—acute mortification, as it is sometimes called, though not correctly—mortification proceeding from acute inflammation. We now consider the chronic form of mortification, or dry gangrene. This is produced by different causes—such as advanced age, an impaired state of the general health, or disorder of the whole system; diseases of the valves of the heart, causing distention of the veins, especially those of the lower extremities; also, from other obstructions of the circulation, such as ossification of the large arteries, and obstruction of their smaller branches by fibrin: the ossification taking place often under unfavourable conditions of the general constitution.

The first example of chronic mortification, or dry gangrene, is the gangrena senilis, or mortification of old persons. This kind of mortification differs in many respects from any other example; it is peculiar in the discoloration which takes place, being always preceded by severe burning sensation in the parts. It commonly occurs in elderly persons—in nineteen cases out of twenty. Not that you may not have similar cases in the youth. Dupuytren relates several instances of young persons suffering from this disorder. It commences at the greatest distance from the centre of the circulation, generally on one of the toes, in the form of a dark purple spot at the side of one of the small toes. Previously, however, you find the patient has been suffering pain about the toe, which is often supposed to be gout; and you find that the extension of the disease is preceded by burning sensation. Its progress is variously marked in different cases: you find that the foot is gradually, sometimes quickly, affected as far as the ankle, and has a dark livid colour; the leg higher up presents a reddish-brown colour, and the whole limb has a mottled appearance. When the surgeon examines the part of the leg higher up, he finds the temperature of the limb much lower than natural, and this loss of heat is found to extend along the limb. Dupuytren thought that the temperature of the dead limb fell below that of the surrounding media—that of the atmosphere, and he believed his opinion was confirmed by experiments that he made with the thermometer. Although this is called dry gangrene, in most cases there is a separation of the cuticle, and a dark bloody serum effused into vesicles, as in acute mortification, and at the bottom of the vesicles is seen the cutis, dark coloured and livid. Whether you are to have much swelling depends on the rapidity with which the disease extends: when it advances rapidly there is much swelling, but where the progress is slow the swelling is generally very slight. I have mentioned that the progress is different in different cases: the patient sometimes suffers a great deal of disturbance in the stomach; he suffers from eructations, and delirium and coma come on early in severe cases. Where the disturbance is great in the beginning, the patient often dies before the mortification has reached to the ankle, about the tenth or twelfth day, from constitutional disturbance. I attended a case of this kind at Staines: a wealthy grazier who had indulged very much in eating and, I believe too, in drinking; at all events, he was a voracious eater; he was an example of death taking place about the tenth day: the disturbance being great, and coma and low delirium coming on early. His case was an example of very rapid mortification. I also attended another gentleman, in Gray's-inn, with Mr. Hughes, of Holborn. He had a small spot on one side of one of his little toes; he had no suspicion it was a disease of any consequence. I told him at once that it was a very serious disease, but he would hardly believe it. He had very little constitutional disturbance, though his pulse was quick, about 100 or 110; he slept well, and eat a chop daily; and it was not till his stomach began to fail that he could be brought to believe he was in an imminently dangerous condition. What helped to bring this patient to his latter end was the gangrena senilis attacking the other leg. In this case, every time there was spreading of the mortification, such extension was preceded by intense burning pain in the part about to be destroyed. But the most remarkable fact in the case was, that the two legs were attacked differently. One limb became cold, and lost its sensibility; the other became flaccid and untumefied, as the French physicians say. This patient lived till the sixth week, but then sank rapidly. He was attended also by Sir Astley Cooper. Another case I attended was that of a lady residing in Guildford-street, who was attacked with gangrena senilis of a spot on the heel; so that you are not to suppose that it always begins in the toes, though this is very common. So slow was the progress of the disorder in her case, that she lived eleven months after its appearance, and when she died the gangrene had not reached higher than the ankle.

Now, what are the causes of gangrena senilis? It has been generally supposed that there is ossification of arterial trunks, and sometimes we can feel very distinctly that the artery is ossified; but in many of the cases I have seen it has not been so. The larger arteries are not invariably ossified in this disease; sometimes we have obstruction of the arterial trunks; obstruction of the smaller arteries is constantly found, but obstruction of the larger more rarely. Cruveilhier always referred gangrena senilis to ossification. There must be some unfavourable circumstances combined with the ossification, as impaired health, diseases of the heart or its valves, producing disorder of the circulation. Then the venous blood cannot pass freely, and accumulates in the lower extremities, impeding the circulation; and this will explain to you the cause of gangrena senilis. It is doubted by many good surgeons whether ossification of the arteries alone is capable of producing gangrena senilis. I think it is not. No doubt in a broken constitution, joined with ossification, it may act as the exciting cause. Dupuytren thought the cause was arteritis, by which the arteries become blocked up by fibrin. It was observed that the blood was buffy, in consequence of his view, he tried venesection, and three-fourths of his patients were saved. This mode of treatment, when tried in this country, did not give such favourable results. There was one case treated by Gibson, a surgeon, of the United States, that was successful, but unfortunately, very soon after the patient was pronounced out of danger, he died suddenly, so that I do not know whether we have sufficient proof of the correctness of this practice. We found that bark was inefficient in this disease, and that opium was a much more available remedy; and the opinion is retained by the best surgeons, that opium is better than bark in the treatment of gangrena senilis. If opium or its preparations be used, half-grain doses of hydrochlorate of morphia should be given every four hours. There can be no doubt that opium is very useful in gangrena senilis; ammonia also has been used in most of the cases that I have seen; but, I must say, most of the cases I have seen have terminated unfavourably. Musk, too, has been tried, and was found to be a most useful medicine. Stimulants, brandy and wine, ought not to be forgotten. With respect to the local treatment, fomentations and emollient poultices are the most employed. I have seen other applications tried; I have seen Labarraque's solution of chloruret of soda, and this, in one case I attended, had the effect of diminishing the fetid smell, but did no other good. I remember that Sir Astley Cooper tried it, but, according to his experience, it had no other effect than that I have mentioned. Applications of charcoal were also tried, but these were no better than the other. A new practice of late has been introduced; in Chelsea Hospital, where gangrena senilis is very common among the pensioners, it was suggested that it would be a very rational plan to maintain the temperature of the limb by enveloping the whole in carded wool. This was tried in a case by Sir Benjamin Brodie; this patient got better, and recovered with the loss of two toes.

Now, you have examples of dry gangrene in various conditions of the general health: some-

times the constitution is so disordered that no function will go on well; and in particular the circulation and innervation are especially impaired. You find in that state of the system which takes place in scurvy, that gangrenous ulcerations, or aphthæ, occur on the mucous membrane of the mouth, and other mucous membranes. You may often find in this form of gangrene, in persons who have been under mercurial treatment for some time, where mercury has been used in cases of syphilis to an unwarrantable extent—pushed, as the term used to be—the linings of the cheeks will slough, and ulceration will take place. Persons, too, who have been confined long by typhoid or scarlet fever, are peculiarly liable to be attacked by this complaint; and, as analogous to this, I may call to your notice the mortification which takes place over the sacrum and scapulæ in persons who have been long confined to bed by diseases of the hip-joint, in the suppurative stage, or by bad fractures; these patients get into such a low condition, that from pressure the soft parts covering the bones become the seat of gangrene. The skin becomes brown, and sloughing comes on, but sometimes in such a degree that the muscles and fasciæ are involved, and the bones are exposed. Often, where the worst stage of compound fracture has been got through, I have seen this gangrene take place and carry the patients off. When you consider the causes of this kind of mortification you will see the difficulty of curing them, as it not only proceeds from pressure, but also from a low state of the constitution, and hence you may remove the pressure and yet not be able to stop the disease. Still you must endeavour to take away the pressure, and you may employ for this purpose pillows or air-cushions, placed under the patient so as to relieve the prominent parts, or, better still, hydrostatic bed—Mr. Arnott's water-bed—which acts upon the principle of equalizing the pressure. This water-bed sustains the lower surface of the body at every point, and diminishes the pressure on the prominent parts by affording a very soft surface for the patient to lie on. When long confinement has taken place, you must be on your guard: examine the parts of the skin; see that they are washed well with astringent lotions—the lead lotion, liquor plumbi, and also a preparation of camphor—camphorated spirit. By altering the position of the patient you may sometimes succeed in preventing this mortification. I have often applied the soap plaster—either white or brown—which is a very good application, though not so good as bathing frequently the part during the day with strong astringent lotion. When sloughing comes on, the modes of treatment are very different amongst different practitioners. Some poultice, some apply camphorated spirit, and some the liquor plumbi lotion; others a strong solution of the chloruret of soda. These are only secondary means in the treatment of this kind of mortification. When mortification occurs in consequence of external injury of an artery—as, for instance, in case of a musket-ball passing through the thigh, and wounding the femoral artery—in such cases the foot mortifies. The foot loses its temperature, and you amputate as high or higher than the wound in the artery.

Generally speaking, when the femoral artery is wounded the thigh will not mortify; but when the wound is inflicted by a gunshot, not only is the femoral artery injured, but also the veins and lateral muscles; and this is the reason that gangrene comes on. If the thigh be wounded by a penknife, mortification will not be likely to take place. Where there is mortification under these circumstances, the disturbance has been great, or the constitution is unfavourable, or the limb has not been under proper treatment; mortification may then be very great.

I mentioned venous obstruction as a cause of mortification. This, sometimes, will arise from the too great tension of the bandage; the bandage presses tightly on the veins, and hinders the return of the blood; effusion then takes place and the swelling increases; the bandage thus becomes still tighter till mortification ensues. You must also take notice of another matter—which is the position of the limb; this must be placed favourably for promoting the return of the blood.

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.

By Professor MATTEUCCI, of Pisa.

PART VIII.

PHOSPHORESCENCE OF LIVING BODIES.

Many living bodies possess the singular faculty to emit light. The best known case of animal phosphorescence is that of the glow-worm (*lampiris italica—ver luisant, lucciola*), a coleopterous insect of yellowish colour, living in meadows, and chiefly met with in spring and summer, after sunset.

The two last segments of the body of this insect appear slightly luminous in the dark, and emit at night, intermittently, a comparatively strong light.

The results of numerous experiments made with this insect by Macaire and others, but more particularly by the author, have led the latter to the following conclusions:—

1. The phosphorescence of the glow-worm is owing to the presence of a peculiar matter in this insect. The manifestation of the phenomenon is not indispensably connected with, or dependent upon, the life or absolute integrity of the animal.

2. In carbonic acid and hydrogen the phosphorescent matter of the glow-worm ceases to shine after the lapse of a certain time, not exceeding from thirty to forty minutes, if the gases are pure.

3. In oxygen gas the phosphorescent matter of the glow-worm (no matter whether the entire animal, or simply the luminous segments, be used in the experiment) shines with considerably greater brilliancy than in atmospheric air.

4. The phosphorescent matter of the glow-worm, when placed in conditions adapted to cause the emission of light from it, absorbs a portion of oxygen, and evolves an equal volume of carbonic acid.

5. The same substance, when deprived of the faculty of emitting light, absorbs no longer oxygen, nor evolves carbonic acid.

6. In a medium of pure oxygen the phosphorescent matter continues to shine for several days, after which it loses its luminousness; a portion only of the oxygen is found replaced by carbonic acid. In a medium composed of one part of oxygen to nine parts of hydrogen or carbonic acid, the phosphorescence continues for several hours. This would lead to the conclusion, that the cessation of the phosphorescence (in the former case) is owing simply to survening decomposition of the phosphorescent matter.

7. Elevation of temperature, within certain limits (up to about 80° Centigrade), increases the intensity of the light emitted by the phosphorescent matter of the glow-worm. Depression of temperature has the opposite effect.

8. Exposure to a higher degree of heat (about 96° Centigrade) causes decomposition of the phosphorescent matter. Continued exposure to the air or any other gas, produces the same effect, after a longer or shorter period of time, according to the nature of the medium. It is indubitably for this reason that these insects do not live in all climates, and shine only during certain periods of the year.

9. Phosphorescent matter, thus altered or decomposed, is no longer apt to emit light, or to become luminous.

These conclusions demonstrate and establish evidently the nature of the phenomenon: the generation of the light in this insect is inseparably connected with the combination of oxygen with the carbon that forms one of the elements of the phosphorescent matter?

We have now to proceed to inquire in what manner the phosphorescence is produced in the living animal, and to examine the circumstances by which the phenomenon may be influenced, and the structure of the luminous matter and of the surrounding parts.

The author placed several glow-worms in a close-shutting tin box; upon opening the box, twenty-four hours after, and about two hours after the setting of the sun, he found the glow-worms apparently dead, but still emitting a feeble light. The warmth of the hand restored to them, to some extent, the power of motion, and rendered the light somewhat more intense.

In another experiment the author kept several glow-worms for thirty hours in the same tin box: upon opening the box some of them were found dead, and without the slightest trace of luminousness; in others the luminousness was exceedingly feeble. The results of these experiments would tend to prove (supposing the whole of the preceding conclusions to be based on erroneous data) the correctness of the *insolation* theory, adopted by Beccaria, Mayer, &c., as explaining the phosphorescence of these insects.

But the results of another experiment of the author's disprove this view and theory altogether and completely. The author placed a great number of glow-worms in one of the compartments of a double-bottomed, close-shutting tin box, and in the other compartment an equal number of these insects, scattered through a quantity of fresh grass that had been gathered in the same place where the insects were found. Upon opening the box, after twenty-four hours, the glow-worms in the former compartment were found dead, or nearly so, whereas those in the latter were found very lively and luminous, and continued so during the nine days that the author kept them in the box, supplying them from time to time with fresh grass. This experiment proves conclusively that the phosphorescence of glow-worms is not ascribable to insolation.

If you look at the last segments of the abdomen of a glow-worm, at the moment of the capture of the insect, you will find them of a glossy reddish colour. During daytime this colour is less distinct, and inclines to yellow, and the same is the case with dead glow-worms. Whilst the insect continues alive the segments are observed from time to time to turn luminous. Careful and attentive observation will show that the luminousness does not always appear upon all points of the segments at once. A slight irritation of any part of the body of the insect suffices to cause a momentary appearance of luminousness, which persists somewhat longer when one of the points of the luminous segment is excited. If the head of the animal be cut off at this moment, the light will immediately fade, and subsequently entirely disappear, when the red colour of the membrane of the luminous segments may be distinctly seen. In this state the strongest irritation of the thorax of the insect will fail to induce luminousness; but upon touching the luminous segments themselves the irritated points will shine, and the light will thence spread all over the segments. This phenomenon may be observed more distinctly still under the microscope, provided the observer take care to avoid the approach of light to the subject: an exceedingly rapid oscillating movement is seen to take place in the particles of the phosphorescent matter, which at the same time turn luminous.

The author has made, also, several experiments with a view to ascertain what influence nux vomica and opium may exercise upon the phosphorescence of glow-worms. He prepared for this purpose solutions of 0·265 gramme of extract of opium, or of alcoholic extract of nux vomica, in 61 grammes of water. He placed the insects in a glass jar, which he filled subsequently with one or the other of these solutions, and inverted afterwards over similar liquids, avoiding thus contact with the air. The results of a great number of experiments led the author to conclude that glow-worms die eight or ten minutes sooner in a solution of nux vomica than they would in pure water; whilst in solution of opium, on the contrary, the phosphorescence continues eight or ten minutes longer than it would in water. To this may be added, that glow-worms that have

ceased to shine under water, recover their luminousness on coming in contact with the air; whereas those that have been subjected to the action of nux vomica or opium are positively dead, and entirely and for ever deprived of the phosphorescent faculty. This proves the action of certain substances upon the phosphorescence of glow-worms—an action which, in all probability, cannot consist in any alteration of the phosphorescent matter.

The author varnished the abdomen of a great number of glow-worms with turpentine: he found the luminousness decreasing in intensity, and the scintillations becoming less frequent, without, however, disappearing altogether in any case.

The luminous organ of the glow-worm has been examined under the microscope. After removing from the luminous segments the dorsal and abdominal membranes, the microscope shows a globular granular yellow matter, in the midst of which appear groups of red globules, a great many ramifications, and, besides these, a sort of tubes, which present the appearance of muscular fibre; upon closer inspection, however, they appear void. Inspection of the luminous segments in the dark shows that the light is emitted by the granular yellow matter; and when the latter is inspected compressed between two glass plates, the luminousness is invariably found on the border of the inspected portion.

The abdominal membrane, carefully freed by washing from all phosphorescent matter that may adhere to it, appears upon microscopic inspection transparent, and covered with a great number of hairs. The dorsal membrane is less transparent, and likewise covered with hair, and presents, moreover, at its internal surface a great many tubes, which are seen to penetrate into the phosphorescent matter. Beneath the last but one luminous ring of the abdomen is invariably found a vesicle of a fine red colour, which, inspected under the microscope, appears to consist of a group of red globules. This vesicle is never met with in other insects, nor is it mentioned in any work on comparative anatomy.

We have to add a few words respecting the chemical action of the phosphorescent matter. This substance, taken from the living animal, has a peculiar odour, resembling that of the sweat of the feet; it is neither acid nor alkaline, dries readily in the air, and seems to coagulate in contact with dilute acids; neither alcohol nor ether, nor weak alkaline solutions, dissolve it to any appreciable extent, but it is dissolved and decomposed by concentrated sulphuric and hydrochloric acids, aided by heat; the fact that the application of the latter agent does not turn the solution blue, proves the absence of albumen. When heated in a tube, it disengages the usual ammoniacal products. The author did not detect appreciable traces of phosphorus in it; if a very large number of glow-worms were operated upon, the slight trace of phosphorus which is usually found in all organized substances *might, perhaps*, be detected in the phosphorescent matter of this insect; but, after all that has been stated here, the presence of phosphorus cannot be considered the cause of the luminousness of the animal.

It has been stated already that all the experiments made with glow-worms tend to show that the contact of the phosphorescent matter with oxygen gives rise to the emission of light, attended with absorption of this gas, and evolution of an equal volume of carbonic acid; and that these phenomena cease the moment that the phosphorescent matter has lost its luminousness.

We may suppose, therefore, that contact of the atmospheric air, or rather of its oxygen, with a peculiar substance principally composed of carbon, hydrogen, oxygen, and nitrogen, takes place in the numerous tubes found to exist in the luminous segments of the glow-worm. The great number of red globules found scattered through the granular luminous mass proves these segments to be the centre of a particular organ of secretion. Instances of spontaneous combustion of organic substances are by no means novel: we need simply poin out here the case of decaying wood, charcoal, in a state of minute division, &c. That the chemica combination of the oxygen and carbon, to which we ascribe here the emission of light by the glow-worm, is unattended with the usual evolution o heat, admits readily of explanation. The amoun of carbonic acid disengaged within a given tim from the luminous segments of the glow-worm i so minute that the heat evolved by the process o combustion cannot accumulate in them; the phosphorescence of decaying wood, and many more similar facts of emission of light attendan upon chemical modification, prove to evidenc that emission of light need not necessarily be attended with any appreciable augmentation of temperature. Our instruments indicate only the presence of accumulated heat; and this accounts also for the apparent absence of heat in animals with cold blood.

In conclusion, we will briefly allude to some other known instances of animal phosphorescence.

It is well known that long tracks of light are frequently observed at night on the waters of tl ocean; this phenomenon was formerly attributed to the meeting of the waves, to electricity, or to the presence of phosphorous gases formed by the putrefaction of mollusca; but it seem really to be owing simply to the presence of phosphorescent microscopic animalcules. But we are altogether in the dark respecting the physico-chemical conditions under the influenc of which these infusory animalcules acquire phosphorescence.

It is an unquestionable fact that dead fishes emit light; the phosphorescence of the sea may in some cases be owing likewise to this cause. This phosphorescence of fishes ceases *in vacuo* and in carbonic acid, but reappears in the air. The annals of medicine mention several well-authenticated facts of flames perceived on the bodies of certain patients, and also of phosphorescent perspiration of the feet; with regard to the latter, it is extremely curious that there should exist an analogy between the odour of the phosphorescent matter of the glow-worm and that of the perspiration of the feet. We are as yet unable to account for any of these instances of phosphorescence.

Botanists tell us that in several plants inflorescence is accompanied by phosphorescence; but this phenomenon likewise is of too rare occurrence to admit of being conveniently studied.

Quatrefage has recently made some experiments on the phosphorescence of the *annelides* and *ophiuri*. Microscopic inspection revealed to this distinguished observer that the phosphorescence of these animals is seated in the muscular fibre, is intermittent, becomes more intense upon irritation of the fibre, ceases there upon for a time, and reappears subsequently again after the animal has been permitted to rest.

The results of these experiments of Quatrefage (which it would be extremely desirable to see confirmed and still further extended) offer to us a point of analogy which should not be lost sight of. The life of the muscles, and their functions, are attended with disengagement of heat and of light, and yet this life and these functions are immediately dependent upon the agency of the nervous system.

Part IX.

ELECTRIC CURRENT OF THE MUSCLES.

The joint contact of two different parts of a muscular mass of a living or recently killed animal with a conductor gives rise to the production of an electric current. This fact may be conclusively demonstrated by a very simple experiment. Take a frog, and prepare it after the usual method of Galvani; cut the pelvis through the middle, separate carefully the muscular part of the thigh, and cut off one of the lumbar plexus at its issue from the vertebral column; this will give you a frog's leg united to its long nervous filament, composed of the lumbar plexus and its extension to the thigh, viz., the crural nerve.

A leg thus prepared, and which may not improperly be called *galvanoscopic*, is of very great use in experiments on the electric current. For this purpose it suffices to introduce the leg into a glass tube, covered with an isolating varnish, to seize the tube, and to bring any two points of the body under examination into contact respectively with two different points (sufficiently distant from one another) of the narrow filament of the galvanoscopic frog's leg. If every care be taken to avoid the slightest contact of the body under examination with any portion of the muscular part of the leg, and if the latter be strictly isolated from the hand, the contractions exhibited by the galvanoscopic leg must be attributed unquestionably to an electric current generated in the body under examination, and which the nerve simply conducts and renders perceptible by the contraction of its muscle.

Now, take any living animal, a pigeon for instance; make a slight incision in the pectoral muscle, after having carefully removed the integuments, and insert into the wound the nerve of the galvanoscopic frog: the leg will immediately contract. If we reflect upon the disposition of the galvanoscopic frog, we cannot avoid arriving at the conclusion that it is absolutely indispensable to bring two different points of the nervous filament respectively into contact with two distinct parts of the pectoral muscle of the pigeon. If the extremity of the nerve of the frog is made to touch the bottom of the wound, whilst another point is placed in contact with the lips of the wound, or with the external surface of the muscle, the galvanoscopic leg exhibits constant contractions; this demonstrates conclusively the presence of an electric current circulating in the nerve.

That the blood has no share in the production of the phenomenon may be readily proved by a simple experiment. Put a drop of the blood of the same pigeon upon a glass plate, and place two distinct points of this drop in communication with the nerve of the galvanoscopic frog: no contraction will ensue.

Moistening either the nerve of the frog or the livers parts of the muscle of the pigeon with a saline or acid, or, better still, alkaline solution, renders the contractions more vigorous. These solutions act chemically upon the substance of the nerve or muscle.

The muscles of all animals, no matter whether with warm or cold blood, manifest the same phenomenon, and this even when the nerve of the galvanoscopic frog is placed in contact with a muscle severed from the body.

The contractions excited in the galvanoscopic frog suffice to *indicate* the existence of an electric current, which we will call "*muscular*," and which is generated in the muscles of a living or recently-killed animal, and, proceeding thence, circulates in the nerve of the frog. But we must have recourse to the galvanometer to place the existence of this current *beyond doubt or question*, and to discover the laws which govern the phenomenon.

If an incision be made in the pectoral muscle of a pigeon (from which the integuments have been previously removed), and the extremities of the platinum wire of a highly susceptible galvanometer be rapidly brought into contact—the one with the external surface of the muscle, the other with the interior of the wound—the galvanometer will immediately mark a deviation of 5,20, and more degrees, and thus demonstrate the existence of an electric current in the muscle, proceeding from the internal part of the muscle to the surface; the index will speedily drop again, and, in many instances, return at once to 0. If the extremities of the platinum wire be now removed from the interior of the wound, and the experiment be then renewed, a new but somewhat less marked deviation will be observed. In some cases, however, the deviation in the second experiment proceeds in an inverse direction with respect to that observed in the first. The results of the experiment are consequently not sufficiently conclusive, and do not *rigorously* demonstrate the existence of an electric current in the muscle. There is evidently

some imperfection in this method of operating which a skilful experimentalist will readily detect and endeavour to remedy. The author recommends on this subject his work entitled "Treatise on the Electro-Physiological Phenomena of Animals."

The author has, however, succeeded to establish *conclusively* the existence of the electric current in muscles, and to discover the fundamental laws of this phenomenon.

The author took five or six frogs, prepared after the method of Galvani, cut them into halves, and severed the legs from the body by disarticulation; he finally divided the legs transversely into two parts, and selected for the subsequent experiment the lower parts. The experiment was conducted on a varnished table containing several capsular holes. The author disposed one of the parts in a manner to place its external surface into one of the capsular holes; to this he joined a second, touching with its external the internal surface of the first; to the same part he joined a third in the same way, and so on to the last part, which again was placed with its internal surface in another of the capsular cavities of the table. The whole formed thus a pile of half legs of frogs, of which the external surface of the muscle formed the one, and the internal surface the other, extremity. The two cavities were filled with slightly saline or with distilled water, and the two extremities of a galvanometer were respectively immersed in them: an immediate deviation of the index demonstrated the presence of an electric current produced by the muscular pile. The same result was obtained with the muscles of other animals. The intensity of the current is in direct ratio to the number of muscular elements used to form the pile.

The author examined also the other tissues and organs of animals, such as membranes, nerves, the brain, the liver, the lungs, with a view to ascertain whether they possessed likewise the faculty of generating an electric current: he found invariably that the galvanometer was but very slightly affected by piles formed of these organs or tissues.

The author has convinced himself by numerous experiments that the generation of the electric current in the muscles is independent of the nervous system.

If the galvanometric experiments are repeated several times with the same muscular pile, the deviations grow gradually less and less marked, and cease ultimately altogether, and this the more speedily the higher the animal stands in the scale of being.

The author managed to repeat his experiments with the muscles of living animals, and obtained invariably the same results. With live pigeons he found the electric current stronger at the commencement than with live frogs; but he observed likewise that the current ceased more speedily with the former than with the latter.

Comparing the results obtained with muscles of animals that have been deprived of food, or in which the blood circulates slowly, or in which the sanguine circulation has been altogether stopped, with those obtained with muscles of well-fed animals, or muscles gorged with blood, the author found the current in the former less, in the latter more, intense and persistent than is the case with muscles taken from average animals.

Poisoning with narcotics, carbonic acid, hydrocyanic acid, arseniuretted hydrogen, does not impair the intensity of the muscular current; but poisoning with sulphuretted hydrogen deprives animals nearly altogether of the faculty to manifest the existence of this current.

The current produced by a certain number of muscular elements is of equal intensity and duration, whether these elements be placed in more or less rarefied air, in oxygen, hydrogen, or carbonic acid.

The results of the experiments made by the author fully demonstrate the existence of the muscular electric current, and establish the laws of the phenomenon. The origin of this current resides in the electric conditions produced by the chemical processes of the nutrition of the muscle. The blood charged with oxygen, and the muscular fibre which undergoes transformation in contact with this liquid, form the elements of a pile; they may be looked upon as the acid liquid and the metal. In the normal state of the muscle there can exist only molecular currents produced by the formation and destruction of opposite electrical conditions at the same points; but when a great number of points of the muscular fibre are placed in communication, by means of a good conductor, with other points of different nature, and not subjected to the same chemical action of the blood, the electric current circulates through the muscular mass. This fact, which has been fully established by experience, proves, on the one hand, the development of electricity in the living muscle, and shows, on the other hand, that this current cannot possibly exist in the mass of this muscle in the natural and normal state.

ORIGINAL CONTRIBUTIONS.

REPORTS ON THE DISEASES OF FEMALES.

By EDWARD RIGBY, M.D.,
Fellow of the Royal College of Physicians, Senior Physician to the General Lying-in Hospital, Lecturer on Midwifery at St. Bartholomew's Hospital, Examiner on Midwifery to the University of London &c.

ON STERILITY.

I propose to offer some observations on a condition in the human female which naturally excites much interest, and which, from the variety of forms it appears under, of causes it depends upon, and of treatment it requires, presents a field of investigation perhaps second to none in importance, in the difficulties of its diagnosis and treatment, and in the striking results when that treatment is attended with success.

I think we shall simplify the subject of sterility by bringing it under the two heads of *organic* and *functional*—the one in which the incapacity to conceive depends on injury or structural defect; the other on obstructed or suspended function from local or general derangement.

Under the first head come those congenital defects where more or less of the generative organs are either deficient or awanting, or at least, if not entirely awanting, in so imperfect a state as to deserve the term "rudimentary"—a form of sterility which necessarily offers but little hope of affording relief; to this place also belong contraction and occlusion of the os uteri, of the canal of the cervix, the vagina, and os externum, in all their varieties; polypus and other uterine tumours, whether malignant or not; organic disease of the ovaries and Fallopian tubes.

Under the second, which I propose to denominate the functional form of sterility, we must class inflammation of the ovaries, inflammation of the cervix uteri; inflammation, ulceration, &c., of the os uteri; displacement of the uterus; rheumatic or gouty affection of that organ; menorrhagia, leucorrhœa, and general debility of the whole system, whether causing, caused by, or unconnected with any of the affections just enumerated.

This form of sterility, which depends on functional derangement, displacement, or debility, presents a much more encouraging field for investigation, and also for removing those causes of ill health and suffering which are so intractable and obstinate under ordinary treatment. Fortunately the forms of sterility which arise from organic defect, and therefore come under the first head, are not of frequent occurrence. Of these I have already reported some cases under the heads of Amenorrhœa and Obstructive Dysmenorrhœa;(a) of the former many are quite incurable; whereas of the latter many admit of much relief, and even sometimes complete cure.

(a) *Medical Times.*

In offering these observations on sterility I presume that it is not necessary to refer merely to cases among married women who have not become mothers; but that I may adduce cases of unmarried females where causes of sterility have existed, and which I have endeavoured to remove by treatment; by doing so I shall be able to illustrate my subject more fully. The first case is one of this sort; it is a case of amenorrhœa, apparently depending on imperfect development of the uterus, but where, by treatment, a certain amount of relief has been obtained. Properly speaking, it should have been reported under the head of Amenorrhœa, but, this not having been done, I have the less hesitation in presenting it under the present head, as I trust that its details will be found interesting.

M. S., aged twenty, unmarried, of anæmic and chlorotic appearance; constant headache; tongue pale, indented, with red papillæ; pulse weak; is subject to frequent attacks of epilepsy.

October 19, 1846.—Had never menstruated until three months ago, when she was under my treatment at St. Bartholomew's. I succeeded in bringing on the discharge by the internal use of ergot and borax, aloetic enemata, and sinapisms to the mammæ, while, at the same time, a slight application of argenti nitras was made to the cavity of the uterus, and galvanism directed through the pelvis. By this combined treatment a tolerable discharge of catamenia was effected, with considerable improvement in her general health, and diminution in the frequency and severity of the epileptic fits. These, however, have continued to recur from time to time, especially just before the subsequent catamenial periods.

Was admitted into the hospital for women shortly before an expected catamenial period.

Examination per Vaginam.—Cervix small and taper, soft and flabby; os uteri minute; the uterine sound passed with some difficulty, but showed a uterus of the natural length; it felt light and thin as regards its parieties.

℞. Sodæ biboratis, ℈j.; secalis cornuti, ℈ij.; misturæ acaciæ, ʒij.; aquæ cinnamoni, ℥iij.; sumat demid. statim et repet. post horas duas.

℞. Pulv. aloes, ℈j.; mistura acaciæ, ʒij.; aquæ, ℥ij.; M. ft. enema. Applicetur sinapismus utræque mammæ.

Hirudines vj. vulvæ; semicupium calidum.

Oct. 11.—The menses appeared to-day; the discharge was copious, and attended with little pain.

Oct. 20.—Pulse quick, face pale. anœmic-looking.

℞. Pil. hydrarg., gr. iij.; ferri sulph., gr. ij.; extr. hyoscyami, gr. v. M. ft. pil. ij. o.n.s.

Oct. 27.—Still anœmic-looking.

℞. Ferri citratis, gr. v.; acidi citrici, gr. xv.; aq. distill., ℥j. M. ft. haust.

℞. Potassæ bicarb., ℈j.; syrupi aurant., ʒj.; aquæ destill., ℥j. M. ft. haustus cum haustu superscripto ter die inter effervescend. capiendus.

Nov. 4.—Expects to be unwell next week. Lallemand's instrument for applying caustic to the urethra was passed through the canal of the cervix into the uterine cavity, and the inner surface touched with nitrate of silver. Rep. med.

Nov. 10. The catamenia have appeared to-day copiously, and without pain; the epileptic fits are less severe in number and severity. Rep.

Nov. 13.—Has not had a fit for six days, which is the longest interval between the fits for a very considerable period. She has had several warnings of a coming fit, but none has occurred. Pulse better. Rep.

Nov. 20.—Has had one fit on the 18th, and two yesterday, but they are slighter than usual. Bowels offensive.

℞. Pil. hydrarg. c. coloc., gr. x., alterius noctibus. Haustus rhæi c. magnes., ℥jss. om. mane. Rep. alia.

Nov. 24.—Appetite good; tongue pale and furred, with red papillæ, tremulous, much indented; bad taste in the mouth; no fit since last report. Repet.

Nov. 27.—Had a severe fit last night, preceded by the sensation peculiar to these fits. Pr.

Dec. 3.—Has had only one fit since last report. The menstrual period ought to arrive the 9th. Pr.

Dec. 8.—Fits less in number and intensity. Sound passed up with some little difficulty as usual. Argenti nitras was applied to the cavity of the uterus.

Rep. sinapismus enema et haust. secalis cornuti c. sodæ biborate.

Dec. 11.—The catamenial discharge appeared on the 9th, and still continues; it is of a tolerably bright colour, and is better in point of quantity. The fits have been much less in number and intensity; headache better. Rep.

Dec. 22.—Fits much slighter, but still frequent; bowels open; tongue clean. Rep.

Dec. 29.—Fits have been more severe since last report; she expects the catamenia on the 9th of January, 1847. Rep.

Jan. 8, 1847.—The fits during the last week have been more severe, and of longer duration she expects to be unwell to-morrow.

Argenti nitras was applied to the uterine cavity, and the same emmenagogue treatment used as on former occasions.

Jan. 12.—The discharge appeared on the 10th, more profuse and of a better colour than before. She had three fits yesterday, but they were very slight, merely amounting to temporary unconsciousness. Bowels open two or three times a day.

Rep. mist. ferri citratis and pil. rhæi co.

Jan. 15.—No fits since last report; feels much better; tongue more natural.

Jan. 19.—Had a severe fit on the 17th; tongue pale; pulse feeble.

℞. Argenti nitrat., gr. ¼; extr. hyosc., gr. iv. bis quotidie.

℞. Acidi nitrici dil., m. xv.; syrupi rhædos, ʒj. ex aquâ destillatâ cum singulis pilulis.

Jan. 22.—Fits not so violent, but more numerous (three a day). Pr.

Jan. 26.—Has just recovered from a slight fit; catamenia appeared at the half-way time (on the 22nd); discharge was more profuse than it has yet been, it was attended with no pain; bowels open.

Omitt. pil. argenti nitr. Rep. pil. camphoræ c. hyosc.

Feb. 2.—Much improved in health; only one fit during the last fortnight.

Rep. pil. argenti nitr.

Feb. 5.—Has had three bad fits since last report.

March 19.—Catamenia appeared on the 4th five days sooner than was expected; they came without pain, natural in colour and in quantity. Has been taking for some time half a grain of zinci sulph. three times a day with great benefit; has had only one fit since, and that very slight. Rep. pil.

March 26.—Has had eight fits since last report. Rep. med.

Let a sponge moistened with sulphuric ether be applied to the nostrils at the approach of a fit.

March 30.—Has had several fits since last report. On the 27th, sponge dipped in ether was applied to the mouth and nostrils on the threatening of a fit; had several precursory symptoms of a fit, which disappeared on the application of the ether. Rep. medic. and ether.

April 6.—Has had one severe fit since last report. The ether has been administered at the approach of several, which have been kept off. Rep.

April 13.—Has had two slight fits, which came on before the ether could be used; another was threatened, but it was prevented by the ether, although considerable drowsiness followed, as after a fit. Rep.

April 26.—Has had two fits since, one of which occurred under the influence of the ether.

This interesting case presents a variety of points well worthy of observation. It would be difficult to decide between cause and effect in the symptoms which have been enumerated; they may be summed up under three heads—anæmia, amenorrhœa, and epilepsy. The first is evidently capable of producing the two latter; but I presume it just to consider that the amenorrhœa might have tended in no slight degree to have kept up the disposition to anæmia and epilepsy.

I had endeavoured to correct this state by alteratives and tonics when she was at St. Bartholomew's, and then proceeded to make a vigorous effort for the purpose of rousing the uterine system. Besides the treatment which I have before recommended under such circumstances, I adopted a plan of rousing the uterus to a menstrual effort, which my friend Professor Simpson recommended to me, viz., of passing a piece of lunar caustic into the cavity of the uterus by means of an instrument similar to that which has been used by Lallemand for the urethra, and painting its inner surface with it; this acts as a considerable stimulant to the uterus, and, if the powers are equal to the task, a secretion of catamenia generally follows in the course of twelve or twenty-four hours after. In the present case this succeeded with the assistance of a variety of other measures, which, when combined, produce a powerful effect upon the uterine system, and evident relief followed; by a repetition of these measures, after a proper interval, the uterus gradually acquired the habit of making a periodical effort to secrete the catamenia, which became free and even copious in quantity. I tried my best to improve the general powers of the system by tonics, good food, and rigid attention to the state of the digestive organs; but the pulse continued feeble, the face pale, the tongue flabby and indented at the edges; some of the more powerful tonics, as nitrate of silver and sulphate of zinc, which are considered to act very beneficially in epilepsy of the low anæmic character, were tried, and a certain amount of relief was produced; but, on looking over the history of the case, I cannot help coming to the opinion that mild sedatives allayed the epileptic seizures more than any other medicines which were exhibited, and I much regret that they had not more decided trial. The ether appeared decidedly beneficial at first, and appeared to ward off the fits very effectually at the onset, whenever the warning of their approach was sufficiently long; it appeared, however, gradually to lose its effects, and she went into the country with considerable benefit to her general health.

GLYCERINE.

By J. STARTIN, Esq., Surgeon to the London Cutaneous Institution.

In reply to several correspondents in the pages of your Journal, and also to numerous letters personally received on the subject, I venture to offer a short account of the liquid substance termed GLYCERINE, or the sweet principle of oils; I have applied this substance in many cutaneous disorders, with a degree of benefit to the sufferers that renders a brief recital of its nature and properties and modes of application subjects of professional interest.

Glycerine was discovered by Scheele, and has since been chemically studied by MM. Chevreul and Pelouze, but was never applied therapeutically (as I believe) until by myself. This liquid exists naturally in the fats of animals and in fat oils, and has latterly been found by M. Goblez in the yolk of egg combined with phosphoric acid; its formula is $C_6 H_6$ (*Liebig*).

The original discovery of glycerine by Scheele occurred in the saponification of olive oil by oxide of lead—that is to say, in the preparations of lead, or *diacolon plaister*; it is also formed in the manufacture of soap, and by the makers of stearine for candles; but, in whichever case it may be developed, water must be present to dissolve the glycerine, which becomes liberated by the combination of the fat body with the metallic oxide, the alkali, or the lime, used in the manufacture.

When perfectly pure and anhydrous, glycerine is a nearly colourless liquid, of a sweet taste and syrupy consistence; it has a faint but not disagreeable odour, and possesses a great affinity for water, with which it readily combines; it also easily unites with oils, and dissolves many gums and resinous substances; it will neither crystallize nor ferment like a sugar,(a) nor will it evaporate beyond a certain point, but is destroyed by ebullition. It is combustible, as may be judged from its formula, and burns with flame; and has been considered of the nature of an alcohol, forming with the acids combinations resembling the ethers in many respects; like alcohol, also, glycerine is a good antiseptic, and may be used alone for this purpose, or in combination.

Glycerine may be obtained very pure by saponifying olive oil or any fat matter, animal or vegetable, by litharge or oxide of lead, water being present during the chemical combination; all the ingredients are to be boiled together, care being taken to replace, by *boiling* water, any portion which evaporates. When the reaction is completed, glycerine will be found dissolved in the water which remains; but, as a portion of lead will also be contained in this solution, it will be necessary to pass a current of sulphuretted hydrogen gas through it, until the metal is precipitated. The liquor is next to be subjected to ebullition, to drive off the sulphuretted hydrogen, when it may be decanted, filtered through fresh-washed animal charcoal, and concentrated by evaporation first in a sand-bath, and finally in the receiver of the air-pump, when it will be found to possess the properties and appearances before described.

It was during the autumn of 1846, in a course of lectures on diseases of the skin delivered at the London Cutaneous Institution, that I first drew the attention of the medical profession to the use of glycerine as a therapeutic agent, and you did me the honour to publish my observations in the *Medical Times*. It was at that time seldom, if ever, preserved in the manufactories from which it is now obtained, and was then collected for me during the making of lead plaister at Apothecaries' Hall, by my friend Mr. Warrington, their able chemical manipulator; it could there be purchased by the pound for a few pence; but as its consumption has increased, and the production of the article in the manufacture alluded to is limited, the price has risen to 3s. 6d. or even to 7s. the pound, if the perfectly anhydrous article be desired. I now procure glycerine from Mr. Button, of Holborn-bars, who has taken much pains to procure it pure and concentrated at a moderate price. It is to be had, however, from Allen and Co., or any other first-rate chemists. The antiseptic and uncloying properties of glycerine first led me to attempt its use for medical purposes, as I believed, by the means of such properties, lotions, poultices, baths, &c., might be rendered peculiarly emollient and soothing. When preternatural dryness, roughness, or harshness of the skin was present, and particularly in those cases where the hair or scalp was involved, as in instances of dandriff or pityriasis of these parts, my expectations were more than realized by reducing my conjectures to practice; and I found that by the addition of one-fourth to one-eighth or even one-sixteenth of glycerine to any lotion, poultice, or external application, all the indications I have mentioned were fulfilled, and that such application never became perfectly hard and dry, whilst it soothed and tranquillized the diseased part, attracting moisture from the air, and thus keeping up a constant evaporation from the surface; its antiseptic properties also, in a great degree, prevented the unpleasant odour of vitiated secretions or discharges, whilst its undrying nature did not permit the formation of hard scabs or incrustations, which it is known very often interfere with the healing process, and occasion much pain on their removal. I have had little experience in the use of glycerine internally, but it is a mild stimulant, antiseptic and

(a) It is this property which has occasioned the employment of glycerine as a means for adulterating tobacco, which, I imagine, was carried to some extent when the price of the article would permit.

demulcent, and might be employed to sweeten many articles of food or drinks for those invalids whose disordered digestive organs would forbid the use of sugar. Pills made with the addition of a few drops of glycerine never become dry, and syrups and extracts by its means are kept from evaporation to dryness, as also from fermentation, and the formation of cryptogamous vegetation, or mouldiness, and many other such uses for this agent will not fail to suggest themselves; for the recapitulation of which, however, your pages can scarcely be deemed the appropriate place; I shall, therefore, briefly enumerate some of the diseases of the skin in which I have employed glycerine with most benefit and success (these are pityriasis or dandriff particularly that form of the disease which I have termed *P. congenita*), lepra, psoriasis, lichen (in its dry advanced stage), impetigo inveterata, and prurigo. I have found glycerine also a useful addition to lotions in the incrusted forms of lupus, or herpes exedens, and to various syphilitic or strumous eruptions, which have a tendency to produce fetid discharges and hard crusts, for which reason it has proved of service in the scabbing stage of smallpox. As a wash for the hair and for chapped hands, face, or nipples, combined with a little rosewater and a few grains of borax (the glycerine being in the proportion of one-sixteenth), this remedy furnishes, perhaps, one of the most elegant and efficacious preparations which has been introduced. It may also be combined with soaps, which it renders peculiarly softening and efficient, particularly to individuals who have a dry or hard skin. I will not, however, further encroach on your valuable pages.

5, Finsbury-place South, Aug. 3.

CONTRIBUTIONS TO THE MEDICAL TOPOGRAPHY OF THE MEDITERRANEAN.

By WILLIAM THOMPSON KAY, Esq., Assistant-Surgeon of the Plymouth Division of Royal Marines.

"THE GRAND OBJECT OF ALL TRAVELLING IS TO SEE THE SHORES OF THE MEDITERRANEAN ON THESE SHORES WERE THE FOUR GREAT EMPIRES OF THE WORLD—THE ASSYRIAN, THE PERSIAN, THE GRECIAN, AND THE ROMAN. ALL OUR RELIGION, ALMOST ALL OUR LAWS, ALMOST ALL THAT SETS US ABOVE SAVAGES, HAS COME TO US FROM THE SHORES OF THE MEDITERRANEAN."—*Samuel Johnson.*

SYRIA. *Its Situation, Name, Extent, Divisions, Ancient and Modern; Physical Characters; Productive Industry; Manufactures; Civil and Social State, Climate, Diseases; State of Medicine and Surgery, Works on the Topography, Natural History, &c., of Syria.*

(Continued from p. 413.)

CLASS IV. PISCES.

SUB-CLASS I. OSSEOUS.

ORDER I. ACANTHOPTERYGII.

Sub-order I. PERCIDÆ.

Perca. Perca marginata.

Labrax. Labrax lupus*.

Apogon. Apogon rex mullorum.

Serrani. Perca scriba; p. cabrilla.

Anthias. Anthias vulgaris*; a. sacer*.

Merous. Perca gigas.

Polyprion. Polyprion cernium.

Trachinus. Trachinus araneus; t. radiatus*.

Uranoscopus. Uranoscopus scaber*.

Sphyraena. Esox phyraena*.

Paralepis. Paralepis risso.

Mullus. Mullus barbatus**.

Sub-order II. BUCCÆ LORICATÆ.

Trigla. Trigla lucerna; t. lineata**; t. aspera; t. papilio; t. phalœna; t. sphinx; t. hirundo.

Peristidia. Peristidion malarmat; trigla cataphracta.

Dactylopterа. Trigla volitans**.

Sebastes. Sebastes imperialis.

Sub-order III. SCIÆNIDÆ.

Sciæna. Sciæna aquila; s. umbra (rare).

Corvina. Corvina miles; c. trispinosa; c. stellifer; c. oscula; c. nigra**; c. furcræa.

Umbrina. Sciæna cirrhosa (very rare in Beirout, but plentiful on the other parts of the coast).

Sub-order IV. SPARIDÆ.

Chrysophris. Chrysophis aurata.

Pagrus. Pagrus vulgaris.

Pagellus. Pagellus erythrinus*; p. acarne; p. centrodentus (rare).

Dentex. Dentex vulgaris*; d. macropthalmus; d. macrocephalus.

Cantharus. Cantharus vulgaris; c. brama.

Boops. Boops vulgaris; b. Hobartii* (rare); b. salpa.

Oblada. Oblada commums.

Sub-order V. MENIDÆ.

Mæna. Mæna vulgaris**; m. jusculum; m. radiata.

Smaris. Smaris vulgaris; s. alcedo; s. cagarella.

Sub-order VI. SQUAMIPENNES.

*Chætodon**.* Chætodon striatus; c. Meyeri; c. miliaris; c. Kleinii; c. nasogallicus; c. frontalis; c. baronessa; c. Zorabii (very rare*); c. bifascialis; c. principalis; c. decussatus.

Brama. Sparus raii.

Sub-order VII. SCOMBERIDÆ.

Scomber. Scomber cobias; s. pneumatophorus (rare).

Thynnus. Thynnus vulgaris**; t. Tournefortii (rare); t. Zorabii*; Scomber coretta; s. brachypterus; s. thunina.

Orcynus. Orcynus vulgaris**.

Auxis. Auxis vulgaris*.

Sarda. Scomber sarda*.

Xiphias. Xiphias gladius*.

Tetrapturus. Tetrapturus belone*.

Naucrates. Naucrates ductor.

Lichia. Lichia sinuosa*; l. proper*; scomber glaucus (Linnæus).

Temnodon. Temnodon saltator (rare).

Caranx. Caranx lune (rare); c. trachurus.

Zeus. Zeus faber* z. pungio*; z. niger (rare); z. Zorabii*.

Capros. Capros aper; zeus aper.

Lampris. Lampris guttatus.

Stromateus. Stromateus fiatola*; s. albus.

Seserinus. Seserinus rondeletii*.

Centrolophus. Centrolophus pompilius*.

Astrodermus. Astrodermus guttatus*.

Sub-order VIII. TÆNIDÆ.

Lepidopus. Lepidopus argyreus (rare throughout the coast).

Gymnetrus. Gymnetrus Mediterraneus; g. Richardsonii* (rare); g. Russelii* (very rare).

Cepola. Cepola rubescens.

Lophotes. Lophotes cepedianus (rare).

Sub-order IX. THEUTYES.

Acanthurus. Chætodon chirurgus (rare); acanthurus scopas.

Sub-order XI. MUGILIDÆ.

Mugil. Mugil capito; m. chelo*; m. cephalus**; m. labeo*.

Tetragonurus. Tetragonurus Cuvieri (rare).

Atherina. Atherina presbyter; a. pinguis; a. hepsetus.

Sub-order XII. GOBIODÆ.

Blennius. Blennius ocellaris; b. gattorugine.

Gobius. Gobius niger; g. jozzo; g. minutus; g. capito*.

Eleotris. Gobius auratus (*risso*) (rare).

Callionymus. Callionymus lacerta; c. cithara; c. jaculus; c. orientalis.

Sub-order XIII. PECTORALES PEDICULATI.

Lophius. Lophius piscatorius (rare).

Sub-order XIV. LABIDÆ.

Labrus. Labrus merula*; l. maculatus; l. variegatus; l. carneus.

Julis. Julis vulgaris; j. gioffredi; j. turcica; j. crotaphus; j. Mediterranea*.

Crenilabrus. Crenilabrus rupestris; c. melops*; c. Mediterraneus; lutjanus lapina**.

Coricus. Coricus rubescens; lutjanus viridens* (rare).

Xyrichthys. Xyrichthys novacula; coryphæna lineata (rare).

Chromis. Chromis vulgaris**.

Sub-order XV. FISTULARIDÆ.

Centriscus. Centriscus scolopex**.

ORDER II. MALACOPTERYGII ABDOMINALES.

Sub-order I. CYPRINIDÆ.

Cyprinus. Cyprinus carpio; c. auratus*.

Abramis. Abramis brama.

Sub-order II. ESOCIDÆ.

Alepocephalus. Alepochephalusrostratus (rare)

Microstoma. Serpe microstoma.

Stomias. Stomias barbatus; esox boa.

Scomber-esox. Esox saurus*.

Exocetus. Exocetus exiliens.

Sub-order III. SILURIDÆ.

Silurus. Silurus glanis (Nahr-el-Kelb*).

Heterobranchus. Heterobranchus bidorsalis**; siluriss anguillaris**.

Sub-order IV. SALMONIDÆ.

Argentina. Argentina sphyræna.

Saurus. Saurus saurus*; s. Geoffroei.

Scopelus. Serpe Humboldt (risso*).

Aulopus. Salmo filamentosus (scarce).

Sub-order V. CLUPEIDÆ.

Clupea. Clupea harengus(a); c. Sardina.

Alosa. Clupea alosa*.

Engraulis. Engraulis encrasicholus; c. meletta. (Both these species are not commonly seen, but at certain seasons they are easily obtained).

ORDER III. MALACOPTERYGII SUB-BRACHIATI.

Sub-order I. GADIDÆ.

Morhua. Morhua minuta*.

Merlangus. Merlangus carbonarius (very scarce); m. pollachius (scarce); m. albus*.

Merluccius. Gadus merluccius; merluccius sinuatus* (swainson).

Phycis. Phycis Mediterraneus* (Laroche), or p. longipennis (Swainson), or p. furcatus (Cuvier), is also the Blennius phycis of Linnæus.

Sub-order II. PLEURONECTIDÆ.

Hippoglossus. Pleuronectes macrolepidotus.

Rhombus. Pleuronectes maximus; p. arnoglossum; rhombus candidissimus; pleuronectes podas; p. rhombus.

Solea. Pleuronectes solea; p. Rondeletii*; solea oculata; p. orientalis.

Monochir. Pleuronectes microchirus; monochir theophile.

Sub-order III. DISCOBOLI.

Echeneis. Echeneis remora; e. naucratus; e. osteochir.

ORDER IV. MALACOPTERYGII APODA.

Muræna. Muræna helena**; m. unicola; m. saga.

Conger. Muræna myrus; m. nigra; m. mystax.

Ophisurus. Ophisurus serpens; o. Rondelettii*.

Ophidium. Ophidium barbatum; o. Vassalli.

Fierasfer. Ophidium imberbe; o. dentatum,

ORDER V. LOPHOBRANCHII.

Hippocampus. Hippocampus brevirostris; h. longirostris (rare).

ORDER VI. PLECTOGNATHI.

Sub order I. GYMNODONTES.

Tetraodon. Tetraodon lineatus; t. hispidus*.

Sub-order II. SCLERODERMI.

Balistes. Balistes capriscus.

SUB-CLASS II. CHONDROPTERYGII.

ORDER I. CHONDROPTERYGII BRANCHIIS LIBERIS.

Acipenser. Acipenser sturio.

Chimæra. Chimæra monstrosa (rare at Beirout, but common at Jaffa).

ORDER II. CHONDROPTERYGII BRANCHIIS FIXIS.

Sub-order SELACHII.

Notidanus. Squalus griseus; s. cinereus; s. niger.

Squatina. Squatina aculeata.

Rhinobatus. Rhinobatus rhinobatus.

Cephaloptera. Raia cephaloptera (rare).

Sub-order II. CYCLOSTOMATA.

Petromyzon. Petromyzon fluvialis (Nahr-el-Kelb).

This completes the First Great Division of the Animal Kingdom; and also the Zoological portion of this paper, as it is not my intention to describe the second and third in this series.

(a) It is generally said that the herring is not known in the Mediterranean; but I have seen some excellent specimens, both in Syria and Greece.

PRODUCTIVE INDUSTRY.—Since the introduction of European manufactures, Syria has suffered considerably: for the local manufacturers of silk and cotton stuffs of several descriptions, which formerly existed on a large scale in the cities of Aleppo and Damascus, have been ruined, because they cannot compete with the manufacturers of Europe, who, with the power and rapidity afforded by steam, can achieve far greater improvements, and sell them at a cheaper rate, to the injury of the Syrian manufacturer and capitalist.

The produce of Syria has little or no local demand, and, as regards foreign consumption, even less: for the prices given in the foreign markets are not adequate to remunerate the Syrian tradesman, agriculturist, or manufacturer.

The treaty of commerce between the European states and the Ottoman Porte of 1838 has greatly affected the internal trade, and also discouraged the agriculturist, for it imposes 12 per cent. upon the value of Syrian produce and industry, which duties are not only in themselves exorbitant but form the main impediment to the merchants to export these produces, unless they should render themselves liable to a loss nearly proportionable to the amount of the duties in question.

By a late proclamation of the Turkish Government, the circulation of all old gold and silver coin is forbidden, and they have issued a new currency of gold and silver which—unlike the former one, that contained their intrinsic value in gold and silver respectively—bears a loss of about 25 per cent. on the gold gazee of twenty piastres (3s. 9d.), and about 55 per cent. on the silver ones.

The commerce of Beirout has increased within the last two years so considerably as almost to have doubled itself.

Custom-house duties on exports and imports are regulated by the tariff annexed to the commercial treaties between the European powers and the Ottoman Porte, viz.:—

Twelve per cent. on exports or produce, growth and manufacture of the Ottoman dominions, of whatever nature or description, which dues are paid on two occasions:—1. Nine per cent. on the purchase; 2. Three per cent. on the exportation of the goods to a foreign country, or its sale or consumption in any place in the Turkish dominions.

Five per cent. on imports, or the goods, &c., produce of a foreign country, which dues are paid equally on two occasions:—1. Three per cent. on the importation of the goods into any port of the Ottoman dominions; and 2. Two per cent. on the sale of the same, or removal to the interior.

These duties are paid in common by the subjects of the Porte, as well as by Europeans, except the Russian merchants, who only pay three per cent. on exports and imports; but the Turkish Government, by compelling their subjects to pay the inland duties (called also commutation duties), when they sell their produce to a Russian merchant, has put the latter nearly on an equal footing with the other nations.

All goods or commodities of every nature or description whatever are allowed to be exported and imported from and to the Turkish dominions, except powder and military arms, which are prohibited by the treaties.

The *imports* into Syria—and I now speak of the port of Beirout in particular—are as follows:—

From England.—London and Liverpool.—The cargoes consist of shawls, manufactured cotton goods, as printed cottons, &c., prints, muslins of several descriptions, both plain and figured. Those from London consist mostly of colonial produce, viz., indigo, cochineal, coffee, iron, sugar, cinnamon, pepper, pimento, tin in boxes and bars, ammoniac, earthenware, and iron and steel manufactured goods.

From France, or the port of Marseilles, several descriptions of grape, velvet, silk, cloths, red-caps, and colonials of all kinds, the same as those from England.

From Switzerland, several kinds of manufactured cotton and silk.

Trieste supplies cloths, caps, steel, earthenware, glasses, silk stuffs.

Leghorn sends caps, taffetas and other silk, yarn, and cotton manufactured goods, the same as those imported from England.

Egypt exports to Syria rice, wheat, barley, and other grain, skins, striped silks, small carpets, soap, copper wares, writing-paper, and linen goods of native manufacture.

The prices of corn and grain vary according to the recolt of Syria: for instance, if the recolt in Syria is favourable, the prices as well as the importation, of course, are moderate; otherwise, the importation is considerable and the prices high.

Since the late war in 1840, the country of Syria has suffered, more or less, from the want of corn, the produce of its own soil, in consequence of the Egyptian Government having taken all the young men for the militia, and Syria is now obliged to import corn from Egypt. Again, under the Turkish Government, the plains of Syria are no more cultivated as formerly, because they are not secure from the depredations of the different Arab tribes, as they were under the former Government, and, therefore, the demand for foreign corn has increased lately, and is, of course, very prejudicial to Syria.

Syria affords a great variety of wines, which are mostly prepared by boiling immediately after their expression from the grape. The chief of them is the *vino d'oro*, or golden wine, of Mount Lebanon; but the quantity produced is small. It is, as the name implies, of a bright golden colour, and bears a high price. "This wine is not boiled, but left to purify itself by keeping."(a)

The Exports.—Lebanon and its neighbouring plains produce silk, which is generally divided into three qualities, viz., *superior*, *middling*, and *inferior*, the prices of which vary from 80 to 105 piastres(b) for an oke(c) of 100 drachms; and oil, which costs from 800 to 900 piastres the cantar(d) (cwt.) of 200 okes, according to the quality.

The south of Syria exports cotton at 750 to 800 piastres the cantar; oil, wax, sesam, butter, grain of all kinds, and tobacco and soap. These produces have lately been so inconsiderable, on account of the discouragement of agriculture (which is depressed in some parts by arbitrary exactions, and in others by the ravages of the Arabs, against which the Government will not afford protection), that they hardly suffice for local consumption, with the exception of cotton and tobacco, which are destined for exportation.

Several varieties of gums, galls, skins, copper, wool, opium, and cotton, are exported to France, Italy, and England, from Aleppo, through the ports of Tarsus, Alexandretta, and Latakia. The gums, galls, and skins, are received from Bagdad; the remainder are mostly the produce of Caramania and Mesopotamia.

(a) "Browne's Travels," p. 432.

(b) One hundred and eight piasters are equal to one pound sterling, according to the present rate of exchange.

(c) Forty okes are equal to 100 lb. Troy weight.

(d) The cantar of the south of Syria consists of 200 okes, or 500 lb. Troy weight; that of the markets of Aleppo and Damascus is only 180 okes.

CLINICAL NOTES.

No. VII.

By RICHARD DE GUMBLETON DAUNT, Esq., M.D. (Edin.), Member of the Faculty of Physicians of Rio Janeiro; and Member of, and late Honorary Secretary to the Parisian Medical Society.

"Vous avez vu, n'est bien; vous avez fait, c'est mieux encore; mais qu'avez-vous vu, qu'avez-vous fait? Comment avez vous vu, comment avez vous fait? * * * * C'est là le point essentiel, le temps ne fait rien à l'affaire, ni votre réputation, ni le nombre de malades que vous avez traités, bien moins encore l'age que vous avez atteint. Quarante ans de pratique n'ont pas fait pénétrer dans votre dure et etroit encephale une étincelle de génie scientifique; où l'intelligence est l'étoffe dont se fait le vrai médecin. Qui ne connait l'histoire du mulet du Maréchal de Saxe? Ce pauvre animal avait fait la guerre pendant vingt ans; il avait vu, il avait fait une infinité de choses et cependant il était reste mulet comme devant."—PARISET.

The "tactus medicus," or medical instinct—on which was based the wide-spread reputation of nearly all the older celebrities of our profession, and which was pre-eminently possessed by the great Valentine von Hildenbrand and by the English Sydenham—appears a much rarer endowment of physicians in our own days; as if what had been gained in progress by the whole profession had, as in other branches of human studies and in moral qualities, been accompanied by the impossibility of the existence of those men, who to the students of those earlier periods are as heroes, and reverenced with meet hero-worship. The two instances cited are among those of its latest appearance, and perhaps no result of its possession has remained to us more worthy of repeated comment and study than the divination by Sydenham of the great law of epidemic medical constitutions of the atmosphere, which, in his own words, do not arise from visible atmospheric variations, "sed ab occultâ potiùs et inexplicabili quâdam alteratione in ipsis terræ visceribus pendent." With respect to febrile diseases, on which Sydenham dwelt for proofs of the truths of this law, and to which he appears to have restricted it, most practitioners of good attainments, and who profess orthodox doctrines, assent to its theoretical truths, though it is not so much studied in its practical applications as it ought to be. With respect, however, to the class of diseases called intercurrent, or which appear from chance causes, and are not epidemic, as, *ex. gr.*, the phlegmasiæ, its application is admitted by but few; and it is on this account that I now publish the afterwards-cited facts in confirmation. It was my good fortune to study for a time in the University of Vienna, where, the traditions of the teaching of the old masters, the glories of past centuries, whose innate sagacity well supplied the place of much of our present vaunted positivism of acquaintance with the local alterations of disease, still are cherished; and where, the spirit of the older medicine yet imparts an influence to the whole body of doctrine of the school. Here, and in the same language in which Sydenham wrote, I heard from the eloquent lips of Toltengi, the Professor of General Pathology, the most masterly enunciation of this great law, and, at the same time, an exposition of other not less important pathological laws, which, elsewhere, at this day it would be hard to find in a living form: and, in justice to this teacher and to that somewhat neglected school, I here acknowledge that whatever success has distinguished my practice I owe almost wholly to the doctrines I there heard expounded.(a)

In the district where I reside, and in the neighbouring cities, the past year has been, at least during the last nine months, decidedly one of little disease: remittent fevers prevailed during the first three months, but afterwards the cases of disease were few. It was soon remarked, however, that the inflammatory diseases of the chest had a certain character of gravity and of intractability, and the deaths were very numerous. In cases treated at the same time by other medical men, and where I was called in consultation, I had an opportunity of verifying these facts; as it happened that, in my own *clientèlle*, such cases did not appear until afterwards. I, therefore, had already evidence of the great caution necessary in the detraction of blood, even in cases of apparently the most violently inflammatory character, and also of the inconstancy of the effects of the various antimonials, when the first case presented itself to me. This was in a negro, healthy, and of middle age, who was attacked by pneumonia of

(a) I do not here, by implication or otherwise, advance any opinion as to the practice of the Vienna Hospital, which is by no means on a par with the University teaching.

the right side; a small bleeding was ordered in the arm, and cupping-glasses were applied; from these measures a temporary relief was obtained. Tartarized antimony was then given in moderate doses, but it was soon evident that the patient could not tolerate it; much diarrhœa came on, attended with delirium; great increase of the local symptoms, great dyspnœa, and high febrile symptoms. Warned by the results of other cases of which I had knowledge, I did not venture on further detraction of blood, but applied a large blister, and substituted the white oxide of antimony in Rasorian doses, with opium for the tartar emetic; the blister rose, and the white oxide of antimony was continued for two days. Tolerance was established, but the patient progressively grew worse: the sputa were at one time sanguinolent, at another of a purulent appearance; the patient passed his nights in a waking low delirium; the dyspnœa and local pain were great, the cough constant, the thirst great, and the heat of skin considerable. Seeing the patient thus, apparently, without hope if the usual treatment were persisted in, and perceiving a something in the compressible though rapid pulse, and the general character of the patient's symptoms, to assimilate his state to that of a person labouring under that condition of disease in which quinine is indicated, I resolved to despise all considerations drawn from the mere nosological classification of disease—and what, to many, would have been a still greater obstacle, viz., the state of the tongue, which was dry and tough as hide, and covered by a thick black crust—and prescribed twenty-four grains of sulphate of quinine with sulphuric acid, and one drachm of tincture of digitalis, to be taken in water, in divided doses, in the four-and-twenty hours. The patient was in the state described, and in the fifth or sixth day of the disease. He commenced the new medicine, and, after he had taken one-half the quantity above mentioned, there was an unhoped-for and complete subsidence of all the symptoms; a refreshing sleep was obtained, the tongue became moist, the skin cool, the dyspnœa very much less, and the local pain reduced to almost nothing. The delirium did not reappear, and from that time a progressive amendment continued. The quinine was given at the rate of twenty-four grains per diem, until a complete cure was obtained; and the patient is now in perfect health.

Soon afterwards another similar case presented itself, which was rapidly reaching an acme like that arrived at in the former one, but rendered bolder by the result of that I did not hesitate so long in recurring to the use of quinine, which again produced effects as marked as those of antimony in ordinary cases of pneumonia. Other cases followed, in all of which, on seeing a continuance of the symptoms on the second day under the ordinary treatment, I prescribed quinine along with antimony and other suitable remedies, *or* alone; and in *all* I was rewarded by the same success; and I may add, that in those cases in which an active congestion of the pulmonary mass, rather than a true and frank inflammation, was present, the success of the treatment was the same. Of the preparations of antimony, the "Kermes mineral" was that which seemed to agree best with all the patients. I sometimes gave it from the commencement, with camphor and quinine. To satisfy an inquiry which many would be desirous to put, I state that, in Campinos, intermittent fever is very scarce; remittents occur at certain seasons, but did not coexist with these cases of pneumonia; and in the neighbourhood there are no swamps, though there are virgin woods in which clearings are being always made.

The state of things which imparted the type in question to pneumonia is here *exceptional*, and in other parts of Brazil, where it might be with reason expected, does not exist; though it may, as an extraordinary medical constitution, do so at any time, as well as here. One might, instead of invoking the explanation of these facts which the above-mentioned law offers us, merely recite them as evidences of the hyposthenuating powers of quinine, asserted by the Italian school; and indeed, in the circumstances referred to, they were proved truly to exist; but I do not think myself justified in concluding from the present cases that they generally and universally exist, though that they may do so I do not deny. As a law exists by which the results obtained are explicable, to seek for other causes would be highly unphilosophical; as it would also be under ordinary circumstances, were any one to neglect to put in practice the usual antiphlogistic treatment in pneumonia, or the Rasorian modification of it—deviating from it so far only and according as sound medical judgment and a careful consideration of the attending circumstances and character of contemporary disease generally warrant. Had this caution been more carefully observed, many instances of the instability of systems and downfalls of brilliant theories of modes of treatment—flourishing for a time, and then universally abandoned—would have been prevented from occurring to discredit the character of the profession for sound reasoning. May it not be most probable that the emetic treatment of Maximilian Stoll, the application of antimony in high doses in acute disease by Rasori, the depletive treatment of Broussais—all owed, in great part, their temporary triumph to their being severally brought forward under the existence for the time of an epidemic medical constitution which demanded an analogous treatment? Such an explanation offers at least an apology for the temporary furor with which they were welcomed by the mass of practitioners, and for the abandonment to which, in part, they have since been consigned: though each of such systems ever leaves a legacy of some useful innovation in therapeutics which is never wholly lost.

City of Campinas, Province of San Paulo, Brazil, January, 1847.

SINGULAR CASE OF CEREBRAL DISEASE.

By THOMAS BROWN, Esq., Surgeon, Castle Donnington.

I was requested to visit Samuel Holmes, a labourer, aged twenty, living at Weston-on-Trent, on the 19th ult. I found him sitting by the side of his bed, evidencing a dread of either moving his body or turning his head, and on doing the latter, he described the symptoms and sensations which characterize vertigo. His mental emotion is very great, the slightest noise (even the falling of a pin) producing nervous excitability and confusion in his brain. He is of the middle stature, has blue eyes, contracted pupils, and light impoverished hair; his appearance is peculiarly idiotic, and there is evident deficiency in the anterior and superior convolutions of the brain; the eyes wander and look vague, giving a vacant expression to the countenance. He complains of an illusory sound like the rippling of water through his veins, and he imagines the presence of this fluid the sole cause of his ailment. He is very unwilling to make the slightest exertion, loves the most perfect quietude, and has only been induced to leave his bedroom a few times in as many months. His intellect is unimpaired, though I should judge it was always of an obtuse kind. His general health is tolerably good, and has continued so during the whole time of his disorder. He first perceived himself the subject of morbid action in January of this year, and has consulted several medical gentlemen, but no hope was held out to him of recovery. Without supposing it probable that I should be capable of rendering my patient any permanent benefit (suspecting cerebral lesion), I felt justified in treating the case as one of an inflammatory kind. I had the hair removed from the scalp, and ordered the constant application of an evaporating lotion; extracted some blood from the temporal region, attended to the proper action of the hepatic and other viscera, and established a double persistent seton in the nape of the neck. At this time (July 20) some improvement has taken place, and all the symptoms are much modified, yet I fear he will remain through life the victim of a miserable and obscure disease.

CASE OF PUSTULAR DISEASE, ALLIED TO VARIOLA, AFTER VACCINATION.

By J. E. PATHSON, Esq., M.R.C.S., Islington.

There are no cases of disease perhaps more puzzling in their diagnostics than those of an irruptive character, and none which the general practitioner is called upon so suddenly to give a being and a name to. For every variety of rash (and their name is legion) that a mother sends for you, generally in a hurry, to see on her child, she desires you at once to give it a name, ere you have scarcely had time to inquire into any of the ordinary symptoms, much less to settle in your own mind the exact nature of the disease, which not unfrequently requires days to develop itself into nosological being.

These reflections arise from a case I was called to a few days since, in attendance on a little patient, the daughter of the Rev. E. C., whose symptoms I shall particularize without even now presuming to give a name to the disease that afflicted her, especially as the eminent physician who was called in, the clergyman himself (a gentleman, I may note, not a little skilled in medical science), and myself, a general practitioner, held each different opinions as to whether the disease was chickenpox, modified smallpox, or a distinct disease to which the name varioloid is sometimes applied. By the term varioloid I do not mean a form of variola modified by previous vaccination, but a disease disconnected altogether with variola, which was known long before the introduction of vaccination, and which is treated as such in the annual reports on vaccination in France, where MM. Honoré and Double, and other members of the academy, state that varioloid was known as a distinct disease long previous to the time of Jenner.

M. Rayer, too, writing on the varioloid, states that occasionally it makes its appearance in persons who have already had the variola, or been vaccinated, or inoculated; and is also developed in persons who have not had either the cowpox, or the natural or the acquired smallpox.

In the case of my patient, whose symptoms, taken together, as will be seen, are characteristic neither of smallpox nor cowpox, the disease, by whatever name we call it, was not quite devoid of danger: the young lady, the subject of it, was about seven years of age, and remarkably healthy looking. She had been vaccinated in her infancy, and had the characteristic cicatrix mark on her arm; but whether she had the constitutional or protective fever during the vaccination I could not learn. The symptoms first noticed were simple fever during the day, increased towards evening, and on the night of the same day of attack, considerable cerebral disturbance, amounting to violent delirium, came on, and towards morning a suffused rash appeared. On being sent for and questioned as usual as to the name of the disease, I answered as well as I could evasively, which meant in plain English, "wait a wee": for from the sore throat which the child suffered from, and suffused red patches, I was apprehensive of scarlatina, though the tongue showed no indication of that disease, as it was coated only with the white fur of simple fever.

Previous to my arrival, the father had wisely administered proper antiphlogistic remedies, so that the delirium and brain excitement had disappeared.

On the second day of the disease the symptoms had changed in character, the eruption becoming more marked—more, in fact, like distinct variola; thus the papulæ were sensibly elevated above the surface of the skin, were circular, distinct, and distended, and had spread over the whole body; the intervening spaces in some parts were red, in others not. The eruption, however, in the ordinary distinct variola, does not generally come out till the fourth or

fifth day, so that, although it was like it in character, it was different in its development. The throat had been sore from the commencement of the attack. On the third day the eyes became suffused, and the general febrile symptoms increased in intensity; red patches appeared in different parts of the body, remained out for a few hours, and again disappeared. The fur on the tongue assumed a brown appearance, but was always moist.

On the fourth day many of the papulæ were seen to be depressed in the centre, were filled with a limpid fluid, and had every appearance of the variolous papulæ; the fever, which had till this date ranged high, was now very much lessened; the swelling of the throat, however, became more troublesome, and deglutition difficult, so that the little sufferer was very much incommoded by it. The suppuration of the papulæ progressed favourably, and the fever on the fifth day had entirely disappeared, so that she was now convalescent.

The treatment adopted was simply to moderate the fever and let the patient have plenty of fresh air, acidulated drinks, and saline purgatives; the soar throat was pencilled with caustic, which the little patient, who was remarkably sensible and docile, was easily persuaded to have done as often as required.

Now, it becomes a question as to what the exact nature of this disease was: it most surely was not the chickenpox, as the fever in that disease is slight, the pustules, too, in varicella never suppurate; whereas, in the case we have described, there was evident suppuration of the pustules. It presented, also, many symptoms which are not observable in ordinary variola, or smallpox after vaccination, such as the scarlet patches which now and then were noticed. However, it matters little what name be given to the set of symptoms, but we see that occasionally then a very virulent disease may afflict the human body, even in spite of vaccination's protective powers; yet, even allowing this, our faith in Jenner's glorious antidote should not at all be lessened, as it is not an unfrequent occurrence even of genuine smallpox attacking the same individual twice, as is noticed in the ordinary vaccine reports; and in respect to lymph, it becomes a question whether it should not oftener be renewed from the cow, and even the vaccine disease itself be renewed, as in the admirable experiments of Mr. Ceeley, to whom is justly due the great merit of proving Dr. Jenner's proposition of the real identity of the cow and small pox.

Barnsbury-road, Islington, July 27.

FOREIGN PRACTICE.

Reported for the MEDICAL TIMES by ALFRED MARKWICK, Esq., Surgeon to the Western German Dispensary, and formerly Externe to the Venereal Hospital, Paris, &c.

SUPPURATED BUBO TREATED BY INJECTIONS.

The following is a summary of a memoir lately published by M. Jules Roux, of Toulon, in the "Archives Générales de Médecine," on a new and hitherto very successful mode of treating suppurated buboes, which consists in injecting into the cavity of the abscess, after the pus has been removed by a subcutaneous puncture, one of the following preparations:—

1. Tincture of iodine, composed of iodine, 30 grammes; alcohol, 100 grammes.
2. Tincture of iodine of the codex, composed of iodine, 8 grammes 33 centigrammes; alcohol, 100 grammes.
3. The above, No. 2, diluted with twice its weight of distilled water.
4. Alcohol at 30°.
5. Alcohol, diluted with twice its weight of distilled water; solutions of 50 centigrammes of nitrate of silver in 30 grammes of distilled water; of 1 gramme of corrosive sublimate in 100 grammes of water; and, lastly, one of common salt were also used in a few cases, but they did not answer so well as those of which iodine formed the basis. The fluid having been injected, its evacuation is facilitated by pressing the tumour, a small quantity, however, remaining within the cyst being immaterial. The operation is said to occasion great pain, but has never given rise to any unfavourable symptom. Sometimes a small puncture may be necessary to evacuate some freshly-formed pus; but, generally speaking, the tumour subsides, and the parieties of the abscess become speedily agglutinated together.

M. Roux states that the quantity of either of the above fluids never exceeded forty grammes for an injection, and that all the patients submitted to this method have undergone a general mercurial treatment.

The cases in which injections may be resorted to are those in which the bubo is beneath the aponeurosis, and its parieties are of sufficient consistence that we may anticipate their agglutination; those in which they are contraindicated are where the tumour is superficial, as in that case a cure is more easy to be obtained without resorting to an injection; and, secondly, where the skin is red, thin, and about to ulcerate.

The results obtained by M. Roux are as follows:- Out of 70 cases 35 were cured without any fresh formation of matter, in, on an average, 17 days. In 17 there was a reformation of pus: the average date of recovery being 22 days. In 18 cases there was either partial or extensive ulceration over the surface of the tumour, in 3 of which the actual cautery was necessary. Taking the whole 70 cases, the mean duration of treatment was 21 days.

19, Langham-place.

A CASE OF CONGENITAL PHYMOSIS.

By OCTAVIAN ROYLE, M.D.

The mother of the child in question applied to me, in the early part of last month, under circumstances which I will briefly illustrate. Her child, she stated, had for several years past oftentimes experienced great pain, heat, and difficulty of micturition, with a great deal of œdema about the frenum, and irritation of the orifice of the urethra, together with a slight gleety discharge. The constriction of the prepuce was almost complete, only sufficient to admit the point of the little finger, although on either side of the frenum it was detached, so as to enable the easy introduction of the probe; here, occasionally, appeared two small vesicles infiltrated with serum, which, according to the boy's own account, caused excruciating pain whenever he made the attempt to empty his bladder; and it was from this circumstance solely, I believe, that induced the mother to adhere to my suggestion, viz., of dividing or dissecting back the prepuce. On the division being completed, the glans, as might be anticipated, presented a very unnatural and unhealthy aspect, which, however, soon yielded to the local application, viz., hydrargyri chloridum gr. vj. ad ℥j. liquor calcis. This produced a very copious discharge for the first two days; but the subsequent beneficial effect of a repetition was very marked and decisive, for upon the morning of my fourth visit the parts had entirely healed, coupled with a simultaneous subsidence of the symptoms hitherto experienced. I should add, the mother had on several previous occasions applied for advice, and Mr. Allhill, her medical adviser, had explained to her the mode in which relief might have been obtained; but, from her strong aversion to surgical interference, she would not, until the present time, submit to anything but palliative treatment.

Ipswich, July 29.

CASE OF STRANGULATED INGUINAL HERNIA IN THE FEMALE, WITH OPERATION.

By B. W. BROWN, Esq., Wymeswold, Leicestershire.

On the 23rd of April last, I was summoned to visit Mrs. Orson, of Rempstone, a village distant two miles. She was seventy-one years of age, and it appeared she had been ruptured on the left side for more than six years; and she had also procidentia uteri of some standing. I had on a former occasion—ten weeks ago—attended her; she was then suffering from constipation of the bowels, and was relieved in a few hours by some active purgatives. She had never suffered any great inconvenience in consequence of being ruptured, and therefore the fact of her having been so *for six years* she had not at any time made known, except to her daughter. On the present occasion, however, after a slight attack of diarrhœa, she was suddenly seized with a severe pain in the stomach, which alternately increased; the bowels had not been moved for several hours; there was constant retching and vomiting of bilious matter, attended with fever and thirst; the tongue excessively furred; an irritable and intermittent pulse, without tension or pain of the abdomen on pressure. I was now, on inquiry, for the first time informed of "a swelling" at the lower part of the abdomen, and upon examination discovered an irreducible oblique hernia: it was very soft and yielding. Sedative salines were given to allay the thirst and arrest the vomiting; alternate doses of calomel and extract of colocynth, castor-oil, &c.; these were successively rejected by the stomach. I now ordered a turpentine enema, to be repeated every four or five hours, if necessary, in order that the rectum and lower bowels might be well emptied; the two first injections brought away a quantity of scybalæ, giving some temporary relief as to the urgency of the symptoms; the calomel and colocynth were repeated with the salines, which remained on the stomach several hours, but were ultimately rejected, without any further movement of the bowels. I now gave the hydrocyanic acid with the saline every four hours, continuing the injections; the vomiting was again stayed for many hours. One might have suspected this to have been a case of intussusception.

On the 28th the bowels had not been moved; the sickness returned, but not so urgent; the hernial tumour remained the same—soft and yielding, nor was there any preternatural hardness of the abdomen; and, therefore, I did not as yet feel myself justified in resorting to the last remedy—an operation for strangulated hernia. The same remedies were persevered in, and a cold spirit lotion was now constantly applied to the protruded part; the warm bath was used with the like result.

On the 29th, six days from the commencement, no evacuation *per anum* had taken place, except by the two injections as before stated; the vomiting had now returned with increased violence, large quantities of feculent matter were thrown off from the stomach, the abdomen had become tympanitic, and the hernial tumour was exceedingly tense and somewhat discoloured; hiccough had supervened; there were now all the symptoms of strangulated hernia, which nothing but an immediate operation could relieve. The operation was at once proposed to my patient and her friends, as the only means left to save her life; she at once consented. My excellent and valued friend, Dr. J. C. Williams, physician to the Nottingham General Infirmary and Lunatic Asylum, now arrived, and the operation was resorted to without delay. Mrs. Orson being then placed in the usual position on a large sofa, I commenced an incision, at least one inch and a half beyond the ring, and extended it to the base of the tumour, which was nearly twice the size of a cricket-ball; this laid bare the fatty tissue and several fasciæ; a large vessel was seen to cross the neck of the tumour, which, being divided, bled somewhat smartly; the fasciæ being divided, exposed the hernial sac, which exhibited considerable vascularity, and was of a dark-brown colour. As the hernia had existed so long, I anticipated there would be plenty of adhesions, and some difficulty in destroying them; I, therefore, did not think it prudent to divide the sac its whole length, nor would it have been wise to have unnecessarily extended the incision over so

large a portion of serous surface; a small opening was made immediately below the ring; but I could neither introduce the director nor my finger-nail beneath the stricture—intending, as I have invariably done in an operation of this kind, to have divided the stricture directly upwards; so extensive and firm were the adhesions that every attempt was here fruitless. The only alternative I had now left, was carefully to dissect and divide the stricture *from without*; so numerous, however, were the membranous bands crossing and intersecting each other, duplications having been formed between the protruded bowel and omentum, and so strongly were they all glued together, that, whilst one of these remained undivided and undetached, the strangulation was not relieved, nor could the contents of the sac be returned. The intestine, which contained some indurated fæces, and the omentum had become entangled—the latter very firmly embraced the former, and a portion of the former had become doubled up over the latter, and were closely adherent to each other; they were separated and placed right; the adhesive bands were carefully detached, and I readily succeeded in returning the protruded volume into the cavity of the abdomen. Three sutures were applied, with strips of adhesive plaster, and Mrs. Orson was placed in bed. The sickness and hiccough had now ceased, and in less than twenty minutes after she was placed in bed the bowels were very freely moved, and again during the night. On the following day every unfavourable symptom had disappeared.

On the 9th the sutures were removed; and, on the sixteenth after the operation, Mrs. Orson became convalescent, and is now doing well.

My thanks are due to Dr. Williams for the assistance he rendered me during this very intricate and perplexing, as well as dangerous, operation. The adhesions being so numerous, and extending along the whole of the inguinal canal, and even beyond, required considerable nicety and care, lest the bowel should be injured. I believe there is some little difference in the operation for inguinal hernia in the male and that of the female. If I recollect right, when listening to Sir Astley Cooper in the theatre of St. Thomas's Hospital, he advised his pupils, in the operation for strangulated inguinal hernia in the female, to avoid opening the sac further than immediately below the ring, sufficient to admit the director; and he gave very satisfactory reasons for so doing, mentioning several cases. In the present case, as the parts have been so freely *scarified* during the operation, in all probability the canal will be permanently closed, and thereby hernia prevented in future. It should be observed, in closing this account of an interesting case, the pulse here was no direct guide—it was exceedingly tremulous: now quick, then scarcely perceptible and slow: then for several seconds no trace of pulse could be felt: this is usually the case in Mrs. Orson. As for several months past there has been œdema of the extremities, no doubt there is some organic disease of, or near, the heart, or of its vessels, which may account for this singular state of the pulse.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of July 26; M. BRONGNIART in the Chair.

POISONING BY VEGETABLE SUBSTANCES. BY M. FLANDIN.—The science of toxicology has, since the last ten years, progressed rapidly, and its advancement is chiefly observable in the history of mineral poisons. Christison, Orfila, Berzelius, Dumas, Devergie, and others have directly pointed out the process by which arsenic, copper, lead, &c., may be extracted from the body after dissolution, and even after prolonged inhumation. But the presence of vegetable poisons in the organs is much more difficult of detection, and hitherto no chemical method has been indicated by which their existence in the system can be ascertained with any degree of precision. The great frequency of poisoning with opium, or the principles extracted from opium, rendered it highly desirable that the practical researches of chemists be directed to this subject. M. Flandin, well known for his numerous and interesting publications on the subject of arsenic, endeavouring to fill up the chasm, read to the academy the first part of a work on poisoning by vegetable substances, treating more particularly of opium and morphine. The analytical method recommended by the author is founded upon the two following remarks:—viz., 1. "Morphine, narcotine, strychnia, brucine, are not decomposed, when in contact with animal matters by a heat slightly superior to 100° (212° F.);" and 2. "Ammonia decomposes the acid solutions of these vegetable alkalis, and causes their precipitation. Hence the substances to be analyzed should be desiccated at a temperature below 115° (239° F.), and afterwards reduced to a fine powder and dissolved in spirit acidulated with oxalic acid, or in weak acetic acid: from these solutions the vegetable alkali can readily be separated by the addition of ammonia."

ACADEMY OF MEDICINE.

Meeting of July 27; M. BEGIN in the Chair.

MINERAL SPRINGS.

A long report on the mineral water of Balaruc was read to the academy by M. Isidore Bourdon, and occupied nearly the entire meeting. Balaruc is a small village, situated at a few miles south of Montpellier, and celebrated for a thermal spring, the mineral elements of which are chiefly chloride of soda about ʒij. per litre) and carbonate of lime (20 grains). The heat of the water is 47.5 (117 F.). Paralytic affections, whatever their cause, rheumatism, and partial ankylosis of the joints, are the disorders for which patients usually resort to Balaruc.

After a long investigation into the statistics, brought forward by the physicians of the locality in support of the virtues of the waters, the reporter, acknowledging that their singularly favourable action might in these statistical accounts have been slightly exaggerated, still maintained the very great utility of the waters; and the Minister of War, having inquired if it would be expedient to establish on the spot a military hopital, M. Bourdon was inclined to propose to the academy to make an affirmative answer.

M. Malgaigne remarked that, as far as the question of partial ankylosis was concerned, he did not consider it was correct to praise the efficacy of any mineral spas whatsoever. One method of treatment alone was of any use, and consisted in exercise of the joint. Without exercise, mineral waters were unavailing—with exercise, they were superfluous. In the year 1840, M. Rigal, a surgeon, came to Paris for a dislocated shoulder, which had resisted nineteen attempts at reduction. M. Malgaigne had the good fortune of replacing the articulation, but very considerable stiffness prevailed for a long time, and was dispelled only by persevering and most painful exercise. Dr. Rigal had at first expressed a hope that he might dispense with this great suffering by resorting to some mineral waters, and was much struck with M. Malgaigne's decided objection to this mode of treatment. Dr. Rigal had since then—his attention being thus directed to the subject—followed up several cases of partial ankylosis at mineral springs, and was now perfectly convinced of their absolute want of efficacy when used alone, and without proper exercise of the affected joints.

M. Lallemand had, for upwards of twenty years, studied the effects of the waters of Balaruc: he had found them injurious in paralysis caused by cerebral disorders, and useful, on the contrary, in maladies connected with debility, want of tone, or a scrofulous constitution.*

CATARACT OPERATED BY SUCCION.—A case was then presented to the academy by Dr. Blanchet; it was that of a man, aged thirty-two, who, being affected with a soft cataract, was operated by succion ten days ago. In a previous communication we have described the *modus operandi* of this new method of removing the cataract, and we stated it to have been revived by Dr. Laugier and Professor [illegible]. In the present case success had been complete, and vision was restored.

Meeting adjourned at a quarter past five P.M.

ORGANIC DISEASE OF THE HEART, DIMINUTION OF THE BICUSPID ORIFICE, AND ARREST OF CIRCULATION IN THE LOWER EXTREMITIES. BY PROFESSOR SHUTZENBERGER, OF STRASBURGH.

CASE.—At the age of twenty, Peter F., a shoemaker, was admitted into hospital for acute rheumatism; his illness lasted one month, and he was dismissed cured—at least in appearance. During two years his health remained excellent, but at the end of that time palpitations and dyspnœa showed themselves; blood was expectorated on six different occasions, and in September, 1816, infiltration of the lower extremities occurred. The anasarca was relieved, but the palpitations and dyspnœa persisted. Four years had now elapsed since the original attack of rheumatism, when, on February 10, 1817, the patient was suddenly seized with vertigo and sickness, and at the same time with a painful sense of numbness in the lower extremities, together with impossibility of moving them. He was brought to the clinical wards on the morning of the 11th, and on examination, the impulse of the heart was found to spread to a considerable surface; its pulsations were weak and irregular; the dulness on percussion occupied fourteen centimètres in every direction; the sounds of the heart on auscultation were, as it were, stifled, and a souffle was found to coincide with the first bruit. The arms and hands were in their natural condition. The pulsations of the carotids and of the radial arteries were remarkably weak. The feet, legs, and the lower third of the thighs were of a dark livid colour, considerably infiltrated, cold, almost immovable. The crural and popliteal arteries were carefully sought for, and were the seat only of an almost inappreciable tremour. The patient was bled, cupping was resorted to, opium was exhibited for the purpose of lulling the pain in the legs, and warm fomentations were employed to restore, if possible, the circulation in the crural and tibial vessels; but the symptoms continued to increase in severity, a hard cord appeared on the course of the femoral veins and arteries, broad patches of ecchymosis and phlyctenæ were observed, and a gangrenous eschar was noticed over the internal malleolus of the left leg. On Feb. 20 the patient died.

On dissection, two ounces of transparent serum were found in the pericardium; the heart was considerably enlarged, its left cavities and also the right auricle being distended by coagulated blood; the aortic orifice was free, and the bicuspid tightened by the thickening of its valves, which was not, however, ossified. In the right auricle were found several fibrinous concretions, and one of them extended as far as the right crural vein. The right iliac artery was obliterated by an adhesive clot which extended throughout the vessels of the limb, down to the anterior tibial below the annular ligament of the ankle. The same alteration, only beginning at eight centimetres from the bifurcation of the aorta, was observed in the left iliac. The veins were likewise obliterated; the lungs congested; brain and spinal cord healthy.

Strictures of the cardiac orifices do not generally, says Dr Shutzenberger, produce in distant parts so complete an arrest of circulation; in the present case, however, it may be explained by the diminution of the column of blood propelled into the arteries, which slackened the capillary circulation, and ultimately brought on its arrest in the parts most exposed to it by their dependent position.—*Gazette Médicale.*

AMAUROSIS CAUSED BY SATURNINE INTOXICATION.

A house-painter, aged forty-six, was two years since attacked with colica pictonum; four months ago he was admitted in the hospital for

symptoms of hemaralopia, which followed another manifestation of the colic, and which disappeared under the influence of a purgative course of treatment. During the month of July he was again received into hospital suffering from a relapse of the ocular disease—viz., in the evening, before darkness really set in, he became almost blind, and artificial light—lamps, candles, &c.—was seen very indistinctly, and appeared of a red colour. The treatment instituted was that usually employed against saturnine affections, and a speedy amelioration was obtained.

In an excellent memoir by M. Duplay we find some details on saturnine amaurosis, which it may not be uninteresting to reproduce, as the hemaralopia observed in the case above briefly recorded must be considered as a sort of partial gutta serena. That form of amaurosis which is produced by the introduction of lead into the system is generally sudden in its appearance, mostly follows several attacks of colic, coincides with articular pains or paralytic symptoms, and readily yields to a proper treatment. From the limited statistics brought forward by M. Duplay, the duration of saturnine amaurosis is not on the average more than eight or ten days. M. Andral records a case of diplopia which followed an attack of colica pictonum, and yielded to purgatives; and in a German thesis, by Dr. Vaten, we find a case of hemiopia due to the same cause: for a long time the patient could distinguish only one half of the objects which he looked at. These various alternations of the visual function may be classed amongst the latest symptoms produced by saturnine intoxication, and all belong to the same order of disease—"neurosis."

MIDWIFERY.—What is the object of the accoucheur in supporting the perineum at the conclusion of labour? It is to retard and render gradual the dilatation of the parts in order to prevent laceration. Professor Dubois thinks the same object may be attained by introducing three or four fingers joined together, and by pressing against the head of the fœtus. The learned professor considers that the generally adopted practice of supporting the perineum by pressure interferes with its circulation, and may be the cause of unpleasant consequences.

HOPITAL SAINT LOUIS.

PELLAGRA.

D., a carter, aged twenty-five, during the spring of 1845 noticed on each cheek [a sin]gular red patch, which gradually invaded the entire extent of the cheeks. This redness was attended with some slight itching and heat, and some general symptoms of trifling importance, such as a sense of lassitude and diminution of appetite. During the ensuing winter these accidents disappeared, but returned with exactly the same characters in the spring of 1846. Again, on the return of winter the eruption subsided, but recurred, and with a different series of morbid manifestations, in the early months of the spring of this year. The cutaneous eruption acquired only a very slight degree of intensity, but the digestive and nervous systems became for the first time the seat of important disturbances. On June 10 the patient was, without apparent cause, seized with violent headache and giddinesss, which, increasing daily, obliged him on the 13th to cease his avocations. On the 16th he was admitted into Hôpital Saint Louis, in the following condition:—The face was thin and drawn, the eyes bright, and on each cheek were noticed patches of a brownish red, covered with scales of desquamation; itching and pain, chiefly on exposure to the sun, were also present. No other alterations existed on the skin of the other parts of the body. The appetite was destroyed; the tongue foul, and scarlet near its edges; the bowels irregular and rather relaxed. Along the spine and in the lumbar region the patient complained of an unpleasant sense of formication. The legs were weak, their motions uncertain, and great unsteadiness was observed in walking; cramps were present in the arms and lower extremities; the pulse at 84. Leeches were applied to the seat, and with the assistance of a mild diet the patient was discharged cured on the 2nd of July. We should not omit to add, that the gums were throughout tumefied and red, and the salivary secretion increased in abundance.

The return of the eruption of the face at each consecutive spring—its connection with other symptoms, such as the redness of the gums, salivation, disorder of the digestive functions, loss of power over the extremities—was the principal ground upon which M. Devergie founded his diagnosis of pellagra. Erythema solare is a *local* disorder; scorbutus is attended with ecchymosis in various parts of the body, but the group of remarkable symptoms united in this case induced M. Devergie to admit that he had to do with a disease differing materially from the other case.

This disease has generally been divided, for descriptive purposes, into three periods: in the first, lassitude, dyspepsia, thirst, melancholy, headache, and pains in the back, together with a slight cutaneous eruption which disappears with the [cess]ation of the warm weather, are the leading symptoms. The second is marked by the greater intensity of the same phenomena; diarrhœa, vertigo, weakness of the limbs, and sometimes delirium, mark their appearance. The skin acquires a dark colour, and the epidermis falls off in scales. This condition may last for many years without any evident increase. But in the third and last period the skin becomes exquisitely painful, diarrhœa is more frequent, the pulse small and quick; vision is disturbed, and paralysis may be observed; at the same time emaciation progresses, and a tendency to self-destruction is noticed. On *post-mortem* examination, the most [frequent] changes are anatomical lesions of the cerebro-spinal axis (induration or softening), by which the nervous symptoms existing during life may be accounted for. With regard to etiology, the disease is by some attributed merely to exposure to the sun; by others to insufficient diet, and particularly to the use of Indian corn—an opinion which, however, is far from general. It is only in the third period that the malady is beyond the reach of art; during the two others a judicious treatment of the symptoms is generally productive of a satisfactory termination.

A NEW MODE OF RECOMMENDING A QUACK MEDICINE.

A M. Deschamps forwarded some weeks since to the Academy of Sciences the following recipe for a purgative "sirop," which he considers as a panacea for the most various diseases; for instance, gastritis, hemi-crania, toothache, cholera, ague, and consumption.

℞. Pulveris jalapæ, 28 grammes (℥j.); anisi, 6g.39 (ʒjss.); macera per dies iv. in spirit rectif., 200g. (℥vij.); agite, sarsaparillæ, 200g. (℥vij.); pulv. rhei, 50g. (℥jss.); serpentariæ radicis, 37g.50 (ʒix.); sarsapar. illæ, 50g. (℥jss.). Decocque per horas ij. in aquæ, O. viij., adde foll. sennæ, sassafras radicis, aa. 100g. (℥iv.). Macera in decoctione, cola adde sacchari comm., lb.iv.; meli narbon, lb.j.; f. s. a. syrup; mix the alcoholic infusion with the syrup. A tablespoonful for a dose to be taken seven hours after a meal.

The most curious part of the history of this most complicated "panacea" is that M. Deschamps has lodged in the hands of M. Arago sureties to the amount of £3000, which he consents to forfeit in case his universal remedy is not found efficient.

D. M'CARTHY, D.M.P.

The Influence of the Brain and Spinal Marrow on the Heart.—Dr. Julius Budge, the celebrated physiologist, has arrived at the following results in reference to this subject: That the spinal marrow is the central organ for the heart's movements, inasmuch as it maintains the irritability of the voluntary muscles; that the medulla oblongata is the central organ for the reflex movements of the heart; that the ganglionic system is not the central system for the heart's movements, but appears to modify the influence of the voluntary and reflex principles.

Benzoate of Ammonia in Gout.—Dr. Seymore states that he has frequently used this medicine in cases in which the small joints were red and swollen, or where fluid was deposited in the joint of the great toe; and also in cases where the lithate of soda existed in the joints of the fingers, with success. He thinks that, under the use of this medicine, early depositions have been arrested, and large depositions diminished. In dropsy, where the stomach is so irritable as to render the employment of ordinary diuretics impracticable, he regards the benzoate as peculiarly applicable. He has also seen, during the use of this medicine, the albumen in recent dropsy diminish.

Properties of the Iberis Amara.—Dr. Silvester read a paper on the properties of this plant, commonly called candytuft, at the meeting of the South-Eastern Branch of the Medical Association. It appears to have been first used by the late Dr. Williams, at St. Thomas's Hospital, in cases of asthma, bronchitis, dropsy, and more especially cardiac hypertrophy, with the best results. It does not diminish the velocity of the heart's action, like digitalis, but controls its violence and sharpness, and thus softening the [puls]e; hence its great value in hypertrophy with dropsy. Dr. Silvester says that he has found, after an experience of ten years, that it may be used with some benefit, nearly always, in the above-mentioned diseases, and sometimes with almost magical efficiency. It occasionally produces giddiness, sickness, or diarrhœa; but [thes]e subside on discontinuing the medicine. [The] dose prescribed was from one to three grains, generally mixed with cream of tartar, which concealed the nauseousness of the taste, and [se]cured a perfect trituration and division of the [to]ugh seed. There is an incidental proof, in Lindley's "Introduction to the Natural System," of the correctness of the belief that the order *Cruciferæ* contains many plants of value in the [treat]ment of asthma and dropsy. It is there said that Prince Maximilian, of Wied Neuwied, relates of the Brazilian Indians, that they used a kind of cress, resembling that of Europe, as a good remedy for asthma. The iberis amara is a true cress.

Arsenic in Cancerous Diseases.—Mr. Hunt, of Herne Bay, has seen some well-marked cases recover under the use of arsenic, and which, systematically administered, checks the disease in every stage. The liquor potassæ arsenitis of the Pharmacopœia was the form used, in doses of five minims, three times a day, on a full stomach; the dose to be reduced on the occurrence of conjunctivitis.

Treacle in Burns.—Dr. Payne, of Nottingham, says, that for upwards of twenty years he has used treacle in the treatment of burns and scalds. It is applied pure on the injured surface, and at the natural temperature, folds of well-aired linen being laid over it, and the dressing allowed to remain for three or four hours at first, when the treacle will be found in a more fluid state—hot to the touch, and the rag saturated with it. The treacle is then applied in the same manner, but after the second or third day of the burn will not require renewing oftener than once or twice daily, and the treacle will now begin to preserve its usual consistence while in contact with the abraded surface. The time occupied in healing is very much less than is the case when any other means are employed. No remedy, Dr. Payne considers, can exert more beneficial effects, and that life may be preserved in the most desperate cases by the timely and free application of this invaluable remedy. It acts by effectually excluding the air, and (as appears by the fact of the pain entirely abating, or greatly diminishing, as soon as applied) by abstracting the morbid heat from the part, and thus proving at once sedative, refrigerant, and healing.

Turning in Distortion of the Pelvis.—Dr. Radford says, in the *Provincial Medical and Surgical Journal,* that before recourse should be had to turning the child, to supersede craniotomy, or other

instrumental means, we should be satisfied that we do not create equal, if not greater, evils. The first question to be settled is, can we safely turn and deliver the child? Here is involved a due estimate of the degree of distortion of the pelvis relatively to the size of the child's head, and likewise the condition of the maternal organic structures. Can we always deliver by turning? Certainly not. It would be highly culpable to attempt turning with the passages undilated and undilatable, or when the liquor amnii has been some time discharged. Under either of these circumstances the child would perish. Does turning give the child a better chance than might be afforded by other measures? As regards the crotchet, the answer is plain; but the long forceps, in the great majority of cases of slight contraction of the pelvis, may be more advantageously had recourse to. Will the head pass through a less pelvic space when its base comes first, as in footling cases, than when the vertex presents? It will not, unless such unwarrantable force is used as to risk the separation of the body from the head, leaving the latter in the uterus. Does the head elongate more readily upwards than downwards? If only the same degree of extractable force is used, it does not, and certainly not so safely to the child. But assuming that the child's head elongates as readily, if not more so, in footling cases, than in presentation of the vertex, we know that the funis is subject to fatal compression in the former—which danger is greatly increased in cases in which the child has been turned on account of distortion of the maternal pelvis. Can the head of the child be adjusted and better adapted to pass through the widest portion of the brim of a distorted pelvis, by means of the leverage its body affords after it has been turned, than by any other means? Velpeau has great reliance on the advantages of turning in these cases; but, unless all contingent circumstances are favourable for its performance, the operation is most certainly hazardous to both mother and child.

Sacculated Œsophagus with Stricture.—Mr. W. C. Worthington read an account before the Suffolk Branch of the Provincial Medical and Surgical Association, of a case of this uncommon disease. The patient was a gentleman, sixty-nine years of age, robust, with an enormous appetite, which he indulged during the greater part of his life. Three years before his death, he suffered from slight dysphagia for eighteen months, without any apparent aggravation. Four or five months before he was brought under medical treatment, there existed considerable difficulty in swallowing solids, accompanied with emaciation. A probang was introduced into the œsophagus, which became obstructed at or near the cricoid cartilage. This operation was repeated at intervals, without getting beyond the supposed seat of stricture. Eventually the patient became totally incapable of swallowing food, and at length died. On a *post-mortem* examination, a pouch or bag was discovered proceeding from behind the œsophagus opposite the cricoid cartilage, which must have hung down between the trachea and cervical vertebræ. Nearly two-thirds of it were covered with muscular fibres derived from each of the constrictors, which were much stronger and more developed than in health. The entire pharyngeal cavity was found dilated far beyond what is natural. Immediately behind the cricoid cartilage, and opposite the commencement of the pouch, there existed in the œsophagus a stricture, formed by a transverse fold of the mucous membrane, and which would only admit a large-sized urethral bougie. The œsophagus below was contracted, but its mucous membrane throughout healthy. Had the nature of the disease been detected in its earliest stage, the stricture being caused simply by the contraction of the mucous membrane, there is no doubt it might have been easily made to dilate by the careful use of bougies.

Calcareous Deposit in the Arteries at the Base of the Brain.—Mr. Norman exhibited to the Bath Pathological Society the brain of a man, seventy-five years of age, who had suffered for six years before his death from what seemed an apoplectic fit; he recovered perfectly, but was subject to threatenings of a similar nature, which were apparently averted by depletion. On Jan. 1, he had an attack followed by insensibility and perfect paralysis of the left side, and in forty-eight hours he died. On dissection there was found a large clot of coagulated blood, occupying chiefly the right lateral ventricle, the pressure of which against the roof gave rise to the appearance of softening; but which, on a section of the nervous matter, such was not the case. Some blood was found in the left lateral ventricle, but the source did not appear. The arteries at the base of the brain were much diseased, especially the basilar, which was merely a rigid tube from the deposition of calcareous matter.

Structure of the Nerves.—The researches of Ehrenberg and his successors in histological inquiries have satisfactorily shown that the nervous fibrils are tubular, and not simple threads. What do these tubes contain? What is the structure of the walls? The nerves of the crayfish, when compared with those of men, are like sacking compared with fine linen. The fibrils from the cerebral and spinal ganglia are composed of flattened tubes made up of large oval cells, giving them a jointed appearance. Left in water for a while, and their contents then squeezed out, the latter is found to be more or less fluid, and have the appearance of a granular mass, presenting here and there soft globules and fine cells, some of which may be also adherent to the inner surface of the tube, and it may often be observed that they are situate between the thin layers of its walls. The embryological development of the nerve tubes is similar in all essential respects to that of the muscle tubes.

Structure of the Brain.—Baumgartner states that the brain consists of two tissues:—1. The proper cerebral substance made up of a layer of large and a layer of small cells, and which lie in a network. 2. The nervous fibrils entering into the ganglia, which cross each other in various ways, and, forming loops, return to the stem from which they departed. This structure has been detected in the brain of a chicken. The cortical substance in animals of a higher organization appears made up of a soft, membranous, adherent mass, and a network of vessels. Only a few loop-like nervous fibrils could be detected running back into the medullary substance. This medullary substance appears to be made up of fibrils and a special network in which they lie. The nervous fibrils are distributed at their termination in the brain as at their termination in the muscles. They are partly collected in bundles and partly form loops, which, uniting, crossing, or decussating with others, return to the point of entrance, and again join a main trunk.

Treatment of Angina Tonsillaris.—Baumgartner speaks of cauterization with nitrate of silver as the most effectual of all means when false membranes form. He has never lost a patient from this disease since he adopted this method of cure. Incision of the inflamed tonsil is another effectual means of relief.

Nature of Parasitoid Formations.—The same celebrated physiologist thinks that the formation of tubercle commences with the formation of simple granular bodies; that these cohere, and a globule is formed, and after that a granular cell, the process being, in fact, analogous to that exhibited in the development of the ovum. The caseous matter of tubercles consists of small granular bodies which are not widely dissimilar from the formative globules of the frog's ovum, such as they appear immediately after the formation of granules. If the caseous matter be in a more advanced stage of softening, it is found to consist almost altogether of globules or cells containing a granule, their parieties being also somewhat granular. In proportion as the tubercular matter approaches the stage of suppuration, the granular bodies disappear, and the pus globules having a cell contained in a cell, become more numerous and interspersed with transparent molecules. Tubercle appears to be a species of false membrane, and its formative process analogous in all respects to the formative process observed in the development of the ovum. The granular bodies are analogous to those of the yolk, which they resemble; out of them, as out of the latter, formative globules are developed, and then these latter change into cells. Here, however, analogy ceases. The cells of the healthy process unite together to form the different tissues; the pus cells remain in this low stage of development.

Wounds and Contusions of the Diaphragm from External Injury.—Mere contusions may occasion, says Mehliss, quoted in "The British and Foreign Medical Review," internal hemorrhage or inflammation, and eventual gangrene of the organ. Penetrating wounds are, however, for the most part of a much graver character. When their locality and size are such as to admit of speedy cicatrization, they are, so far as they are alone concerned, seldom productive of much mischief. In the opposite event either they cicatrize imperfectly, and eventually give rise to diphragmatic hernia, or else they remain permanently open, affording to a greater or smaller amount of abdominal viscera a free passage into the thorax. The consequences are permanent disturbance to the thoracic organs, and, sooner or later, fatal asphyxia. This prolapsus is more frequent when the left side of the diaphragm is wounded; on the right side the liver opposes a decided obstacle to such a consummation.

Liebig's Soup.—When one pound of lean beef, free of fat, and separated from the bones—in the finely chopped state in which it is used for beef sausages or mince meat—is uniformly mixed with its own weight of cold water, slowly heated to boiling, and the liquid, after boiling briskly for a minute or two, is strained through a towel, from the coagulated albumen, and the fibrine now become hard and horny, we obtain an equal weight of the most aromatic soup of such strength as cannot be obtained even by boiling for hours from a piece of flesh. When mixed with salt and the other usual additions by which soup is usually seasoned, and tinged somewhat darker by means of roasted onions or burnt sugar, it forms the very best soup which can in any way be prepared from a pound of meat.

Post-mortem Contractility of the Muscles.—Dr. Bennet Dowler, New York, in his "Researches," mentions the following singular case:—A young man, twenty-five years of age, died; two hours after death, when the arm was extended to an angle of 45° from the trunk, and was struck with the hand, or, still better, with the side of the hatchet, he carried his hand to his epigastrium; but when the arm was extended upon the floor so as to form a right angle with the body, he slapped himself upon the mouth and nose. The contractility began to decline in the third hour; and by the fourth hour all motions of the limbs ceased, though the pectoral muscles assumed the ridgy or lumpy form when percussed. An hour after death the thigh was moderately contractile. The left heel hung down near the floor; its flexors, after being struck, drew up the heel against the buttock. Five hours after death the contractility had ceased and rigidity prevailed. It is remarkable that in all the cases mentioned the heat of the body remained at a very high standard for some time after death, and in some instances even rose after the cessation of respiration. In the case above, the heat was far above the usual standard of health for seven hours, only sinking in that time from 111° to 102°.

Popliteal Aneurism Cured by Compression in four days.—The case is related in the "Dublin Quarterly;" it is that of a man, thirty years of age, admitted in Steven's Hospital, under Mr. Cusack, with a pulsating tumour, of a fusiform shape, in the right popliteal space, possessing unequivocally the characters of an aneurism. In its long axis the tumour measures three inches; its centre, the broadest portion, extends across from the external to the internal hamstrings. Pressure on any point of the femoral artery

arrests the pulsation in the tumour; a very small amount suffices to accomplish this when exercised upon the vessel as it crosses the pubis. The pulsations are strong, equable, and synchronous with the ventricular systole. No *frémissement* is perceptible to the hand placed over the tumour, nor is any *bruit de soufflet* audible by the stethoscope. The parieties of the aneurismal sack feel solid, and cannot be compressed so as to empty it of its contents. The collateral branches above the knee are very large; one in particular, which crosses the internal condyle, is fully equal in size to the radial artery. Trifling pain after walking; no abnormal indications in the region of the heart. Two months before his admission, while walking, he felt something suddenly give way, attended by a throbbing sensation and slight pain. Upon examination, he discovered a pulsating tumour, the size of a pigeon's egg, and the foot for a short time was cold and numb. The swelling gradually increased. The patient was ordered ten drops of tincture of digitalis three times a day, and to rest in the horizontal position. Reade's pelvic ball-and-socket apparatus was applied on the patient, and the pad adjusted so as to bear perpendicularly upon the femoral artery, as it passes over the pubis. A degree of pressure was exercised sufficient only to diminish, without entirely interrupting, the current of the blood through the vessel. No congestion of the limb followed the application of this pressure, but shortly afterwards the temperature of the leg and foot fell considerably. The patient was able to bear pressure on the same point for four hours; when it became painful, by regulating the screw which connects the screw-pad with the curved arm of the instrument, the pad was capable of being shifted to a small extent. By thus alternating the pad upon the two points within a range of about one inch and a half, uninterrupted compression of the artery was maintained and a cure accomplished, without the aid of a second instrument.

Case of Enlargement of the Labial Glands.—A young man, twenty years of age, was admitted under the care of Mr. Wilde, surgeon to St. Mark's Hospital, having a remarkable enlargement of the upper lip, which began about two years before. It was not attended with pain. An operation was performed for its removal, and the diseased mass was carefully examined by Professor Aldridge. He stated that the portions of the upper lip were natural structures in a state of considerable hypertrophy. This increased nutrition appears not only to have affected the reticular cellular tissue of the glands, but likewise the fibrous structure of the cutis; this being preserved with difficulty in its natural condition, healed kindly, and there has been no return of the disease.

Fibrous Tumours of the Uterus.—The most useful position, says Mr. Lee, for those tumours is the submucous, viz., those projecting into the cavity of the womb; and the pedicles of these are generally situated just below the openings of the Fallopian tubes. The next position in which they are most abundent is the posterior wall and fundus of the uterus; they are very rarely situated in the anterior wall, and still more rarely in the cervex uteri. These observations were obtained by the examination of seventy-four preparations in the museums of the Royal College of Surgeons, University College, Bartholomew's, Guy's, and King's College.

REVIEWS.

The Brain and its Physiology; a Critical Disquisition on the Method of Determining the Relations subsisting between the Structure and Functions of the Encephalon. By Daniel Noble, Member of the Royal College of Surgeons. 8vo. London: 1846. Pp. 450.

The subject of which the volume before us is an excellent embodiment has for a long time past engaged much of the attention of the author; and, judging from the manner in which he has executed the task of its elucidation, his inquiries have been most ably and agreeably prosecuted.

The leading object of Mr. Noble in bringing together the facts and inferences contained in this work is to show, by a process of inductive reasoning, how intimate, if not essential, is the relation which holds between cerebral development and intellectual faculty. Without taking the side of phrenology, properly so called, we must do our author the justice to say that he has brought together a vast mass of evidence,—some known aforetime, and other new—and that from such evidence he has drawn inferences which can scarcely be objected against by any lover of legitimate logic. The only question against the induction will rest upon the amount of facts which are taken for its authority—an amount scarcely sufficient, we should say, to justify sweeping conclusions, and the constitution of generalities, and yet enough to incline the lover of phrenology to feel confidence in the soundness of his suppositions. Mr. Noble has availed himself of no doubtful data, and has certainly not pushed conclusions further than a laudable energy in the performance of his task would account for; and whilst, on the one hand, the pure anatomist or physiologist will thank him for his able exposition of the structure and general functions of the brain, the phrenologists will, to a man, hail him as one of the most temperate and logical of the annotators of their science.

The following observations on the much-agitated question of the size and function of the posterior lobes of the brain in the inferior animals is an excellent specimen of our author's style, and of his clear and explicit way of meeting counter-statements:—

"When anatomists set forth that the posterior lobe is relatively small in the inferior animals, and found this assertion upon the fact that the hemispheres of the brain do not extend backwards so as to overlap the cerebellum in the same way as they do in man, they should have some regard to the circumstance of their bodies being in the horizontal position, which demands such an accommodation of the cranium as shall fit them for it; the *foramen magnum* of the occipital bone is unavoidably placed further back in these creatures, than it is in the human subject; and this modification places the cerebellum, of course, rather behind than under the cerebrum. A moment's reflection upon this matter will render it clear enough. The actual size, however, of the posterior lobe of the brain cannot be affected by the mere circumstance of its relative position. There is also another point for consideration, in connection with this subject: what is to determine the line of the posterior lobe anteriorly? How is it to be settled where the posterior lobe ends, and where the middle begins? In estimating the development of any division of the cerebrum, it surely cannot be just to regard but one of its boundaries. The fact is, in discussing such questions as these, physiologically, we gain no advantage by the simple aid of mechanical data; we must go to *function*, in order to make out correlative parts. In this view of the case, it must be remembered that the brain of man possesses several portions which the inferior animals want, correspondently with the possession of other and more exalted faculties of the mind. It must be recollected, also, that those superadded structures are constituted of certain convolutions, situated, for the most part, in the superior region of the cerebrum, just above and behind the anterior lobe; the necessary consequence of which state of things is, to supply the true posterior lobe with a comparatively backward locality.

"Let any one take up the brain of a sheep, and compare it with that of man; he will, in the latter case, notice several transverse convolutions superiorly, which are completely absent in the former. If the analogy of the respective structures be made a matter of any study, it may be seen that certain longitudinal convolutions which, in the human brain, belong to what is called the posterior lobe, in the sheep, run into what some may be pleased to call the middle lobe; and this circumstance arises from the absence of parts in the one instance which are found to be present in the other. It should be always kept in mind, that the anatomical divisions into the middle and posterior lobe are quite arbitary, and, as ordinarily formed, have no physiological basis. The author has referred to the sheep's brain as the subject for comparison with the human structure, not because it constitutes any exceptional case, but on account of its ready accessibility. As may be gathered from many of the statements that have preceded, a like principle pervades the brain and nervous system throughout the whole scale of animal organization." (Pp. 316—318.)

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly,* 6s. 6d.

Crassus.—*The paper on "Fracture of the Base of the Skull" has been received, and will obtain an early insertion.*

Mr. Jamieson.—*The lesion is not uncommon, but the symptoms of its existence are often very obscure. The diagnois is in all probability correct.*

M. D., Edinburgh.—*The Apothecaries' license must be procured, or there is danger of prosecution for illegal practice.*

Mr. G. L. Simpkins.—*We have been informed of the proceedings of the parties, and there is no doubt their impositions will be speedily exposed and punished.*

A. B., Dublin.—*The newspaper was duly received.*

Scotus.—*Ether has been employed in some cases of traumatic tetanus with decided success, according to the testimony of those who are worthy of credence. There has not been sufficient experience, however, to warrant the conclusion that it will always succeed.*

L. L., Bassingbourne.—*Celsus is a good Latin author, and not difficult to translate. The secretary of the Apothecaries' Society is the most proper person to be consulted in reference to the other parts of the letter.*

Tyro.—*Ether has been exhibited to patients during labour without any injurious effects being produced on the fœtus.*

Tenby.—*The debt can be recovered in the County Court with but little expense. A physician's fee is considered honorary, and is not recoverable at law.*

Mr. W. Thomas.—*Creasote combines in all proportions with alcohol, ether, and naphtha. It is highly antiseptic; it is employed in toothache, ulcers, and cutaneous diseases externally, and to check hæmorrhage; and internally as a stimulant, and for the prevention of nausea and vomiting. Its powers have been greatly overrated. It is injurious in inflammatory conditions, and structural diseases of the stomach, and frequently fails in allaying the sickness dependent on organic diseases—as of the heart and kidneys. The Ung. Creasoti of the "Pharmacopœia" is used in cases of ringworm, &c.*

Chirurgus.—*Iodide of potassium has been employed with success in cases of hemiplegia. The dose is about 10 grains a day at first, gradually and cautiously increased,*

J. B.—*The paper is inadmissible.*

M.R.C.S. and L.A.C., Manchester.—*A radical cure may be accomplished; it is, however, inadmissible if the testis is diseased, or if the hydrocele is complicated with irreducible hernia, or if the tunica vaginalis preserves its communication with the abdomen.*

—, Aug. 3.—*The party may be prosecuted by the Apothecaries' Society if he should visit and dispense medicines with a license.*

C. E. V. G. *informs us that he has received a letter from the Secretary of the National Friendly Society, Red Lion-street, London, offering him the situation of district surgeon. Their scale, he says, is liberal, but one clause in their regulations he does not like—that every medical officer elected shall be required to have an interest in the society by himself assuring for not less than £100. He wishes us to inform him in reference to the existence and prospects of the society. We are not able to give our correspondent the information he seeks.*

Mr. W. W. Lloyd, Islington, near Birmingham. —*It must have arisen from some oversight of the clerks. We were not aware of it.*

Inquis.—*Franklin communicated his observations in a series of letters to his friend Collinson, and explained in a satisfactory manner the phenomena of the Leyden phial.*

Miles.—*We sympathize with our correspondent, and hope that the efforts of the profession to remove the degrading duties will be successful.*

B. A., Walworth.—*Special certificates would be necessary. The* Medical Times Almanac *will give the required information. The secretary of the university ought to be consulted.*

A Medical Witness. *Before giving evidence at the inquest, a legal summons, according to the prescribed and printed form, should have been demanded, without this a fee cannot be obtained.*

Magister. *The pupil can be compelled to serve till of age, the indentures are then no longer binding.*

George B.—*The paper cannot be inserted on account of its length, and some reflections on individuals, which it would not be prudent to publish.*

A College Member *is thanked for his kindness.*

Mr. S. Johnson.—*A coroner may undoubtedly demand proof that a witness professing to be a medical man is so.*

A Student of the Westminster Hospital.—*The old apparatus, being the simplest, is the best.*

An Old Subscriber.—*The publication of the letter would not interest the profession generally.*

Mr. G. Mansell.—*We do not retain manuscripts after they have been used, unless requested so to do. Communications not inserted are destroyed.*

Medicus.—*The preparation has been employed with decided success in the case mentioned.*

A Member of the National Institute.—*The information can best be obtained from Mr. Poss, the secretary.*

* * *.—*We are not aware of the nature of the inquiries referred to.*

X. Y. X.—*We believe the assurance company referred to is respectable.*

Mr. J. B. Budgett, Medical Directory Office, 274, Strand, *informs us that Dr. Wone is a surgeon of Edinburgh, 1836, and a physician of that university, 1839.*

Mr. Southee, Cambridge.—*The communication has been received in reference to the National Institute, but too late for insertion.*

Letters and communications have also been received from Mr. W. W. Lloyd, Islington, near Birmingham, Inquis, Miles; B. A., Walworth; A Medical Witness, Magister; George B.; A College Member; Mr. S. Johnson; A Student of the Westminster Hospital, An Old Subscriber; Mr. G. Mansell; Medicus, A Member of the National Institue; X. Y. X.; Mr. J. B. Budgett, Medical Directory Office, 274, Strand; Mr. Southee, Cambridge; Crassus; Mr. Jameson; M.D., Edinburgh; Mr. G. L. Simpkins, A. B., Dublin; Scotus; L. L., Bassingbourne Tyro, Tenby; Mr. W. Thomas; Chirurgus, J. B., M.R.C.S. and L.A.C., Manchester, C.E.V.G.

THE MEDICAL TIMES.

SATURDAY, AUGUST 7, 1847.

THE INSTITUTE.

The annual meeting of the National Institute, to be held on Wednesday next, will be for the profession an important event, to which we look forward with mingled feelings of hope and fear. Our distrust originates not with the Council, but with those whom they represent; and our hopes are founded in a sense of the merits which on one side claim recognition, and on the improved judgment which will most probably acknowledge them.

The Institute has undoubtedly been most useful: it has had hard work carved out for it, and has well performed it; it has disseminated useful information; it has inspired an *esprit du corps*, and it has diffused through the public mind an improved estimate of the capabilities and position of the general practitioner. We consider this much, but it has done more: it has frequently held close relationship with the Government, leaving impressions most useful for any future professional legislation. It has given the general practitioners a *locus standi*, a public embodiment, an actual legal existence—things most useful to them amid the negotiations and intrigues of the heads of the smaller classes of the profession. The defeat of the registration measure is a parliamentary victory we owe mainly to the National Institute. The retrospect, therefore, of the short year of its existence, is one of which the Council need not be ashamed; and, as we have said before, the only thing which makes us look with some small apprehension to the future fortunes of the Institute, is not the certainty of their merits, but of their professional appreciation.

We have had so many associations, baseless in their foundation and delusive in their management, that suspicion and distrust are qualities which naturally arise, and there are parties endowed with a fair share of activity who seem only to live to excite and diffuse those doubts and suspicions in reference to the National Institute. They would avenge the failure of many of their own impostures by ensuring the same ruin to an honest project. We trust, however, the increased and increasing discernment of even those who have been frequently misled will prevent any such mischievous disaffection in the present instance. We never wanted union more than now, and the body of general practitioners will not be true to themselves or to their own interests unless they extend a warm, generous, and general support to the only body which has either the inclination or the power to do the just public thing for them. We confess we should look with apprehension to the future of the profession if the National Institute were removed from the field; it is their presence alone that can secure us an equitable arbitration. Camillus-like, they can resist the aggressions of the Gothic invaders by throwing a sword into the scale; it is for us to see that they do not share the ingratitude of that Camillus, nor we reap its deplorable results.

PROSPECT OF A REVIVAL OF BARBER-SURGEONS IN THE ARMY—CONDUCT OF THE GOVERNMENT AUTHORITIES AT THE HORSE GUARDS.

The position of the Surgeons of Great Britain and Ireland is at the present time very critical, from the attempts which are being made to impose on them the performance of duties which no persons with a due sense of their own respectability ought to undertake, and to compel them to accept the most beggarly rewards for their services. The medical officers of some poor law unions are urged to take the liberal sum of 3¾d. for each visit to a sick pauper, and to give him into the bargain all needful medicines. Navy surgeons are billeted next door to the cockpit on board ship, and their brethren of the army have been recently ordered to undertake the very responsible and respectable employment of branding all the deserters from her Majesty's service with the letter "D." The Government manifesto, which has been recently issued from the Horse Guards, is evidently a "new move," to check ambitious feelings, which, if allowed to freely develop themselves, might become so strong as to force even her Majesty's advisers to bestow upon deserving medical men becoming honours and substantial rewards.

It is a melancholy fact, that, with all the efforts that have been made for ameliorating the condition of our profession, we seem to be scarcely one step in advance. Sisyphus like, we have hitherto laboured in vain, and the period seems yet at a distance when we shall reap the reward of all our toils, and enjoy the full fruition of our most sanguine expectations. We learn a truth, however, from our present circumstances which ought never to be forgotten, that nothing less than public opinion, worked into shape and substance, strengthened and consolidated by union, can bring about the "golden age" of the profession. Statesmen and parliaments must be urged from without before they will exhibit symptoms of activity: they can never, and will never, take the lead; and we are now paying the penalty of former supineness and division. The medical community—acknowledged to be liberal, learned, and polite—is, nevertheless, yet experiencing social oppression, and, up to this day, social neglect, that have no parallel in the history of civilized Europe. In no other country have such attempts been made to cripple its energies, contemn its services, and lower its *status*; hence it is now encountering difficulties of such magnitude as require a vast amount of sacrifice and self-denial to effectually remove them.

In the outset of every struggle for the possession of just rights, it should be borne in mind that oftentimes the greatest discouragements are experienced. The tale of bricks is required without the usual gift of straw with which to make them; and it seems that, now the profession is roused to seek deliverance, there are taskmasters who would further humble it by imposing labours which are unprofessional and derogatory. In the army medical service the surgeon is to supersede the farrier in tattooing the deserter who is so unfortunate as to fall within the power of his military chieftains. The official document which has been very recently issued says, "that the Commander-in-Chief has, on the recommendation of a board of influential medical officers, to whom the subject has been referred, been pleased to direct that the method of marking with needles should be resorted to throughout the service, and that the operation of marking deserters shall henceforth always take place in the hospital, under the superintendence of a medical officer, who will be held *responsible* that the execution of the sentence is performed, the letter "D" being indelibly impressed on the skin."

It is a great pity the Commander-in-Chief had not been pleased to mention the names of those illustrious worthies upon whose recommendation pricking has become fashionable, that posterity might not forget the important act of which they are the authors, and that the unfortunate men upon whom the operation is performed might utter blessings upon them for superseding the cat by the needle. A pretty thing, forsooth,

for army surgeons to be reduced to the rank of infantry drummers and cavalry farriers, as they certainly are by the Horse Guards' edict—the one, up to the present time, having been "whippers-in" and the other "prickers-in" of the different regiments. As the operation has now become a surgical one, it ought to be made as important as possible; and, were it not for the additional suffering it would entail on the men, we would recommend that the name of the Commander-in-Chief of the Army should be neatly imprinted around the capital "D."

The surgeons, we find, are made "responsible" that the execution of the sentence is effectually performed. Of course, at first, the authorities must be lenient, as the operators, not having experience in this new department of their profession, may not furnish the letter with all the attributes of immortality; and, as a consequence, commissions will be in danger of having the War-office "D" indelibly impressed upon them. The army medical officers require instruction in their new duty, as they are now perfect novices; and the Government must forthwith raise to the dignity of professor some farrier deeply skilled in the art of pricking, at whose feet university doctors and college members must attentively sit and receive instruction. For what purpose, we ask, is the responsibility of making an indelible mark in the flesh placed upon the surgeon, unless it be to degrade him? Is the operation one which requires the exercise of so much skill, and is fraught with so much danger, that none but educated gentlemen ought to perform it? *Proh pudor!* Would it not have been far better to have placed the surgeon in the drummer's place, that the strokes of the cat might be scientifically adjusted to the exigencies of the culprit's strength, than that he should called to perform the silly act of marking a man's flesh with a letter, which any illiterate farrier or sailor could do, and embellish the engraving with a pretty mermaid into the bargain? In mangling a soldier's back with a whip, a surgeon's presence may be necessary to prevent the culprit from being flogged to death; but no such excuse can be made when he is doomed to undergo the operation of marking.

From tattooing to shaving there is but one step—the latter operation having quite as much respectability about it as the former; and we should not be surprised to hear of another new regulation being issued from the War-office, commanding all army surgeons to superintend the lathering and scraping of the officers' chins. By this the young ensigns and cornets of the crack regiments would be especially benefited, as it would remove many of the dangers attendant upon the first shave; while numbers of the older officers, whose hands are anything but steady in the morning, would find the surgeon's superintendence at the toilet a very proper addition to the comfort and respectability of British officers. We consider it, therefore, not very improbable, that her Majesty's Ministers will advise her to grant, without delay, a new charter to the very ancient corporation of Barber-Surgeons, by which the art and science of tattooing and shaving may be one and indivisible.

The new military regulation is a gratuitous affront offered to the whole medical profession, which it is bound to resent. The eyes of Europe are turned upon it, and the French medical press has stigmatized the circular memorandum as a revolting measure. The signs of the times must be carefully noted, so that no opportunity may be lost of improving our social condition, and of transmitting to posterity an untarnished reputation.

THE INQUEST AT PUTNEY.

The attention of the members of the profession continues to be directed to the late judicial proceedings in the coroner's court at Putney, touching the death of the young lady, Miss Sophia Dallett. We have received numerous letters from different medical gentlemen, and one from Mr. Farmer, the druggist, who received such a severe castigation from a contemporary, because he prescribed at the outset of the illness "a mild mercurial and aperient" for the patient. It is our duty, as public journalists, to hold the scales of justice with an even hand, and, while careful to maintain professional reputation, not to be unmindful of the interests of society.

parties in this unfortunate case whose conduct has been called in question—the medical gentleman who attended the patient in her illness, and the druggist who was accustomed to furnish the family with certain domestic medicines. The former has been freed from all blame in the treatment of the case by the coroner's jury, and the professional gentlemen who were called in at the last stage of the illness; the latter, while exonerated by the medical gentlemen, the family, and the jury, has been fiercely assaulted by certain parties, and his conduct held up to public opprobrium as strongly exemplifying the evils of counter practice.

It seems that, when Dr. Cormack was first called to attend the patient, "she was labouring under severe abdominal pain, and distressing retching;" doubtless with much tenderness over that region where pain was felt. To relieve these distressing symptoms opium was prescribed, without, however, any beneficial results. The patient afterwards became comatose, which, being mistaken for narcotism, an emetic and the stomach-pump were used, and the patient shortly afterwards expired. The professional attendants of the deceased can best understand how it was that there had been no local abstraction of blood, &c., usually considered so necessary, though the pulse may indicate great prostration of strength, and why opiates and brandy were ordered when the inflammation was raging in all its intensity. It is to be lamented that the patient should have been subjected to the action of an emetic, to the thrusting of a stomach-pump down her throat, and to the shaking and slapping which are considered so necessary when opium is exerting its influence on the constitution: for, during these attempts to rouse her from her slumbers, she sunk into a "sleep that knows no waking."

We are fully convinced, from a review of the evidence, that Mr. Farmer, the druggist, is not chargeable with exciting a fatal inflammation by the drugs which he gave when the patient first felt unwell. We are of the number of those who would strongly condemn the tampering with human life by druggists and quacks, and our best efforts shall always be employed to bring about the total annihilation of the latter, and to confine the former to the legitimate exercise of their trade. This is not to be accomplished by falsely charging individuals with crimes of which they are entirely innocent; but by constantly setting before the public "the truth, the whole truth, and nothing but the truth." Mr. Farmer complains that the medical journal referred to has stated things at variance with the truth, in many important particulars, and that the report, as a whole, is garb'ed, incomplete, and partial. And is this the way by which the profession is to attain a proper standing with the public, and by which druggists' counter practice is to be put down? We think not: for the community has too long entertained an opinion that, when Demetrius and his workmen cry "Great is Diana of the Ephesians," it is only because their craft is in danger. Mr. Farmer tells us that Dr. Cormack, though a physician, is the proprietor of a chemist's shop, as like his own in appearance and objects as it is possible to render it, and he ventures to assert that if any one had gone to that shop before the melancholy occurrence, and had asked the assistant to supply medicine for a person labouring under a supposed bilious attack, that drugs of a similar description to those supplied by himself to the deceased would have been handed over the counter with as little hesitation and, perhaps, in exchange for as few pence. Here, then, we find the physician charged with the vending of drugs and chemicals in the same way, and *upon the same terms*, as the druggist; and the latter asks any one to be good enough to point out to him why a mild mercurial and an equally mild aperient, coming from one shop, should be set down as rank poison, and as "razors placed in the hands of suicides," whilst out of another, only about two or three hundred yards distant, the same drugs should be deemed efficient and proper remedies for disease? Here, then, the physician, or his assistant, is as much to blame in prescribing blindfold for disease as the druggist, and quite as likely to fall into error. If medical gentlemen think proper to keep shops, they ought to be especially careful not to "flirt" with sickness in a shopkeeping spirit. It is nothing less than rank quackery to prescribe for disease at a venture; and, if legitimate practitioners do this, who can wonder that the hosts of unprofessionals who dabble in physic should follow so injurious an example? Mr. Farmer takes for his Magnus Appollo his neighbour, Dr. Cormack; and as salts, senna, blue pill, and colocynth are dispensed at the one shop for the sterling coin of the realm, he does not see why the same exchange of commodities should not take place at the other. Moreover, Mr. Farmer considers that his giving two purges of salts and senna, "as sharp as a razor in the hands of a suicide," when there was impending ulceration of the intestine, is no more open to severe strictures than an aperient mixture still in the possession of Mr. Dallett, prescribed for, and sent to be taken by, the deceased on the very morning which closed her existence."

Mr. Farmer, in vindication of himself, refers to the medical evidence at the inquest. Dr. Cormack said that he did not convey, nor did he wish to convey, the idea that the disease arose from the improper administration of medicines in the first instance; Dr. Wane declared that he did not consider them dangerous, or in any way hurtful to the deceased, and certainly were not such as were calculated to hasten the result; while Mr. Charles Shillito added his testimony, that the medicines supplied in the first instance had nothing to do with the death of the patient.

Medical journalists, in advocating the rights of the profession, should be particularly careful not to go beyond the truth. Those who do this are stumbling-blocks in the way of sound Medical Reform, and little better than enemies in the

camp. The public sympathized with Dr. Cronin from this very circumstance, and viewed him as an individual unjustly persecuted. In the present instance the garbled and one-sided statement, in reference to Mr. Farmer, will fail to produce in the public mind that disgust with unlawful practitioners which will help the members of the profession most materially in putting them down. Clad in the armour of truth, every arrow shot against us shall fall without injuring, and a victory over every enemy shall eventually be obtained.

GLYCERINE.

In another part of our paper appears a communication furnished to us, at our request, by Mr. Startin, on the medicinal uses of glycerine—the sweet principle of oils.

It will be recollected by our readers that the first account of the use of this liquid as a medical agent was contained in the pages of this journal some eighteen months ago, when Mr. Startin's Practical (and, therefore, valuable) Lectures on Diseases of the Skin were in the course of publication.

We believe the letter in the present number to which we have made allusion contains the most complete information on the subject of this new therapeutic which has yet been made public; and we, therefore, gladly insert it, in answer to the numerous inquiries we have received on the subject.

THE BOROUGH OF STOKE-UPON-TRENT.

Mr. T. Piers Healey, a gentleman known to most of our readers from his connection with this journal and with legal medicine generally, having received a very strong invitation, was announced as a candidate to the electors of Stoke-upon-Trent on the day before the nomination (Tuesday, July 27).

On that day he addressed eight large meetings, at which there attended many thousands of the inhabitants. The general effect of these speeches may be best inferred from the reports of the *Staffordshire Advertiser*, which, speaking of the address at Langton, says "Mr. Healey's speech was well calculated to tell on a popular audience, containing passages of eloquent declamation, as well as witty and humorous illustration."

Mr. Healey's opponents were the well-known Alderman Copeland and Mr. J. Lewis Ricardo; and the Alderman, having been understood to have abandoned his old political predilections for those of Mr. Ricardo, both these gentlemen obtained a united support of the two parties formerly opposing each other, viz.—the Liberal and Conservative. This conjunction of opposite parties was, of course, most adverse to the interests of Mr. Healey whose friends, from the shortness of the time found it impossible to make head against this unexpected combination.

At the nomination, however, the popular voice declared itself very decidedly against this coalition. Mr. Alderman Copeland was unable to show himself on the hustings; Mr. Ricardo met with a most unfavourable reception; while Mr. Healey's speech, lasting for one hour and half, was heard with breathless silence, the speaker himself being received with warm emotion and enthusiastic cheering by a multitude consisting of not less than from twelve to fifteen thousand persons.

When a show of hands was called for, very few were raised for Alderman Copeland; some more for Mr. Ricardo; and, to use the words of the *Staffordshire Mercury*, "a perfect forest for Mr. Healey." About thirteen hundred voters polled. Of these Mr. Healey had three hundred and eighty-one, which, in consequence of the combination, was of course a minority. Several cases of bribery, however, being made out, it is understood that a petition will be presented against Alderman Copeland's return, which will probably result in Mr. Healey's being seated for the borough.

As the expenses of this petition will be borne by the electors of the borough, some gentlemen interested in medical politics have already proffered contributions in support of the undertaking. Mr. Williams, the solicitor, of Hanley, will be the gentleman through whom the petition will be prepared.

After the close of the poll, many influential electors, including some of the most active members of Mr. Ricardo's committee, waited on Mr. Healey to express their regret at a result arising from temporary confusion in the state of parties, to invite Mr. Healey to stand on the next vacancy, and to assure him of their united support. A proposition was immediately set on foot for a public dinner, to which Mr. Healey is to be invited, and several of the operatives have since commenced a subscription to present the losing candidate with one of the best specimens of their local manufacture.

"PROGRESS" IN FINSBURY.

Mr. Wakley and Mr. Duncombe have walked quietly over the Finsbury course. Mr. Duncombe stayed at home on the nomination day; and it would have been well for Wakley's reputation if he had followed the example of his colleague. We do not remember, in the whole course of our experience, to have read even an election speech so full of vulgar impertinence as that with which the coroner of Middlesex insulted the understandings of the electors of Finsbury. Election speeches are seldom very famous for refinement and good taste. It is necessary sometimes to deal in claptraps and to use strong language in deference to the gross appetites of a mob; but Mr. Wakley seems to have delivered himself of his vulgarity, not in deference to the tastes of his audience, but out of a natural love for the thing itself. He absolutely revelled in the development of his low grovelling views and opinions, and exhibited, in a most unmistakable aspect, to the world all the worst characteristics of an incurably vulgar mind.

Mr. Wakley's contempt of literature is well known. He will go down to posterity as the man who declared, in the House of Commons, that he could write such poetry as Wordsworth's by the mile. He seems to measure men by the standard of the apothecary's shop. On the hustings, the other day, he spoke with supremest contempt of Mr. Samuel Warren, as a man who, "he would be bound to say, did not know a dose of salts from a dose of rhubarb." There had been some talk of Mr. Warren coming forward to contest the representation of Finsbury. Now, Mr. Warren is an author and a man of genius. We have no sympathy with his political leanings; but we cannot deny his claims to be considered as a writer of great power and versatility. Now, Mr. Wakley thinking, on Wednesday last, that it was his bounden duty to insult even a rumoured candidate for the suffrages of the good people of Finsbury, and being at no trouble to find the vulnerable point of Mr. Warren's public character, came down upon him without any misgivings as to the effect of his denunciations. He called Mr. Warren an author. He pilloried him at once as a man of letters. He held him up to scorn as "a sort of writer for the magazines;" and, thinking he had done the thing handsomely, smiled significantly at the people, as though he would say, "I think that we had him there;" and then went on to ask why, if Mr. Warren must write, he does not write about law? Now, as Mr. Warren has recently been writing, and very successfully, about the law, one would think that the object of this question was the exposure of Mr. Wakley's own ignorance; but we can assure the member for Finsbury that he need not take any trouble to supply us with additional evidence on that head, as we are perfectly well satisfied of the fact without any further proof than we have long had in our possession.

We need not trouble ourselves with any observations on that part of Mr. Wakley's speech which related to the absence of his colleague from the hustings on so memorable a day. The excuse was either pure matter of fact, or it was an egregious lie. We shall not pause to inquire which hypothesis is the more colourable. We are now only referring to that portion of the harangue which is to be stigmatized as an offence to the intelligence of Great Britain. Mr. Wakley's systematic contempt of all intellectual greatness—the source of those "intellectual joys" which, it is well observed by a morning contemporary (the *Herald*), "are at once the solace and the safeguard of his more fortunate fellow-countrymen," shows how far he lags in the rear of the enlightenment and liberality of the age. He talks of liberality, but is the most illiberal of men; of progress, and he is a mere sluggard. There is not an artisan in Finsbury who is not far in advance of him. Are these the men to prate about liberality and progress? Are these the men to represent the growing civilization of this great empire? When, years ago, in an emphatic appeal to the intelligence of England, Shelley, exhorting the people to patience and forbearance, exclaimed—

> "Science and poetry and thought
> Are thy lamps; they make the lot
> Of the dwellers in a cot
> So serene they curse it not;"

the measure of the people was well taken; but a quarter of a century later, a "liberal" orator would have taught them to despise those intellectual solaces which elevate the day labourer, in his humble cottage, to the level—nay, perhaps, above it—of the proudest peer in his palaced home. Mr. Wakley may be sure that the people of England are not to be insulted with impunity after this fashion. They know and appreciate the dignity of the literary character; they set a true value upon that without which they would be poor indeed. It is one—the greatest one of the boasts of the present age—that the highest intellectual pleasures are now within the reach of the poorest labourer. It is not only that the people have a literature of their own—but that the literature of the rich has now become also the literature of the poor; and that there are few so destitute and so desolate as to be denied the solace which Mr. Wakley laughs to scorn. A man of this intellectual calibre is sadly out of place as the representative of an intelligent constituency. Let the people of Finsbury ponder upon the manner in which he has insulted them. In the absence of all opposition, he has been returned for the Parliament now in course of construction. We could almost wish that the Parliament may be a short one, if only that it might run a chance of being purged of such impurities as those which, in the teeth of our own political leanings, have called forth from us these comments.—*Atlas.*

MEETING OF POOR-LAW MEDICAL OFFICERS.

A numerous and highly respectable meeting, convened by advertisement, of medical men connected with various unions in the midland counties, was held on Wednesday, July 28, at the Royal Hotel, Matlock, Bath, to take into consideration the subject of pauper medical relief. During the discussion which took place, and on which resolutions were founded, the most glaring absurdities of the present system were adduced. Many of the medical men were paid at a rate totally inadequate to the services performed by them, some being as low as 1s. 3d. per case, for which pittance they have to provide drugs, horse expenses, and a dispenser; the distance over which they have to travel in numerous instances was enormous; in other cases £5 for every thousand inhabitants were allowed. One gentleman had a union workhouse *thrown in* for nothing. An overseer's orders contained the following note:—"This patient is

to be attended in sickness, *but not in her confinement*." A case in which a lad had compound fracture of both legs, the guardians refused to pay the medical man for more than one. Because another officer reduced a dislocation without medical order, he being then on attendance on the mother, he could not get his money from the board at all, though the commissioners were appealed to, and would have allowed the charge. Whenever the boards had been applied to for augmentation of salary, in consequence of excess of duties, the application was either rejected with the significant answer, "You can resign if you like, others are willing to doctor for the same price," or else a paltry pittance was given, as insulting as degrading. Our space will not allow us to enumerate all the astounding facts adduced at this meeting, and we sincerely hope other union officers will meet to represent to Government, fully and fairy, the injustice under which a class of men, the most useful in the state, labour. If a hundred patients in one district are paid for at the rate of 6s. 6d. per case, the lowest sum sanctioned by the commissioners, surely, in other districts 1s. 3d. is less than should be tolerated in any union. We consider this subject one of the greatest import to the community at large, and we express our firm conviction that boards of guardians are not the persons to be allowed to debase the profession and injure the poor. A Government medical inspector, acquainted with the value of general practice, should be appointed to fix the salaries upon a just and equitable footing, and correct the abuses which have crept into the system through a parsimonious policy. We would give liberal and efficient salaries, and provide in rural districts medical relief on a more extended basis, for, above the pauper, there are a class equally destitute in respect of procuring medical advice, and many hundreds are annually lost from this cause. Great praise is due to the promoters of this meeting, and we trust our columns may chronicle many more in other parts of the country.

ANSWER TO THE IRISH MEDICAL PROTEST FROM THE LORDS OF THE TREASURY.

Dublin Castle, July 26.

SIR,—I am directed by the Lord Lieutenant to state, that the memorial from physicians and surgeons, complaining of the rates of payment allowed under the temporary Fever Act, having been submitted to the Lords of the Treasury, their lordships are of opinion that the remuneration is as high as under the circumstances of the case they should be justified in granting.

I have the honour to be, Sir, your obedient servant,

J. W. REDINGTON.

J. W. Cusack, Esq., M.D.

THE INQUEST AT PUTNEY.

[To the Editor of the Medical Times.]

SIR,—As in my report of the inquest on Sophia Dallett, inserted in the last number of your journal, no mention whatever is made of Mr. Farmer, the chemist, who, in another report in another journal (*quite another journal*), is made to bear the entire onus of the case, it is due to you and your readers that, as the reporter, I should account for this omission. I must do so by the simple statement that at the adjourned inquest, which I reported, not a single allusion was made to Mr. Farmer; and, so far from the *onus probandi* resting with him, Dr. Cormack looked upon it as entirely his own, as did the coroner and the jury, and I should imagine every one else.

Certain prints, like certain persons, are incapable of slander; and, doubtless, Mr. Farmer will find solace in this fact, for the unmerited contumely (*to my certain knowledge*) that has been heaped upon him; but should he not be altogether satisfied with this, and will challenge a professional jury, as Dr. Cormack challenged a jury of laymen, I will undertake the duty of his counsel, and guarantee him not only to come out scathless, but perhaps even with a little improved position. I am, Sir,

Your obedient servant,

WILLIAM HENRY BROWN, M.D.

Belgrave House, Park-road, Old Kent-road, July 26.

THE LEGAL PRIVILEGES OF THE LICENTIATE OF THE HALL.

[To the Editor of the Medical Times.]

SIR,—Your correspondent O. L. U. is very needlessly perplexed respecting the legal rights of the licentiate of the Hall. He asks by what authority the licentiate of the Hall practises physic? I answer, by the authority of an act of Parliament, which overrides all charters, whether granted to Colleges of Physicians or Colleges of Surgeons.

The Act of 1815 empowers the court of examiners to examine candidates in the science and practice of medicine, and as to their fitness and qualification to practise *as apothecaries*, and also to grant licenses to approved candidates, "entitling them to practise as such in any part of England and Wales."

The licentiates of the Hall are, therefore, entitled by act of Parliament to practise *as apothecaries*. Let us see what is the kind of practice thus limited to those who have passed the Hall examination. At the time of the passing the act, the apothecary was the ordinary attendant of the sick, officiating, more especially in country places, as physician, surgeon, and accoucheur, while, at the same time, he supplied all midicines and medical and surgical appliances which might be required by his patients. This cannot be denied. The number of members of the College of Surgeons was at that time very small, and smaller still, perhaps, the number of doctors of medicine. The population of this country must, consequently, have been attended in medical, surgical, and obstetrical cases chiefly by the old apothecaries.

A license, therefore, under an act of Parliament "to practise as an apothecary" *must* confer a legal right to practise *physic*, *surgery*, and *midwifery*.

But the act contains a clause saving some of the privileges of the Colleges of Physicians and Surgeons.

Now, Mr. Lawrence, speaking on behalf of the College of Surgeons, denies that the diploma of a member confers any privileges at all. But, admitting that the diploma does confer privileges, it can be only since 1813 that those privileges extended beyond London and its suburbs. And I believe this extension remains still to be effected with respect to the privileges of the College of Physicians. And, then, the fact that doctors of medicine of any university are officially recognised as "physicians," whether they be or be not connected with the College of Physicians, as well as that many others than members of the College of Surgeons are officially recognised as "surgeons," proves that these collegiate *privileges*, so called, are not *exclusive* ones, and, therefore, the clause in the Act of 1815 referring to the colleges can only mean that there is nothing contained in the act to prevent a M.R.C.S. from practising as a pure surgeon, or a M.R.C.P. from practising as a pure physician, while the whole act manifestly entitles the licentiate of the Hall to practise any and every branch.

I wish it to be understood that in the above observations I have not said a word as to the *competency* of the licentiate to practise. Competency is one thing, and a legal right to practise is another. There can be little doubt, however, that most of the licentiates have availed themselves of the opportunities to study special surgery, necessarily thrown in their way while completing the *curriculum* for the Hall, in addition to such parts of surgery as are inseparably connected with anatomy, the study of which is enjoined, and in which they are examined. And it is to be regretted that the authorities at the Hall have not included special surgery in their *curriculum* and examination, which I believe they are entitled to do, as the act empowers them to require a "sufficient medical education;" and is not surgery a department of medicine?(a) As such a *curriculum* and such an examination are in the contemplation of the Council of the National Institute, it is much to be desired that their plans for the reorganization of the profession may be carried into effect.

I am, Sir, your most obedient servant,

SELBSTVERTHEIDIGER.

Lincolnshire, Aug. 2.

[To the Editor of the Medical Times.]

SIR,—In that vile and slanderous publication, the *Lancet*, of this week, is a letter abusing me for petitioning against that stupid bill of Tom Wakley's, and stating that I am in practice along with several others; which I acknowledge, and what of that? If I was to qualify, would the Apothecaries' Hall put me in a better position? I say no. Then why should I spend my money? I can now afford to charge lower than the regular doctors, and I do more business than any two of them; and I know the company will not prosecute me. As I don't give much credit, as I charge low, and I can make all over to my wife if they do; besides, there is more than twenty others in this neighbourhood who does the same. And I am at the hospitals to learn all I can, so that I think it is very hard to expose me; but it is all spite of the other medical men, and I hope you will put this in your paper this week, to show that I am not afraid of them, and that you will see me righted, as I take your independent paper in, and hate the meddling fool, Thom. Wakley.

Yours, very obediently,

J. ROLPHE, Surgeon; but not an Apothecary.

Paradise-row, Bethnal green.

GOSSIP OF THE WEEK.

ROYAL COLLEGE OF SURGEONS.—The following gentlemen, having undergone the necessary examinations for the diploma of this college, were admitted members on Friday evening, the 23rd instant, viz.:—Messrs. Charles Peter Markus, Ceylon; William Henry Ackland, Bideford, Devon; William James Blyth, Abergavenny, Monmouthshire; Henry Turner, Dorsetshire; James Lewis Holloway, Charlbury, Oxfordshire; John Owen Evans, Stoke Newington; Charles Astley Walters, Stockport; Alexander Henry Paterson, Stourbridge, Worcestershire; Joseph Adolphus, Kingston, Jamaica; Joseph Holmes Buxton, Bishop's Auckland, Durham; and William Home Popham, Judd-street, Brunswick-square.—On the 26th inst.—viz., Messrs. William George M'Clure, Newtownbreda, Belfast; John Lane Cutcliffe, South Molton, North Devon; William James Williams, London; Thomas Sympson, Lincoln; James Frederick Knipe, Cheltenham; John James, St. Just, in Penwith, Cornwall; Edward Bunbury Passmore, Lyncombe, Bath; William Mackey Ogilvie, Boughton Blean, near Faversham, Kent; Francis Henry Blaxall, Clayton, Suffolk; Richard Davison Miles, Watford, Herts; and William Braithwaite, Plymouth, Devon.—On the 29th inst., viz., Messrs. Mitchell Henry, Woodland, near Manchester; William Thomas Gaye, Minehead, Somersetshire; Edward John ap Ellis Eyton, Overton, Flintshire; George Robart Hanbury, Hereford; Alfred Mathias, Lamphrey Court, near Pembroke,

(a) At any rate, all surgeons claim to be considered members of the *medical* profession. If they are rightly so, it can only be because surgery is to be regarded as a *branch* of medicine; and, as every whole must include all its parts, so it must be held that a *sufficient medical education* ought to include surgery.

South Wales; James Edmund Clutterbuck, Newark-park, Gloucestershire; Francis Leopold Hooper, Great Canfield vicarage, Essex; Charles Jennings, Cheapside; Thomas Robinson, Leicester; and Horatio Carco Brenchley, Maidstone, Kent.

Royal College of Physicians.—The following gentlemen have been elected "fellows" of this institution, viz.:—Sir George Magrath, Knight, Plymouth; Henry Beaumont Leeson, M.D., Greenwich; Thomas Southwood Smith, M.D., Finsbury-square; Peter Nugent Kingston, M.D., Curzon-street, May-fair; and John Taylor, M.D.

Apothecaries' Hall.—Gentlemen admitted members July 22: John White Bridgman, and Robert Baker.—July 29: James Herbert Budd, Henry Bate, William Brook Charles Maxwell, Hugh Hastings, and Edward M'Donnell.

Queen's College, Birmingham.—A special meeting of the council and friends of the college was held on Wednesday last, to vote a loyal and dutiful address to her Majesty on the occasion of the grant by her Majesty of a supplemental charter. The chair was occupied by the Right Hon. Lord Lyttelton, the principal. Letters expressive of regret at unavoidable absence were received from Earl Howe, the Lord Bishop of Worcester, and the High Sheriff for the county. Amongst the numerous friends present were —the Mayor (Mr. Robert Martineau), the Treasurer of the College (Mr. J. E. Piercy), the Dean of the Faculty (Mr. William Sands Cox), Professor Dr. Eccles, Professor Dr. Birt Davies, Professor Dr. Wright, Professor G. B. Knowles, Professor S. Berry, Mr. Alderman Room, Mr. T. Upfill, Mr. James Bourne, Mr. W. H. Osborne, Mr. G. Taylor, Mr. J. Suckling, and other friends.

Robert Bentley, Esq., M.R.C.S., of King's College, has been appointed to the chair of Botany, in the Medical School of the London Hospital, vacant by the death of Edwin J. Quekett, Esq.

The Provincial Association has been holding its annual meeting on Wednesday and Thursday. We regret to hear that the attendance has been scanty, the interest of the proceedings small, and the financial future of the institution itself anything but promising. The deficiency of the benevolent fund especially is most marked, and leads to much general dissatisfaction. We shall notice the proceedings more at length in our next number.

A Child Poisoned by Laudanum.—On Wednesday afternoon last, an infant, three weeks old, named Mary Ann Barlow, the daughter of Robert Barlow, 19, Ludgate-hill, was seized with convulsions, and, in order to give it relief, two drops of laudanum were mingled with a teaspoonful of gin and a rather larger quantity of water, and about two-thirds of the mixture were given to the child. She at first appeared to be easier, and slept quietly for about an hour, but at the end of that time was again seized with convulsions, and became so much worse that she was taken by her mother to a neighbouring druggist, by whom she was treated, but without effect, as she died on Thursday morning.—An inquest was held upon the body, before Mr. Chapman, the borough coroner, at the Greyhound Inn, Baptist-street, on Friday last, when Mr. G. Smith, assistant to Mr. M'Gill, druggist, Rochdale-road, stated that the death of the infant was caused by an over-dose of laudanum; indeed, a single drop would be sufficient to cause the death of so young a child. The jury returned a verdict that "The deceased came by her death through an over-dose of laudanum, administered by mistake."

New Farinaceous Plant discovered in Algiers.—In Algiers a vegetable production has been found on the tops of mountains towards the south, and in Algerine Zaara, during the last campaign. General Jusuf has drawn the attention of Government to it. It appears like a lichen spread over a large part of Zaara. As for its identity, it is the *Lichen esculentus* which the Tartars use. They feed their beasts upon it, and make for the poor a sort of bread; they consider it like manna sent by Providence. General Jusuf has had two loaves made of this lichen: the one, entirely of it, was more brittle and less consistent than the other, which had about one-tenth of flour in it. This loaf resembled store bread, and had the flavour of it. The nutritious quality of this bread cannot be denied, when it is known that the distinguished chemist, M. Payen, has proved that an extract, similar to the starch formerly made by M. Berzelius, can be produced from it.

Longevity of a Lunatic.—An insane person has recently died in Belgium at the advanced age of 109 years.

Discovery of Ancient Remains.—The railway excavators now engaged near the old Roman city, or "Isca Silurium," known to moderns as Caerleon, in the neighbourhood of Newport, have dug out from their ancient graves, two massive coffins of stone, in which were found the remains of two human bodies, and in one an antique stone bottle, containing a thick liquid, upon which village practitioners in chemistry and medicine have not yet pronounced. The coffins resemble huge and rudely-fashioned troughs, with lids of stone almost as large as the coffins. From the fact that a stone coffin was found near the same place by excavators some time since, it is conjectured that the field was at one time used as a general burying-place for the inhabitants of Caerleon, whose boundaries, some five hundred years ago, extended near to the spot where the coffins have been discovered.—*Globe.*

Abuses of Ether.—On Monday, July 26, a young person called upon a dentist of the Palais Royal to have a tooth extracted. She was rendered unconscious by ether, and some hours after it was ascertained, by a medical examination, that her person had been violated. The dentist has been placed under arrest.

Naval Appointments.—Deputy Inspector of Hospitals: E. Hillditch, to Bermuda Hospital. Deputy Medical Inspector of the Fleet: Dr. J. G. Stewart, to the Vindictive. Surgeons: T. H. Nation, to the Imaum, vice Cross; A. B. Cuxfield, to the Fury; J. Lambert, to the Trincomalee; W. Loney, to the Amphitrite.

The *Gazette d'Augsburg* contains a letter, dated "July 1st, on the borders of the Black Sea." It announces that travellers who came from Redout Kale, a fortnight past, report that the cholera is raging at Tiflis. More recent reports confirm this news; but the data of the intensity of this malady varies so much that it is impossible to say anything correct upon the subject.

REWARD OF MERIT.

The King of the Belgians wished to give a public testimony of his approbation of M. Orfila, for the numerous and eminent services he has rendered to medical science; he has, therefore, appointed him officer of the (civil) order of Leopold, by a resolution passed on the 20th of July. By a resolution of the same date, M. Heckerman, a senior of the medical faculty at Berlin, has been appointed chevalier of the same order.

M. le Docteur Fallot, a member of the Medical Academy of Belgium, and principal physician to the army, has just been promoted to the rank of officer of the order of Leopold; M. Cuvier, member of the same academy, and surgeon to the Ophthalmic Institution of Brussels, has been appointed chevalier: both of them for the eminent services they have rendered to science and the army, especially in the treatment of ophthalmic affections.

The bust of M. le Docteur Pariset, recently deceased, is to be executed in white marble, and placed in a conspicuous part of the Academy of Medicine, of which he was perpetual secretary.

M. Gervais, professor of zoology and comparative anatomy to the Scientific Faculty at Montpellier, and M. Dumas, professor to the Medical Faculty, both skilled in medicine and science, have been presented to the Minister of Public Instruction as candidates for the vacant chair. M. Gervais stands at the head of the list by the Scientific Faculty, and M. Dumas is the first candidate of the Academical Council.

The Royal Academy of Medicine at Belgium has just been nominating the committee for the three years from 1847 to 1850. M. Vleminck has been re-elected president.

M. Fallot, principal physician of the garrison of Namur, and M. Verheyen, inspector of the *Service de Santé Vétérinaire*, have been elected vice-presidents. Dr. Marinus succeeds M. Lebeau, physician to the garrison at Brussels, in the capacity of assistant-secretary.

The Council of State has just come to an important decision concerning physicians called to fill municipal offices. M. le Docteur Guépin (of Nantes), appointed municipal adviser at the last election, saw his nomination cancelled by the Council of Prefecture, because of a disagreement between the officers of the municipal council and three of the professors of the College of Medicine. M. Guépin having appealed to the *Conseil d'Etat*, they came to the decision that the office of professor exercised by the physician did not rank among the public salaries. Consequently, it has annulled the decision of the Council of Prefecture of the Loire-Inférieure.

Copenhagen, July 19.—Lately, the Congress of Scandinavian Naturalists held its last session, which was honoured by the presence of the King. At this session it was announced that the congress would reassemble in July, 1850, at Stockholm. The King honoured M. le Baron de Berzélius with the dignity of the grand cross of Danebrog, to which dignity is attached the title of excellence. He conferred the honour of commander of the same order on M. Hausteen, of Christiania, Norway; and M. Nielson, of Lund, Sweden. MM. Ekstroem, Efner, and Reitzius (Swedes), and MM. Coriander and Faye (Norwegians), have obtained the cross of chevalier of Danebrog. The King has had a copy of the portrait of Thorwaldsen, by M. Horace Vernet; and his Majesty has presented it to the Society of Fine Arts at Copenhagen.

Obituary.—On the 26th ult., after a few hours' illness, William Penn Foster, surgeon, of Church-street, Stoke Newington, aged 44, beloved and respected by all who knew him.—Lately, at Waterford, Dr. Price, of fever, caught while in the discharge of his duties as physician to the dispensary.

MORTALITY TABLE.

For the Week ending Saturday, July 31, 1847.

Causes of Death.	Total.	Average of 5 Summers.
All Causes	964	940
Specified Causes	962	935
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	301	[illegible]
Sporadic Diseases.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	122	103
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	135	157
Diseases of the Lungs, and of the other Organs of Respiration	196	226
Diseases of the Heart and Blood-vessels	23	25
Diseases of the Stomach, Liver, and other organs of Digestion	82	94
Diseases of the Kidneys, &c.	13	8
Childbirth, Diseases of the Uterus, &c.	9	10
Rheumatism, Diseases of the Bones, Joints, &c.	[illegible]	7
Diseases of the Skin, Cellular Tissue, &c.	4	2
Old Age	33	50
Violence, Privation, Cold, and Intemperance	35	28

SUGGESTIONS

FOR A MORE SIMPLE ARRANGEMENT OF THE

MATERIA MEDICA,

BASED ON ITS PHARMACEUTICAL AND THERAPEUTICAL RELATIONS.

By GEORGE LEITH ROUPELL, M.D.

Cantab., F.R.S., Fellow of the Royal College of Physicians, Physician to St. Bartholomew's Hospital, Lecturer on Materia Medica at the College of St. Bartholomew' Hospital.

(Continued from p. 441.)

LECTURE V.

Proceeding with the list of crystalline alkaloids, I come to 6. Strychnia, the active principle of the nux vomica. This is found in combination with another alkaloid, brucia, in the fruit and bark of several varieties of strychnos.

Strychnia is met with in brilliant transparent prisms or octohedrons; soluble in boilin. rectified spirit; insoluble in ether; scarcely soluble in water—sufficiently so, however, to impart an intensely bitter taste to 80,000 times its bulk. The salts of strychnia are crystalline, and, from their greater solubility than the pure alkaloid, might advantageously be introduced into practice. The symbol of strychnia is $\overset{+}{St}$, and its formula is $C^{44} H^{23} O^{4} N^{2}$. It acts upon the system as a tonic, as a powerful stimulant of the spinal chord, and as an antispasmodic.

The indications for its employment are—

1. Some forms of debility.
2. Paralysis of various kinds.
3. Some varieties of epilepsy.

Impaired powers of digestion, hemiplegia, and especially paraplegia, amaurosis, and paralysis of the bladder, are some of the disorders relievable by strychnia; and the fact of the bean of St. Ignatius having obtained great celebrity in Germany as a secret remedy for epilepsy would render the employment of strychnia in such cases deserving of trial.

It should be mentioned that the sexual with the other functions of the spinal chord have been found to be excited by this alkaloid. The dose of strychnia will vary with its object. As a tonic it should not exceed the $\frac{1}{30}$th of a grain; as a stimulant, from the $\frac{1}{16}$th to the $\frac{1}{8}$th of a grain may be exhibited. Larger doses of commercial strychnia may, however, be given, as that usually contains brucia, in the proportion of one half. Brucia acts upon the system precisely as strychnia, though less powerfully, and is the cause of the red colour usually struck on the addition of nitric acid to the strychnia of our shops.

7. Digitalia is considered to be the active principle of the officinal plant digitalis purpurea, and is described as existing in the digitalis lævigata, grandiflora, and others. MM. Homolle and Quevenne, who claim the merit of discovering it, and have given directions for its preparation, speak of it as an extremely powerful agent, 100 times the strength of the dried leaf of digitalis, as having occasioned serious effects in the human subject in the dose of $\frac{1}{16}$th of a grain, and as having destroyed life in a dog when the $\frac{1}{5}$th of a grain was exhibited; they add that it is too powerful to be employed endermically. Its taste is acrid, its reaction alkaline, and its form crystalline. Further information, however, on this subject is still desirable, as other pharmaceutists have failed in procuring this principle in a pure and isolated form.

The effect produced by digitalis on the system is to increase the quantity of the urine, to check the frequency of the heart's action; but if its use be continued, or it be given in larger doses, it produces vomiting, distressing faintness, cold sweats, irregularity and feebleness of the pulse, coma, convulsions, and death. The chief indications for its employment are—

1. Some forms of dropsy.
2. Certain disorders of the heart and large vessels.

The forms of dropsy in which digitalis is most useful are hydrothorax, anasarca, and ascites, especially when dependent upon disease of the kidneys and heart. The disorder of the heart and arteries in which this remedy may beneficially be employed is irritability of their action, as well from mere functional disturbance as from organic structural lesion.

Digitalis is highly extolled by some practitioners in hemoptysis; and, from the volatility of its principles, will act in the form of vapour. Its officinal preparations are the powdered leaf, the infusion, the tincture, and the extract.

8. Colchicia, the active principle of the colchicum autumnale, appears in the form of colourless prisms or needles, soluble in water, acrid, and bitter to the taste.

The effect of colchicum or its active principle is that of a powerful local irritant, occasioning acute inflammation of the mucous membrane, with all its usual signs; it acts also as a sedative upon the nervous system, allaying pain and controlling certain forms of inflammatory action. Colchicum is said to increase the proportion of urea in the urine, as well as to augment the quantity of that secretion.

Adopting these views, the leading indications, then, for the exhibition of colchicum will be—

1. Local inflammation of a peculiar character.
2. Certain forms of neuralgia.
3. Deficiency of urea in the secretion from the kidney.

The peculiar form of local inflammation which colchicum is capable of relieving is, as is popularly known, the gouty. More question exists as to its efficacy in rheumatism. The action of colchicum in allaying pain would appear in some cases independent of its controlling vascular action, as relief to pain will result while the swelling remains. The property which colchicum is asserted to possess of increasing the proportion of urea would indicate the probable utility of this medicine in those forms of dropsy in which urea is notoriously deficient; and to this point my attention is at this time especially directed.

The seeds and bulb of the colchicum are officinal, the preparations of which are two extracts and a vinegar of the fresh cormus, a wine, and two tinctures. By regulating the dose the remote effects of colchicum may be produced, or with them may be combined the local action upon the mucous surface of the bowels.

9. Quina and 10. cinchona are the two last of the crystalline alkaloids mentioned in my list of the nitrogenized bases of officinal plants. Quina and cinchona are procured, as is generally known, from bark; the yellow yielding quina; the pale, or quilled, according to some botanists, the grey, according to others, yielding cinchona.

Quina ($\overset{+}{Q}$. $C^{20} H^{12} O^{2} N$) crystallizes in fine silky needles, is soluble in strong alcohol and ether, and, to a certain extent, in water. Cinchona ($\overset{+}{Ci}$. $C^{20} H^{12} O N$) appears in large brilliant prisms, is soluble in strong alcohol, but insoluble in ether and in water.

Quina and cinchona resemble each other in many respects—in chemical reaction—in being themselves crystalline—in forming crystallizable salts with acids, and in their effects upon the system. The salts of quina, however, are almost exclusively employed in this country, and the disulphate is the only one which is officinal. This is met with in white, silky crystals, efflorescing on exposure to air, and of an intensely bitter taste. The disulphate of quina acts upon the muscular, the vascular, and the nervous systems. It gives tone to the muscles, strength to the pulse, and increases the appetite when given in moderate doses. Exhibited in large ones, it occasions sickness, headache, flushing of the face, feelings of fulness of the head, accom-

panied by loss of sight and hearing, numbness of the extremities, and delirium.

Quina is universally known to be a specific for ague, and for certain other affections which have a tendency to recur at definite and regular periods. It is a specific also for some forms of neuralgia; and some practitioners rely upon it as the best remedy for certain forms of acute inflammation. The indications, then, for the exhibition of the disulphate or other salts of quina will be—

1. Debility.
2. The tendency to periodicity in certain disorders.
3. Some sorts of neuralgia.
4. Certain inflammatory affections.

The character of the debility which quina is especially calculated to relieve is that produced by the simple exhaustion of the natural powers, unaccompanied by inflammation of the mucous membranes, or continued febrile action. In proportion as the secretions may be healthy, and the debility, in short, be simple, so may we anticipate advantage from this remedy.

Of periodical disorders, not only is ague cured by quina, but the numerous disorders which arise from marsh miasma, and which are, like it, characterized by paroxysmal recurrence. These need not be dwelt upon now; but it should be observed that where marked remissions take place quina is of essential service in very many occasions, and that where the disorder arises from malaria it should be exhibited, although the case should be complicated even with local inflammation, such local ailment being met by its appropriate treatment.

The form of neuralgia best relieved by the alkaloid now under consideration is that probably dependent upon the exhalation from unhealthy districts.

With regard to the exhibition of bark or quina in continued fever, in erysipelas, and even in the convalescence from these disorders, it is not by any means to be resorted to, as was formerly the case, indiscriminately. The treatment of acute rheumatism by quina in very large doses, from a scruple, for instance, to three drachms per day, is strongly advocated by some continental physicians. With us, however, the employment of quina in inflammatory diseases may be considered as limited to some forms of scarlet fever, and to the atonic periods of rheumatic affections.

Before concluding this subject, some notice must be taken of the difference in effect between bark and quina or cinchona. These alkaloids are essentially the febrifugal portion of bark, which possesses, besides other properties, such as astringency, tonicity and stomachic qualities. The employment of bark, therefore, should not be entirely superseded by quina; and it is deserving of mention that even as a febrifuge bark is stated to have been in some cases more successful than the mere quina.

It alone remains for me to add that quina is efficacious when used endermically, and that bark locally applied acts as an antiseptic.

The preparations of bark of the "Pharmacopœia" are the infusion and tincture of the pale, the tincture of the yellow; the powder, the extract, and the decoction of each of the three officinal varieties.

A COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the Theatre of Queen's College, Birmingham.

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Epilepsy; difficult to treat, especially in the adult subject; infantile epilepsy, and that of childhood, more tractable; observations thereupon; distinguishing symptoms of epilepsy; their variation in different individuals; causes of epilepsy in early and adult life; treatment of it; convulsions to be regarded secondary to their cause; treatment indicated by this view; case of epilepsy seemingly arising from gastro-intestinal disturbance; effects of various treatment upon it; supervention of erysipelas; return of the epilepsy with severer symptoms; treatment; death; post-mortem appearances, observations; case of epilepsy chiefly characterized by debility; two other cases perhaps originating in gastro-intestinal disturbance; epilepsy consequent upon amenorrhœa; epilepsy ceasing after discharge of worms.

GENTLEMEN,—We have had several cases of epilepsy in the hospital of late. The present will be a favourable opportunity for their recapitulation with a few remarks.

Epilepsy is one of the most unsatisfactory and intractable diseases with which we have to contend. It often arises from causes which are as obscure as they are irremediable; and ours is then the melancholy office of variously ministering to the necessities of the sufferer, without diminishing the severity or lessening the number of them. These difficulties chiefly beset us in encountering the epilepsy of adults. Than this, there is no ordinary ailment more unmanageable. In the course of my practice I have treated very many cases of it, some of which have seemingly recovered, but truly speaking I could not say that medicines had much to do with the result. Others have improved for a time, and promised a permanent amendment, but, just as hope was at its highest, they suddenly relapsed and became worse than ever. In the majority, however, there has either been no approach at all towards improvement, or it has been so slow and insecure as to leave little room for rejoicing at the effects of drugs. From the personal observations I have been enabled to make, for some years past, in various public institutions, I am inclined to think that, if the truth were told, many similar testimonies to my own could be given to the almost incurable character of adult epilepsy. I do not say that such cases never completely recover—many of the milder of them undoubtedly do, but I think the process of cure is chiefly, if not altogether, Nature's: the worst cases are either persistent or fatal, despite the efforts of Nature or her ministers.

The epilepsy of early life is a less formidable ailment, because it often arises from circumstances which are capable of cure or of control, or which disappear spontaneously. When organic causes are in operation, the epileptic child is as much in jeopardy as the epileptic man; but when the convulsions are consequent upon irritation, itself not dangerous, or upon weakness from rapid growth or innutrition, there is rational ground to hope that recovery may be complete and permanent. The common saying, that a child may outlive its fits, bears reference to the constitutional change which we know to be connected with increase of years and of strength. Various causes tending to produce convulsions are operative in infancy and childhood, which either cease or are much mitigated with advancing age. Hence the reason that the epilepsy of early life is often lost in the adult.

Epilepsy is distinguished from all other ailments by the peculiar convulsions that characterize it. Usually at the moment of seizure the patient falls to the ground: this occasioned its earlier denomination, viz., *the falling sickness.* Whether he fall suddenly or slowly, the convulsions are the same, and consist of contortions or violent agitations of the body, which last from a few minutes to half an hour or more. The struggles are often excessive and accompanied with frightful distortions of the face; the eyes are fixed, and turned inwards or upwards, and the pupils generally contracted; the hands are spasmodically clinched, or incessantly grasping at some near object; the jaws are either fixed in spasm or the teeth gnash against each other, and frequently lacerate the lips or the protruding tongue; the breathing is heavy, oppressed, and irregular; the pulse quick, small, and hard; the lips often covered with foam. Whilst this state lasts, there is total insensibility. The convulsions having ceased, the patient either remains for some time motionless, and seemingly asleep, and then slowly awakes up, or he partially recovers his intelligence at once, stares about him in ignorance of what has happened, and then commits himself to rest, completely exhausted or half stupified.

The nature and duration of the attack vary considerably with different individuals. In strong robust people, the convulsive action is often so excessive as to require the best efforts of half a dozen attendants to restrain it; in delicate subjects, on the contrary, there is frequently only a sort of trembling of the whole body that is not difficult of subjugation. In other cases the spasms do not rapidly alternate with relaxations, but exhibit a sort of tonic or fixed character that gives to the seizure something of the appearance of tetanus. In others, again, there is great prostration at the commencement, and so little distortion or convulsion that the attack has sometimes been mistaken for a fainting fit. These differences have suggested a division of epilepsy into three species; but, with deference to the ingenious author of the distinctions, I cannot help thinking that they are best regarded as varieties of the same thing.

The causes of epilepsy are diversified and numerous. Occasionally it is found to be a hereditary ailment, but it is oftener consequent upon some functional or structural change in the system. In early life the most common causes are irritation—from teething, from worms, from mesenteric disease, from debility, or from some unknown alimentary disorder; hydrocephalus, also, and the sources of it, are frequent originators of the convulsions of children; not rarely it has been observed in connection with undue cerebral development. In the adult, also, the causes of epilepsy are various. Gastro-intestinal disorder is not an unfrequent source of the ailment; whatever prostrates the powers of the nervous system has the same tendency; it has been found associated with, and seemingly the result of, disease of the liver, heart, kidneys, and uterus, but most commonly of some altered condition of the brain or its investments—such as inflammation, congestion, extravasation, effusion, tumours, exostoses, softening, tuberculescence, abscess, and injury from external violence; often it attends upon amenorrhœa, or the period of menstruation; and often, again, it has no evident pathological connections, and necroscopy throws no light upon it.

In treating epilepsy it is paramountly necessary that you first search for the *cause* of it: *that* is what you have to contend with. Always bear in mind that the convulsions do not constitute the disease: they are only symptoms of a more remote and more serious suffering. If this appear remediable, attack it at once with the best remedies you have; if it arise from organic and incurable causes, you must be satisfied to palliate. The various sources of epileptic seizure will suggest to you that there can properly be no routine treatment instituted, but that every case must be judged by its pathological manifestations, and prescribed for accordingly.

The first case of epilepsy treated in the hospital, to which I wish to direct your attention, was in the person of Henry Bayliss, who was admitted under my care on the 24th of March last. He had suffered from epilepsy for more than two years, and had been under the care of several practitioners, but without any benefit. He was twenty-one years of age, very stoutly built, with a tendency to plethora. Had not led a dissipated life, and could not account for the occurrence of his fits. Lately he had little employment, and scarcely a sufficiency of food, and his epileptic attacks (seemingly in consequence) had increased in force and frequency. Sometimes he would not have a fit for two or three days, and then would have half a dozen in as many hours. Usually he had a fit every morning, either just before or just after rising. The convulsions were not severe, and generally lasted for ten or fifteen minutes. The patient had a stupid look, but did not complain of drowsiness, or any pain in his head, or singing

in his ears; his eyes were bright, and pupils natural; his appetite was capricious; tongue furred in the centre; bowels costive; pulse small, hard, and of proper frequency. He had almost constant pain in the epigastrium, increased on pressure, and he suffered much from gastro-intestinal flatulence.

The general aspect of this case inclined me to look upon the epilepsy as arising from a disordered state of the stomach and bowels, and the more so because the man had often been bled and blistered, but without deriving the least benefit from such treatment. He was ordered the following:—

℞. Infusi quassiæ, ℥vijss.; solutionis strychniæ, ʒij.; tinct. zingiberis, ʒiij. M. ft. mist. cujus cap. coch. ampla duo ter die.

Each dose of the mixture contained one-sixteenth of a grain of strychnine.

℞. Scammonii, jalapæ, aa. ℈ij.; hydrarg. chlor., gr. iv. Misce et divide in pulv. vj. equibus cap. j. omni mane.

During the first week of this treatment, the man had not a single fit, and his general health so much improved that I was almost inclined to think he would soon be well. The week, however, had scarcely elapsed, when the convulsions returned, and were more severe and rapidly successive than they had been for months past. It seemed as if the increased strength of the patient were all thrown into his paroxysms. From this time the strychnine disagreed with him, and, as he expressed a dislike to it, I substituted the following tonic, the gastric condition still inclining me to the opinion that therein was the chief disorder:—

℞. Inf. quassiæ, ℥viij.; tinct. ferri sesquichloridi, ʒij. M. fiat mist. cujus cap. coch. larga duo ter die. Cap. omni nocte, hora somni, pil. coloc. c. gr. x.

Under this plan the man again improved; he had only two fits during the first week of taking the iron, and not a single fit during the three subsequent weeks. He became more lively and active, lost his flatulence, and had scarcely any epigastric pain; his appetite was good, and digestion easy.

Again, however, he relapsed, and his convulsions became as violent and frequent as they had ever been. We pushed the iron some days longer, but to no purpose; it began to disagree with the patient, and he complained that it made him sick and chilled his stomach. The fur was again upon his tongue, and the flatulence had returned.

℞. Infusi cuspariæ, ℥viij.; ammon. carb., ℈ij. M. ft. mist. cap. coch. magna duo ter die. Contr. pil. ut antea.

This form of tonic benefited him for a few days, during which he was free from convulsions. But they returned again, and it was clear we had made no real advances towards recovery. Pain at the back of the head now came on, not severely, but still I thought it best to be suspicious of it. Depletive measures were rather contraindicated than otherwise, and I therefore provided a steady drain and counter-irritation, by a seton at the back of the neck. This was the object of preventing congestion or inflammatory action in the brain, at a small sacrifice of general strength. The head was relieved in consequence, and the fits abated for a few days, but only to return again, neither lessened in force nor frequency. We then suspended the mixture, and tried the oxide of silver in the following form:—

℞. Pil. coloc. c., ℈ij.; pulv. rhei, ℈j.; argenti oxydi, gr. iij. Misce in massam, dividendam in pil. xij. quarum capiat j. ter die.

For several days I thought some benefit was being derived from this plan; the stomach and bowels had recovered a proper tone and function, and the fits decreased both in number and severity. Before a fortnight had elapsed, we were again disappointed in the unmitigated return of the convulsions. There was, however, no pain in the head, or the least evidence of cerebral congestion; the tongue was less furred than before, there was little flatulence, the bowels were well open, and the appetite good. We continued the pills night and morning, and additionally tried the sulphate of zinc in mixture, as follows:—

℞. Zinci sulphatis, ℈j.; acidi sulph. dil., ʒj.; mist. camphoræ, ℥viij. M. ft. mist. cujus cap. coch. larg. duo ter die.

When three days had elapsed we increased the quantity of sulphate of zinc to half a drachm, and then to two scruples. Some amendment took place, decidedly, but, like all aforetime, it was only temporary.

On the 6th of July the seton was obliged to be removed, on account of an erysipelatous inflammation that had seized the part, and was threatening to extend itself. It did extend, and implicated the whole face and neck in one of the most serious forms of erysipelas I ever saw. The treatment now used I will detail to you in my next lecture, which will embrace the subject of erysipelas chiefly; I must, therefore, speak of my patient again after his recovery from the cutaneous inflammation. He was convalescent from this on the 16th, at which time he was taking bark and ammonia; his gums were slightly tender from the mercury that had been given, and though we had not bled him he was considerably reduced. During the prevalence of the erysipelas he had no fits, nor for above a week after his convalescence. I was not without a hope that his more acute ailment might supersede the chronic one, but again I was disappointed.

On the 25th the fits returned, but mildly, and not oftener than twice or thrice daily. At this time the patient was very feeble; he had no pain in his head, or confusion of vision, or any single symptom of cerebral disturbance; he complained of sinking at the epigastrium, and great lassitude. The ammonia and bark were continued, with an occasional aperient. Beef-tea, mutton-chop, and other nutritives, were ordered at stated intervals. He remained in much the same state until the 2nd of August, when strong reaction commenced; the skin became hot and dry; pulse 100, and firmer than usual; urine scanty and high-coloured; fits frequent. Still there were no cerebral symptoms. Feeling suspicious of this sudden reaction, but at the same time not daring to deplete, I ordered the following:—

℞. Sodæ bicarb., vini ipecac., tinct. digitalis, aa. ʒj.; aquæ, ℥viij. Misce; cap. coch. ampla duo tertia quaque hora. The feet to be immersed in hot mustard and water at bedtime. Low diet.

On the following morning the fever was still higher; head hot, with oppressive pain all over it; pulse 110, small and hard; bowels moderately open. Ten leeches were immediately applied to the temples, and their bleeding maintained for three hours; five grains of calomel were given at once, and a turpentine enema half an hour afterwards. The mixture to be continued. These means were of no avail. The convulsions became more frequent, though they diminished in individual severity, until a few hours before his death, when he became calm and semi-comatose, and died early on the morning of Aug. 4.

The *post-mortem* discovered some congestion of the superficial vessels of the brain; none of its membranes or substance. There was slight subarachnoid effusion, but this was quite clear and free from lymph. About half an ounce of perfectly clear fluid was found in each lateral ventricle, and about the same quantity at the base of the brain. A triangular piece of bone, three-quarters of an inch long, and half an inch broad at its base, was found in the folds of the *falx cerebri*, lying upon the summit of the left hemisphere of the brain; it did not press into the latter, or appear in any way mechanically to interfere with it. The only other strange appearance in the body was concentric hypertrophy of the left ventricle of the heart: the cavity was not large enough to contain more than three quarters of an ounce of fluid, and its walls were, in places, an inch and a half in thickness.

In this case the gastro-intestinal disturbance ... stanced in its persistence, and in the temporary relief frequently afforded by tonics. Yet these did not effect a cure, which may, perhaps, leave us in doubt whether the radical affection were alimentary. Then there was the bone in the *falx cerebri*; less deposits than that within the cranium have committed injury and proved fatal, and yet it is somewhat singular that, if this were the source of the convulsions, these should vary according to the state of the stomach and bowels. The vascular condition of the brain's surface and the nature of the effused fluid clearly showed that these were only of recent date—the former not more than forty-eight hours, the latter much less, from the period of death. It is clear, therefore, that this cerebral condition had no share in the earlier epilepsy. Perhaps some irritation caused by the osseous deposit in the falx, increased sympathetically by any disturbed condition of stomach and bowels, was the source of the epilepsy as it originally existed, and continued until the last severe seizures; the latter were plainly due to congestion, which, though not active and coming upon a state of prostration, was yet enough, under predisposing circumstances, to quickly terminate the patient's existence.

Some weeks back we had a patient named Marshall, in the top ward, the subject of that form of epilepsy which I spoke of as being sometimes mistaken for a fainting fit. He was very pale and rather emaciated-looking. His fits used to occur in a morning, and, with scarcely perceptible convulsion, left him prostrate and powerless for hours. I could not learn the history of his ailment, but I suspect the cause of it to have been due to some youthful improprieties. His tongue was always clean, and appetite and digestion good, but he had a feeble and sometimes intermittent pulse, and the systolic sound of his heart was indistinctly audible. He improved under the use of a bitter infusion with ammonia, and good living; but we were compelled at last to dismiss him on account of his propensity to lie in bed, and to give exaggerated reports of his ailment.

In the same ward I have at present an epileptic patient, a little boy, ten years of age. His ailment is of about eighteen months' duration. He has no pain in his head or any other indication of cerebral disease; but his tongue is always furred, and he has epigastric tenderness. His pulse is good, appetite variable, bowels generally costive. At first I suspected he had worms, and gave him various anthelmintic purges, but without producing any good effects. I then tried him with a light chalybeate tonic, that proved serviceable for a time, and then its efficacy failed; next I gave him a bitter infusion with ammonia, but whilst taking this, his fits strangely increased in number and force; oxide of silver was next given, but after a fair trial I was not satisfied that it had been of any use; at present he is taking sulphate of zinc in solution, in doses of five grains each (three grains was the commencing dose), and it has done him more good than anything. He has taken it for more than a month, and the fits have systematically diminished both in force and frequency. This boy bids fair to get well; but my acquaintance with the uncertainty of the disease does not leave me at liberty to indulge in more than a qualified hope.

There is an out-patient named Wilkins, an epileptic, who has been under my care about five weeks. The only pain this man complains of is across his eyes, and at the pit of his stomach. I expect that disturbance of the latter organ is the pathological fault. The frontal headache is increased after meals, and the epigastric pain is worst when the stomach is empty. The tongue is deeply furred; bowels costive, and generally flatulent. Aperients were first tried, with vegetable tonics and soda, but without effect. Then we gave chalybeates, but they were also unavailing. Next we tried ammonia in a bitter infusion; that did good, but it was only for a time. Then we gave oxide of silver, as I have previously prescribed it, but its services, again,

were only temporary. He is now taking sulphate of zinc, in doses of four grains three times a day, and during its use has been certainly better than ever whilst under my care. At the same time, I am not unprepared to find him, some morning, as bad as he has ever been.

A week ago I admitted an out-patient, named Harriss, the subject of epilepsy. Her fits, which occur most days, and often more than once daily, came on about two months ago. She is seventeen years of age, and rather more than four months since ceased to menstruate. She had previously been very regular, had enjoyed excellent health, and had no apprehension or forewarning of her fits. In this girl's case there is nothing to indicate that other than uterine causes are operative in the production of her convulsions. She is taking warm purgatives, with chalybeate tonics, living well, and walking three or four miles daily. I think the restoration of her uterine function will be marked by a cessation of her convulsive fits.

You have seen one or two cases of epilepsy in children cured by purgatives that have caused the discharge of worms. These cases, however, require no comment.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), M.R.S., Physician to the Royal Infirmary for Children, &c.

(Continued from page 426.)

I occupied your time at the last lecture, gentlemen, in reviewing some points of differential diagnosis in relation to tuberculous meningitis and other disorders. Before proceeding to consider the treatment of the former, I must say a few words on the "pathogeny" of the affection, the more so as the arriving at a true interpretation of it is the sole guide we have for our therapeutic interference. I shall say nothing about the opinions held upon the point in question before the times of Quin and Rush, because they were the earliest, I believe, who, proceeding upon the evidences of morbid anatomy, endeavoured to arrive at a right conception of the truth. From their investigations, and those of others, up to the present time, a very numerous class believes that, to use the words of an eminent practitioner, "the disease is clearly inflammatory, and the treatment of inflammation is that which is demanded for its cure;" in fact, another writer has remarked that this doctrine "has become a household creed." In late times, however, very different views have been held of *acute hydrocephalus*, both as regards its pathology and therapeutics, more especially by the continental writers.

The main point for you first of all to become satisfied of is this, that, although there may be inflammation of some kind, degree, or peculiarity involved in the series of diseased actions at some one or other of the stages of their development, the inflammation never occurs as the consequence of temporary external influences alone; or, although its outbreak may be excited by some disorder already existing, the more general and fundamental origin of it lies in a different direction. Next, that there occur cases of *acute hydrocephalus* characterized by lesions not necessarily involving inflammatory action in their production or sequence such as softening, ventricular effusion, and granular deposit. Lastly, that that form of disorder — acute in its march and character, rapidly advancing to a fatal result if permitted to run on, but often subdued by the interference of remedial measures—although called hydrocephalus by many, is a different disorder altogether, and does not constitute the common hydrocephalus which we usually observe. The former is the "disease clearly inflammatory in its nature, and the treatment of inflammation is that which is demanded for its cure:" it is that which is an independent inflammatory process, either completely idiopathic or occurring as an intercurrent affection of some febrile disorder; it is that which may be found independent of any primary constitutional vice; it is that which may be produced alone by external influences. It is true simple meningitis—it has nothing specific about it like the other. What is this other? It is an open manifestation of the scrofulous diathesis; it is tuberculosis with its attendant phenomena attacking the membranes of the brain; it is scrofulous disease of the nervous centre. This manifestation of scrofula varies in different cases, but the common form is that of the exudation of tubercular granulations, accompanied with meningitis—it is tuberculous meningitis: it is this which is the common water on the brain, which disorder, in many cases, has, as a characteristic, effusion of fluid in the ventricles.

But what more particularly, may it be asked, are the characters of the *local action*, although it be admitted the scrofulous or tuberculous state of body is the foundation of it all? We find the lesions to be exudations, effusions, softening, and congestion. Which of these *necessarily* indicate there has been increased vascular action or inflammation in the brain or its membranes? But few of their forms *necessarily* indicate the previous or present existence, or would involve the future of such a state at all. Have we, then, no evidence of inflammation being included in the series of diseased actions constituting "acute hydrocephalus"? In the majority of cases we have—we have such evidence afforded both by symptoms and *post-mortem* phenomena. In the combination of cephalalgia, increased sensibility of eye and ear, fretfulness if disturbed, heat of scalp, tense pulsating fontanelles, vomiting, &c., all signs of irritation, with vascular congestion, effusions of concrete lymph or purulent matter, or milky effusions at the base or on the hemispheres of the brain, and along the course of the meningeal vessels as seen after death, we find enough evidence to warrant us in saying that inflammation has existed.

But do we *always* have such combination of symptoms and morbid appearances? We do not. We may have all the symptoms, and yet no such morbid phenomena. We may have, in lieu of the latter, either granular deposit and effusion in the ventricles, or the former with softening and no effusion; we may even have great effusion with scarcely any softening, or but very slight granular deposit.

You know, too, that, except in a few cases, exudation of the granular matter always accompanies what evidences of the inflammation may exist.

Now, I need not, after all I have said on scrofula, attempt to prove that this granular deposition or exudation of the tuberculous matter usually ensues without having inflammation as its cause or forerunner. It would be beyond the intention of these lectures to show you that that peculiar lesion called *white softening* is not the result of inflammatory action; and you must accept from me, as the truth, that an effusion of serum may ensue without being produced by an inflammatory action, and that this is especially the case in the scrofulous or tuberculous diathesis. I refer you to the writings of Schweninger, Bright, and Bennett.

Although admitting, then, that in a great many cases there has been inflammation, as shown by the morbid phenomena; and also—or, if you like it better—very great *irritation*, as shown by the earlier symptoms during life, yet it may be affirmed this inflammation is not of the common kind. We find, too, that in others the disease runs its course without any traces, after death, necessarily inferring the previous existence of this action, and with much the same symptoms as it does where such traces exist. Not only this, but we have every reason to believe that, even in those cases in which there is distinct proof of inflammatory action having preceded the fatal event, this action is, in most cases, a secondary phenomenon, and is caused by other more primary and important changes in the brain or its coverings.

We are led, then, to infer other causes besides mere inflammation as the pathologic essence of this disorder; we are forced to look for a more primary derangement, of which congestion, inflammation, softening, and effusion, are effects, not causes. From the fact of this disorder being so constantly connected with the scrofulous diathesis, from the more constant morbid lesion met with after death being tubercular or granular deposit, from the frequent coexistence of tuberculosis of other organs during its course, we are led to infer its connection with scrofulous or tuberculous disorder. This connection is still further strengthened by the fact that the assumption of its being a *common inflammation* helps in no way to explain the nature of the disease—nay, such assumption is negatived by the latter giving us proof that it often kills without leaving any traces behind it which necessarily prove the existence of that morbid action. Not only this, but, when we are sure this action has ensued, it does not sufficiently explain the symptoms during life as being entirely dependent on it and its sequences: for from what we know of those cases, which may truly be regarded cases of simple meningitis, the symptoms, course, and progress of the malady, as also its *post-mortem* phenomena, are different to those of our present disorder, and which inflammation also seeks to explain. It is also allowable to fortify our argument against the view in question by our producing proof that the therapeutic indications followed out on the above assumption have no power of arresting the malady; but, on the contrary, will often hasten the fatal event.

From the peculiarity of symptoms and course of the malady, from the morbid appearances after death, and from the result of particular modes of treatment, as well as from the constitution of body in which it occurs, and its correlation to other disorders, we deny, then, that "acute hydrocephalus" is a common inflammatory disorder. Suppose it be admitted, then, on the other hand, that it is a manifestation of scrofulous disease, it may be asked, how are the local phenomena to be explained? The most frequent of them, you know, is the granular deposit, or tuberculous matter. This, I have already told you, is, in the greater number of cases, deposited as a subversion of the healthy act of nutrition; and that, if the state of the blood be very bad, and the constitutional tendency to persist in forming it so be very great, organic assimilation of any of the more important organs can scarcely be attempted in children without being accompanied by this non-vascular, aplastic, albuminous deposit. (a)

The next more frequent phenomenon is ventricular effusion. In the scrofulous or tuberculous diathesis the blood is unusually serous; and you know that, of all the conditions of this fluid inclining to effusion, a poor or watery one is the most general, both from the greater tendency watery blood has to transude through the parieties of the vessels, and also by the failure and irregular distribution of the force of the circulation occasioned by such a fluid; and we know that the movement of it within small vessels in the scrofulous diathesis is very sluggish. "What is the precise essence," says Dr. Bright, "of the scrofulous diathesis, or how far it depends upon the construction of vessels, or if how far it is to be ascribed to the direct influence of the nerves, still remains a matter for investigation; but that the feeble powers of resisting mischief which accompany this diathesis greatly predispose to disorganization, and more particularly to effusion, is most certain; and even when no tubercular disease can be detected the effusion of serum in the form of hydrocephalus frequently occurs."

In relation to this point, Schweninger writes so appositely, that I cannot refrain quoting from Dr. Bennet's translation of the paragraph. He says,—"A slight glance at the symptoms and *post-mortem* appearances of tubercular diseases in general will show us that nothing is

(a) *Vide Medical Times*, No. 397, page 210; also Carpenter.

more common than preternatural effusions of serum either as the product of secretion or excretion. Œdema of the feet, and general anasarca, frequently occur, not merely in the latter stages, but repeatedly in the course of such diseases. A more abundant secretion of fluid from the arachnoid and into the ventricles of the brain is found in phthisical subjects than in those dying of most other diseases. Hydropericardium is also common, as well as œdema of many of the other internal organs. . . . If serous effusion be a common occurrence in tubercular disease in general, we need not be surprised that in children it should so frequently occur in the brain—an organ which in childhood is in a state of high organic functional development."

The next lesion I have to notice is the *white softening* which is met with. In hydrocephalus we meet with "ramollissement" of the central part of the brain, which in certain cases undoubtedly must be referred to the absorption of ventricular effusion, giving rise at first to œdema of the ventricular parieties, and afterwards to pulpy disorganization. This kind of softening may be produced either by infiltration of the fluid during life, after the distention of the ventricles has produced rupture of some portion of their walls, or after death by the simple imbibition of the fluid in question by the structures surrounding it. This you will find is proved by the researches of Rilliet, Guillot, and Paterson, although Rokitansky denies it. But there is another kind of *softening*, which is certainly no more referrible to such causes any more than it is in those cases to inflammatory action; and it is this softening which is an important element in the pathology of the disease. Not that inflammatory action cannot or may not produce it, for sometimes it does; but the softening of tuberculous meningitis does not own it for its cause, for we have it existing, and yet no evidence of such an action having ensued, unless the softening itself be assumed to be such; and this, you know, would be what logicians call a *petitio principii* at once, and therefore we cannot argue the matter. What does it depend on? On a specific alteration in the act of nutrition, of organic assimilation, closely connected with that condition of blood and small vessels we see in the dyscrasia of scrofula.

Lastly, it must be admitted, as before remarked, that the effusion of lymph, of concrete pus, together with the frequent congestion of the vessels along the course of which, in the membranes, these effusions are more frequently seen, are evidences of inflammation having existed when such effusions are observed. But, admitting that, it is still to be asked, Is not this inflammation, in the majority of cases secondary or consequent upon, or intercurrent with, the granular deposit? Does it not own something as a cause—which is the true essence of the disease—instead of it being the disease it self? Not only this, but is not that form of inflammation which we see connected with the deposition of tuberculous matter, or which we call scrofulous inflammation, of so specific a character that, even admitting a disease was characterized by its supervention, we should have to reason upon it, so far as practical purposes were considered, in a different way to which we should in reviewing a disorder marked by inflammation of the simple common, or, as it is often called, *healthy* form? But in this disorder we have also fatal cases occurring, in which we have scarcely any satisfactory evidences that inflammation even of this secondary specific character has occurred at all. How, then can inflammation constitute the disease we have regarded as the commonly observed form of "water on the brain"? Broadly as this doctrine may be asserted, it is, however, equally as true that tuberculosis of the meninges, &c., may be preceded by congestive or scrofulous inflammation in particular cases; and, therefore, when cerebral congestion appears in a scrofulous child, we must be careful in the extreme as to the consequences which may follow. It is equally certain, to my mind, that in the great majority of cases the deposit of tuberculous granules, &c., is the primary local mischief which produces the local irritation, giving rise to the inflammation, and which increased vascular disturbance, must be regarded as different from the common type.

Pulmonary tuberculosis is not an inflammatory disorder; but congestive or scrofulous inflammation may in some cases precede the morbid deposit. Tuberculosis of the lungs mostly precedes the local congestions, which, when they exist, are primarily caused by the irritation of the deposit. Although such congestions or inflammation, in phthisis, may give rise to serious results, yet phthisis is not an inflammatory disorder. So must we reason in a like manner with regard to *tuberculous meningitis* or "acute hydrocephalus."

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.

By Professor MATTEUCCI, of Pisa.

PART X.

ELECTRIC FISHES.—CURRENT PROPER OF THE FROG.

Of the five species of electric fishes known to us at present, viz., *raia torpedo, gymnotus electricus, silurus electricus, tetrodon electricus*, and *trichurus electricus*, the two former alone (and more particularly the raia torpedo) have been the subject of careful and attentive study.

The seizing of a live torpedo with the hands is speedily attended with strong electric shocks in the wrists and arms, similar to those produced by a pile constructed of from 100 to 150 elements, and charged with salt water; these shocks succeed one another sometimes with such frequency and rapidity as to become quite unbearable. After the lapse of some time, however, the animal loses its vivacity, and the shocks become less vigorous. The electric shock given by the torpedo is sufficiently strong to be felt, even though the recipient be not in immediate contact with the animal: thus, whenever there happens to be a torpedo among the fishes in the nets of a fisherman, the latter is speedily made aware of its presence by feeling electric shocks, more particularly in the arms, upon throwing water in a continuous stream upon the fishes (for the purpose of washing them). The torpedo has the power to communicate this shock even at considerable distances through the water in which it exists—a faculty which seems to have been bestowed upon this animal by nature in order to enable it to kill the fishes intended for its food.

The identity of the phenomena presented by the torpedo with those of the electric force has been long established. Numerous experiments have fully demonstrated that the phenomena of the electric discharge and shock of the torpedo are to be attributed to an electric current generated in two particular organs, denominated *electric organs*, and of which the dorsal face is positive, the abdominal negative. The electric discharge is a voluntary act on the part of the animal, and all external excitation acts upon the electric organ solely by the intermediacy of the will; indeed, as the discharge would pass actually through the body of the torpedo were there not external circuits and conductors to receive it, it is obvious that the animal would immediately cease to give electric discharges if removed from the water, or touched with irritating bodies or left altogether untouched. It is not without reason, therefore, that nature has placed animals endowed with this faculty in a conducting fluid.

If one of the electric organs of a living and vigorous torpedo be rapidly severed from the covering and surrounding cartilages and integuments, leaving intact the large trunks of the nerves alone which spread their ramifications through the organ, the latter will continue to exhibit the usual electric phenomena—which proves that the cartilages, integuments, &c., are without the slightest influence upon the discharge of the electric shocks; and shows likewise that the circulation of the blood is not absolutely indispensable for the manifestation of the electric phenomena. If the organ thus severed from the animal be covered with frogs prepared in the usual way, and the conductors of the galvanometer be applied respectively to the two faces, excitation of the nerves will be immediately followed by contractions of the frogs, and deviation of the needle indicating the circulation of an electric current from the dorsal to the abdominal face of the organ.

When proceeding in this manner, another very curious phenomenon is observed, viz., the discharge is obtained at one time in one, at another in another, portion of the electric organ; to perceive this clearly, it suffices to excite separately and singly each one of the nerves of the organ, when those frogs alone will be seen to contract that are placed upon one of the ramifications of the excited nerve.

These discharges are obtained only for a very short space of time, which may be lengthened, however, by passing an electric current through the nerve of the organ thus severed from the animal: this current obeys here the same laws which regulate its action on the muscles. It excites the electric discharge at the moment it commences to circulate in the nerve of the organ; this discharge is not repeated whilst the current continues to traverse the nerve, but may be excited anew by interrupting the current.

The parenchyma of the electric organ continues to retain the electric property for some time, although completely severed from the animal and pierced and cut in various directions; but it ceases to manifest electric phenomena if the albumen which enters largely into its composition is coagulated, either by immersing the organ in boiling water, or by subjecting it to the action of acids.

The preceding facts prove that the electric discharge of the torpedo is under the direct influence of the will of the animal, which is transmitted through the nerves spreading their ramifications in the electric organs. These nerves are thus neither sensory nor motory, and have no other function except to excite the action of the organ in which they are distributed.

With respect to the influence which the brain exercises upon the discharge of the torpedo, the author has ascertained, by a series of experiments, that the olfactory and optical lobes of the brain and the cerebellum are altogether unconnected with the electric phenomena presented by the animal, and that the fourth lobe (denominated by the author *electric lobe*) alone is most intimately connected with these phenomena: the three former parts may be removed without impairing the electric faculty of the animal, whereas the removal or radical lesion of the fourth destroys this faculty for ever, even though the other three lobes be left intact.

The torpedo ceases to manifest its electric properties when immersed in water of 32° Fahrenheit, but it recovers them upon immersion in water of from 59° to 68° Fahrenheit. In water of about 86° Fahrenheit, the torpedo dies speedily, the extinction of life being attended with a great many violent discharges.

The discharge of a great many successive shocks seems to exhaust or suspend the electric faculty; rest restores it.

Narcotic poisons (strychnine, morphine, &c.), given in large doses, kill the torpedo speedily, the extinction of life being attended with a great number of vigorous and rapid discharges; small doses of these poisons put the animal into a state of extreme excitement, when the slightest irritation suffices to provoke electric shocks. The section of the spinal marrow deprives the parts situated below the cut of the power of giving electric shocks; which proves that the electric discharge is produced by reflex action upon the spinal marrow.

The analogies between muscular contractions and the discharge of the torpedo are complete: everything that destroys, augments, or modifies the one, acts equally and in the same manner upon the other.

The *gymnotus electricus* has not been so fully studied as the torpedo. From Faraday's and the

author's observations and experiments it results, however, that the electrical phenomena presented by this animal are also identical with those of the electric force. Faraday has established that the cephalic extremity of the gymnotus constitutes the positive, the caudal extremity the negative pole. Faraday calculates the discharge of the gymnotus equal to that of a charged battery of fifteen bottles, representing a surface of 3500 square inches English. The author observed that the gymnotus possesses the faculty to discharge either part only, or the whole, of its electric organ. This requires, however, further confirmation.

According to the important anatomical researches and observations of Savi and Robin, the electric organ of the torpedo is composed of a certain number (about 400 to 500) of prismatic vesicular masses, resembling grains of rice—the whole organ presenting the aspect of a honeycomb. Each of the component prisms presents a certain number of partitions, dividing it perpendicularly at its axis, and which seem to consist simply of the aponeurotic walls of the adjoining vesicular masses. Nervous ramifications are distributed over these partitions. These ramifications result from elementary fibres disseminated in meshes over the walls of the vesicles, and terminating in links in the electrical lobe, and most probably likewise on the walls of the vesicles. The nervous ramifications of the electric organ would accordingly form a great number of closed circuits, having each of them one link in the electric lobe, and the other in the wall of the vesicle of the electric organ. The close resemblance or, more properly speaking, the identity of structure presented by the vesicles of the electric organ leads us to look upon these vesicles as the elementary organ of the electric apparatus; this hypothesis is supported, also, by the identity of composition which they present—every one of them being filled with a dense fluid, composed of nine parts of water, one part of albumen, and a little sea-salt. The author has demonstrated by direct experiments, that each of these vesicles forms one of the *units* which constitute the *sum* of the elementary organs of the electric apparatus. He removed from a living torpedo a piece of one of the prisms of the electric organ, and placed the removed piece (which was about the size of a large pin's head) in contact with the nerve of the galvanoscopic frog; he found that the frog contracted when the fragment was pricked with a piece of broken glass or some other pointed substance.

Now, if we reflect that each of these prisms (of which Hunter counted 470 in one single electric organ of the torpedo) is composed of a very great number of vesicles or elementary organs, we can readily account for the intensity and vigour of the discharge, considering that this must be proportional to the number of vesicles.

The electric organ may, accordingly, be looked upon as a real multiplicator apparatus.

Volta's hypothesis, viz., that the electric organ should be considered a pile, which the animal puts into action by compressing the organ, and thus establishing a contact between the latter and the skin, has not been confirmed by the results of the experiments made on the torpedo. It has recently been asserted that the electric organ of the torpedo is analogous to an electro-magnetic spiral, and also that the discharge from it is a phenomenon of induction. When we reflect that microscopic observation has demonstrated the existence of a nervous filament in every one of the vesicles composing the electric organ, we find it difficult to discover this pretended analogy between the electric apparatus of the torpedo, and an electro-dynamic spiral.

Another hypothesis may be started which, as we shall see hereafter, is supported by some facts, or, at all events, by very strong analogies. Let us suppose that the two opposite electricities separate each time that the nervous excitation arrives at one of the elementary vesicles of the electric organ of the torpedo. As heat, chemical and mechanical action, friction, pressure, &c., effect this separation of the two opposite electricities in other bodies, we have some reason to suppose that the nervous excitation may act in a similar manner upon the vesicle of the electric organ; the identity of structure and disposition of the vesicles warrants us to assume that every one of the prisms composing the electric organ forms a pile, but only for the infinitely short period that the excitation lasts: the electric organ may accordingly be considered as a multiplicator apparatus which remains charged only for one instant—placed, as it is, in the midst of conductors. The discharge will take place, according to this hypothesis, partly in the interior of the organ, and partly on the outside in the surrounding medium; but the outside discharge will be the stronger, in proportion as the surrounding medium happens to be a better conductor than the interior of the organ. (That this discharge really takes place in the interior of the organ has been proved experimentally.)

From this hypothesis it would result that the opposite electricities should invariably be found at the longitudinal extremities of the prisms, and their intensity should be proportional to the length of these prisms, or, in other words, to the number of cells composing each of them. Actual observation and examination of the organs of the torpedo and gymnotus tends to confirm these hypotheses.

The relative position of the poles in the gymnotus corresponds to that of the poles in the torpedo, as regards the extremities of the prisms. In the gymnotus the prisms extend along the axis of the body of the animal, or, in other words, from the tail to the head, or *vice versâ*. In the torpedo, on the other hand, the extremities of the prisms are respectively in contact with the back and belly. The head and tail are accordingly the poles in the gymnotus, whilst in the torpedo these poles are found on the back and belly.

The structure of the electric organ in the silurus would likewise lead us to place the poles in that fish at the head and tail, as in the gymnotus.

The electric discharges are the most intense in those points of the organ which are nearest the median line, where, likewise, the height of the prisms and the number of nervous filaments are the most considerable.

For a more intimate and satisfactory knowledge of the electric organ of these fishes we must look to the future investigations and revelations of microscopic anatomy.

The phenomenon which takes place in the electric organ is certainly analogous to electric induction: the constancy in the direction of the discharge supposes a definite direction in the action of the nervous force; and this supposition seems not without foundation, when we consider that the excitation of the fourth lobe and of the electric nerves has no other effect except to produce the discharge.

We come now, finally, to another phenomenon of animal electricity, viz., the *current proper of the frog*.

Galvani discovered that a frog, prepared in his usual way, contracts when the lumbar nerves are brought into contact with the muscles of the thigh or leg. Nobili was the first to study this phenomenon with the galvanometer. His fundamental experiment may be readily repeated:—Take a frog, prepared in the usual way; place it into two small glasses, filled with distilled water in such a manner that the lumbar nerves are immersed in the water on the one, and the legs on the other, side. Close the circle by immersing into the two glasses the two platinum wire extremities of the galvanometer: you will observe that the needle deviates to the extent of 5°, 10°, or even 15°; and that the direction of the deviation indicates a current circulating from the legs to the nerves, or, in other terms, from the legs to the upper part of the body of the animal.

These indications of an electric current will increase in intensity if, instead of using a single frog, the experiment be made with a pile of frogs. The author found in his experiments upon this subject that the degree of deviation of the needle is proportional to the number of frogs composing the pile; that the deviation is more marked when an alkaline, or saline, or, better still, acid solution is used instead of distilled water; and that the direction of the current is constant (from the legs to the upper part of the body of the animal), whatever the nature of the liquid used.

At the same moment that the galvanometer indicates the presence and direction of the current the frogs exhibit contractions.

These contractions are analogous to those observed by Galvani; they take place each time that the circle is completed with a conducting body, such as a cotton wick or piece of paper imbibed with water, or any conducting liquid whatever, provided, of course, that the conducting body be disposed in a manner to touch the nerves of the animal on the one, and the musles on the other, side; these contractions are again observed at the moment that the circuit is broken.

This current has been denominated *current of the frog*; the author has substituted for this "*current proper of the frog*," because, till very lately, its existence seemed confined to the frog alone. The current proper of the frog exists exclusively in the leg of the animal.

The author has recently discovered that this current, which was hitherto deemed peculiar to the frog, is a phenomenon appertaining to all animals. The simple statement and explanation of the fact is this: all muscles endowed with life, and in which the tendinous extremities are not equally distributed, present the existence of an electric current in the interior of the muscle, directed from the tendon to the muscle. All animals have some muscles in which one of the tendinous extremities is less broad than the other—the one presenting the appearance of a sort of string, the other that of a ribbon. This is the case with the gastro-cnemius of the frog, and of some other animals, and with the pectoral muscle of birds. A pile constructed of these muscles presents an electric current circulating in the muscles from the tendinous extremity to the muscular surface. Care must be taken, in the construction of such piles, to avoid laying bare the internal part of the muscle, and the elements must be placed in contact with one another in such a manner that the tendinous extremity touches invariably the surface of the muscle, and is as far as possible removed from the interior. If this precaution be neglected, the circle will include the *muscular current*, which, being directed from the interior to the surface, would follow a direction the very reverse of that of the *current proper*.

Having thus established the conditions upon which the current proper depends, the author proceeds to assert that the muscular current and current proper have one and the same origin in common. The correctness of this assertion he maintains principally upon the ground that the divers causes which modify the organism and life of animals act in the same manner upon the muscular current and upon the current proper.

Anatomists have recently demonstrated that the elementary muscular fibrils merge immediately and without interruption into the tendinous fibrils, and that the sarcolemma which invests the muscle terminates abruptly at the point of insertion or union between the muscular and tendinous fibrils. The tendon may accordingly, with some reason, be considered to possess the same electric condition as the interior of the muscle, and we may, therefore, assume that a portion of the muscular current is put into circulation by establishing, by means of a good conductor, a galvanic circle between the tendon and the sarcolemma investing the muscle.

PART XI.

PHYSIOLOGICAL ACTION OF GRAVITY, LIGHT, AND HEAT.

Under the heading of "Physiological Action of Gravity" we mean here simply to treat of a peculiar phenomenon observed in the development

of plants, and in which it would be impossible not to recognise the influence of gravity.

Generally speaking, all plants exhibit in their germination and growth the tendency of the roots to descend and of the stalks to ascend. Experience has demonstrated that this opposite tendency of the different parts of the plant is attributable neither to the humidity of the soil, nor to the action of light or of the atmosphere. The roots will continue to descend, and the stalk to ascend, even if the order of Nature be inverted and the stalk placed in contact with the soil and the roots exposed to the light. We are indebted to Knight for some ingenious experiments which, though they have not fully enlightened us upon the subject, have at all events demonstrated the existence of one of the causes of the phenomenon. Hunter caused a barrel full of earth, and in the centre of which he had placed some beans, to revolve round a horizontal axis; when this rotatory motion had continued for several days, he examined the beans and found the direction of the roots parallel to the axis of rotation. Knight fixed some beans in a suitable manner upon the periphery of a wheel, which he caused subsequently to revolve for a considerable period of time, taking care to keep the beans constantly moistened: in one experiment the revolving wheel was placed in a vertical, in another in a horizontal, position. Knight found that in the former case the roots of the young plants were directed towards the circumference, and the stalks towards the centre, of the wheel; whilst in the latter case, the roots and stalks were directed obliquely, the roots, however, still inclined towards the circumference of the wheel.

These experiments show that the direction of the stalks and roots of plants is under the influence of gravity; the oblique position of the roots, in the second experiment, is owing to the contending influence of two forces, viz., the centrifugal force, which tends to place them in the horizontal, and the force of gravitation, which tends to place them in the vertical, position.

To account for the facts revealed by Hunter's and Knight's experiment, it is obviously necessary to assume—1, that the new parts of the young plant are in a state of greater or less fluidity; 2, that the divers parts of the young plant are of different density; 3, that the densest parts of the young plant incline towards the roots, at least during the first period of germination.

Dutrochet, without denying the influence of gravity upon the usual direction of the roots and stalks of plants, maintains that there exists another cause for this phenomenon, viz., the unequal development of the cellular system of the stalk and roots, and the different degree of turgescence produced in the cells of this system by endosmosis.

We know hardly anything of the physiological action of light upon animals. Edwards has shown that the development of the eggs of frogs, and subsequently of the tadpoles, progresses more rapidly in the sun than in dark places.

The colours of animals appear the more intense and lively in proportion to the intensity of the light to which they are exposed. Some physiologists maintain that the action of the solar rays increases the cutaneous exhalation of carbonic acid in animals; but, as we do not know to which of the solar rays we have to ascribe this effect, we are unable to attribute it positively to the chemical action of those rays, however probable this appears otherwise.

The action of light upon plants is better known. The respiration of the plant, in other words, the decomposition of the carbonic acid operated by the green parts, the fixation of the carbon, and exhalation of the oxygen, proceed only under the influence of the solar light: in the dark, on the contrary, the plant absorbs oxygen and emits carbonic acid. It is in the light that plants acquire their tints, and that their tissues contract and harden; whilst, in the dark, they lose their colour, and their stalks become lengthened and softened. The action of intense artificial light is similar to that of the sun, although, of course, much feebler. The only known fact calculated to throw some light upon this singular action of the sun is that revealed by Daguerre's invention: in taking images with the Daguerreotype it has been observed that the green parts of plants and, generally speaking, all green substances are not, like the other parts, reproduced upon the plate. Now, as it is clearly and fully established that the formation of images by Daguerre's process is owing to the action of the chemical rays of solar light, we can only account for the non-reproduction of the green parts by assuming that these parts absorb the chemical rays of the sun entirely. This would lead to the conclusion that the production of the green matter in plants, and the extraordinary property, with which this matter seems endowed, to decompose carbonic acid under the influence of light—absorbing the carbon and exhaling the oxygen—are dependent upon the chemical action of the solar rays. At all events, it results from some experiments made by Draper, that it is principally under the influence of the luminous rays, properly so termed (the yellow rays), that the green matter of the plants decomposes carbonic acid. This subject offers a wide field for research and experiments.

The roots of certain plants have a tendency to shun the light, whilst those of others, on the contrary, eagerly seek it. The roots of several plants of the family of the *Crucifera* are instances of the former, those of the *allium cepa*, of the latter, tendency.

According to Dutrochet, the structure of the internal layer of the bark of the roots is different in roots that shun, from that in those which seek, the light; and it is to this difference in structure that Dutrochet ascribes the opposite tendencies. Generally speaking, the largest cells in the bark of the roots of young plants are found in the central layers; and they go on decreasing in size both to the external and internal faces of the bark; but in some cases this decrease is less marked in the outer, in others in the inner, layers. The influence of light and solar heat causes the plant to perspire and the cells to give up the water which they contain; hence it results that the roots seek the light in all cases where the internal layers of the bark are of greater density than the external, and that, on the other hand, they shun the light in all cases where the external layers are of greater density than the internal.

We come now to the influence which heat exercises upon organized living bodies.

A suitable temperature may be considered one of the essential conditions of life. The physico-chemical phenomena of living bodies are produced only within certain limits of temperature, which are likewise the limits of animal and vegetable life.

We know that the various actions of contact take place only at a certain temperature.

The fecundation and germination of vegetables take place only at a certain temperature, and the actions of contact play a considerable part in this mysterious phenomenon.

Edwards found that frogs placed in river water of 32° Fahrenheit, lived eight hours; in water of 50° Fahrenheit, six hours; of 60°.8 Fahrenheit, two hours; of 71°.6 Fahrenheit, from thirty-five to seventy minutes; of 89°.6 Fahrenheit, from twelve to thirty minutes; in water of 107°.6 Fahrenheit, death ensued instantaneously.

The great influence which slight variations of temperature exercise on the life of the frog cannot be attributed to any supposed difference in the quantity of air held in solution by the water at different temperatures. It is well known that the proportion of air dissolved in the water varies very slightly indeed with the different seasons of the year.

Edwards has found that the amount of air respired by frogs is the more considerable the higher the temperature of the medium in which they find themselves placed, so that elevation of temperature renders the quantity of air which the water holds usually in solution insufficient for the respiration of the animal, even though it be constantly renewed.

Frogs, accordingly, live immersed in water of a very low temperature only; placed in water of a higher temperature, they come to the surface and respire the air of the atmosphere. Fishes present analogous phenomena: placed in water containing a certain amount of air in solution, and precluded from contact with the atmosphere, they continue to live the longer the lower the temperature of the water.

A torpedo placed in water of 82°.4 Fahrenheit died speedily, giving a series of strong shocks; the same torpedo had been kept alive a long time in cold water, giving only rare and feeble discharges.

The relation thus found to exist between the respiration of animals and the temperature of the medium in which the animals exist forms a new proof of the chemical nature of the respiratory functions.

Man and the mammifera in general are capable to bear a temperature much higher than their own. Tillet and Duhamel saw a young girl remain for twelve minutes in a kiln heated to 262°.4 Fahrenheit. Delaroche and Berger placed rabbits, cats, and other vertebrated animals in an oven heated to from 132°.8 to 149°: the animals died in a few minutes. The results of a series of experiments has led these observers to arrive at the conclusion that a temperature of 113° Fahrenheit in a dry atmosphere is near the extreme limit at which vertebrated animals can exist. It would accordingly appear that man alone can bear a higher temperature. Dobson cites the case of a young man who remained twenty minutes in a kiln heated to between 190° and 210°; when he came out of the kiln his pulse marked 164 per minute instead of 75, which was the usual number with him. Berger remained seven minutes shut up in an atmosphere of 228°.2 Fahrenheit; Blagden bore a heat of 260°.6.

But the matter is very different if the air is saturated with aqueous vapours. Berger could only remain twelve minutes in a vapour-bath of which the temperature was raised from 113°.45 Fahrenheit to 128°.75 Fahrenheit. In a water-bath man cannot even bear the temperature which he is capable of enduring in a vapour-bath.

How far is the temperature of animals modified by the divers degrees of heat to which they are exposed? As far as the ordinary variations of temperature, dependent upon climates and seasons, are concerned, the heat of the human body is not sensibly modified by them. Davy's numerous experiments give only slight differences in this respect. Franklin observed that his body was 95°.99 Fahrenheit, whilst the surrounding air was at 99°.986 Fahrenheit. This fact led to the conclusion that animals with warm blood possess the faculty to remain at a lower degree of heat than that of the surrounding medium. Delaroche and Berger observed that the temperature of the body of one of them who had remained for eight minutes in an atmosphere of 186°.8 Fahrenheit had risen by 9°. The results of numerous experiments made upon mammifera and birds proved to these observers that the exposure of animals to a dry and hot air induces a rise in their temperature, which, however, can never exceed from 12°.6 to 14°.4 Fahrenheit, without causing death.

It is easy to account for the effects of the external temperature upon the heat of animals. The formation of the aqueous vapour, which constantly escapes through the skin of an animal, acts as a permanent cause of refrigeration; this explains why the temperature of animals does not rise so much in hot and dry air as in an atmosphere saturated with aqueous vapour. There exists thus in the animal a continual source of heat and a constant cause of refrigeration; and its temperature remains almost stationary, notwithstanding the variations surviving in the temperature of the surrounding media (although the latter may happen to be much hotter or colder than the temperature of its own body), since the cause of refrigeration

acts more energetically in proportion as the external temperature is higher, and *vice versâ*.

A very marked difference is observed in the refrigeration of animals, according as the surrounding atmosphere is calm or agitated. When the air is calm and at a lower temperature than that of our own body, we lose heat by evaporation, by the contact of the air, and by radiation; with respect to the latter (loss of heat by radiation) the presence and nature of the gas, and the agitation, are without marked influence upon it; but the loss of heat by evaporation, or by contact of the air, is considerably increased by agitation of the latter. Thus Parry states that he frequently bore a cold of +0·14 Fahrenheit without being painfully affected by it, when the air was calm; whilst he felt serious inconvenience from a cold of +20°.012 Fahrenheit, when accompanied by even a light breeze. The surgeon of Captain Parry's celebrated expedition reports that the sensation of a cold of −50°.998 Fahrenheit, in calm air, was comparable to that produced by a cold of +0·14 Fahrenheit, accompanied by a breeze. From this observation it would result that a certain agitation of the air produces a sensation of cold equivalent to the effect of a refrigeration of −51°.012.

DUMAS ON ORGANIC CHEMISTRY.

No. XXVII.

(Continued from page 450.)

THE MILK OF THE DIFFERENT MAMMIFERÆ.

Milk of Woman.—The milk of the human female, of which the composition has been already given, resembles that of the cow in its physical properties: its density is nearly the same; it varies, according to M. F. Simon, from 1·030 to 1·034. It is invariably alkaline at the moment of drawing it, and preserves this property for several days. It, however, differs from the milk of the cow, in the difficulty experienced in precipitating its caseum by acids. Rennet coagulates it, not in consistent clots like those formed in cow's milk, but rather in detached flakes.

The following are some analyses of this milk, due to M. Simon. The first gives the mean of fourteen analyses made successively upon the milk of the same woman; the second was drawn from a female, thirty-six years of age; whilst the third belonged to a mother, aged twenty:—

	I.	II.	III.
Water	883·6	894·0	898·0
Butter	25·3	38·0	28·8
Caseine	34·3	34·0	32·0
Sugar of milk and extractive matters	18·2	40·5	36
Fixed salts	2·3	1·8	0

The analyses of MM. Pfaff and Schwartz give to human milk 0.4107 per cent. of salts, composed as follows:—

Phosphate of lime	0·25
Phosphate of magnesia	0·05
Phosphate of iron	0·0107
Phosphate of soda	0·040
Chloride of potassium	0·03
Soda arising from the decomposition of the lactate	0·03
	0·4107

Milk of the Ass.—This milk is often acid; yet it greatly resembles human milk in its composition. Its density varies from 1·023 to 1·035; according to M. Peligot, it is comprised between 1·030 and 1·035. It ferments with great readiness.

Mare's Milk.—This is chiefly distinguished from other kinds of milk by its richness in *lactose*; it is, moreover, poor in fatty matter, for, according to Van Stiptrian, Luiscius, and Bondt, it contains but four-fifths per cent. of this principle. It is with this milk that the Tartars produce their alcoholic liquid; and, according to its composition, it should be very suitable for that purpose.

Milk of the Goat.—The density of goat's milk is about 1·036. It possesses a peculiar rank odour, which is much more marked in the dark-coloured animal than in the light one. This odour is communicated to the butter. The coagulated caseum is hard and consistent.

Milk of the Sheep.—This is very rich in solid matters. Its density varies between 1·035 and 1·041; it is less fluid than cow's milk; it has an agreeable odour and taste. According to Stiptrian, Luiscius, and Bondt, it contains:—

Water	63·2
Butter	5·8
Caseum	15·3
Sugar of milk	4·2
Cream	11·5
	100·0

Milk of the Bitch.—It is very thick, possessing a disagreeable animal odour, and a slightly saline, nauseous taste, quite devoid of sweetness. This milk contains an extraordinary quantity of solid materials, the proportion of which is sometimes found so high as 30 per cent. It is converted into a thick consistent mass by heat. Its serum, when evaporated *in vacuo*, yields to boiling alcohol a matter which becomes concrete like urea under the influence of nitric acid. Its butter appears to be devoid of all volatile fatty acids. It commonly crystallizes in nipple-shaped prolongations.

Preservation of Milk.—In a state of nature, milk is ordinarily consumed upon the spot; but, when the consumption of a locality is much below its production, it becomes necessary to have recourse to certain methods of preserving it. These means may be classified under three heads: -1. The preservation of the milk in its natural state; 2. The conservation of the immediate principles of the milk - a plan which enables us to prepare afresh the emulsion which constitutes it; 3. The manufacture of cheeses.

We have already seen that M. Gay-Lussac has succeeded, by means of ebullition, in preserving the milk for a very long time, even during the heats of summer. This plan is not, however, applicable on a large scale. It has been proposed to evaporate the milk to dryness; but this proceeding is also difficult of application, where the quantity of milk is large; moreover, the powder, which we thus obtain, quickly grows rancid, and no longer makes an emulsion when brought into contact with water.

M. Appert preserves the milk, in its natural state, in full bottles, which are to be well stoppered and subjected to a temperature of 100° C.; but the agitation caused by its transport always separates a portion of the butter, which will be found swimming on the surface of the liquid.

MM. Grimaud and Calais reduce the milk to a dry paste, by passing through it a current of cold air, which removes from it all its water. This dry paste, on being mixed with a certain quantity of water, reproduces the original milk.

M. Braconnot has proposed two other plans which altogether differ from the foregoing. Some newly formed cheese is to be acted on by boiling water, and for every 500 parts of cheese we are to add 12 parts of bicarbonate of potass, after which the whole is to be dissolved in a further quantity of boiling water. This solution is to be concentrated in a water-bath, taking care constantly to stir it. When it begins to present a gelatinous appearance, it is to be thoroughly dried. The product, thus obtained, may be preserved for any length of time, and is capable of being employed to great advantage at sea.

The second process, invented by the same chemist, consists in coagulating 3 *kilogrammes* of milk by hydrochloric acid, at a temperature of about 15° C. We then express the coagulum, and add to it 10 *grammes* of crystallized carbonate of soda, dissolved in a small quantity of water, so as to obtain about half a *kilogramme* of a thick, consistent substance. To this species of jelly we are to add a third of its weight of pulverized sugar. The artificial cream, thus obtained, answers perfectly for all culinary purposes, in cases where it becomes impossible to procure fresh milk.

Cheeses.—In those places where the production of milk is greatly beyond the requirements of the immediate population, a part of this liquid is employed in making cheeses. Under this form it becomes especially suitable for exportation: for, not only is the caseine—that important nutritive element of the milk—found concentrated in the cheese, but it exists there in a state very favourable to its preservation. Thus, the manufacture of cheeses constitutes, in some countries, an important branch of commerce, of which we will now endeavour to give some idea.

The successive operations into which this art is divided consist, in the first place, in coagulating or *curdling* the milk; then, in dividing or breaking the *coagulum*, to facilitate the separation of the whey; and, lastly, in strongly expressing it by means of presses. To complete the formation of the cheese, we have merely to salt or season it, and then to keep it for some time in cellars, where it undergoes a species of fermentation.

We usually employ the milk of the cow in the preparation of cheeses; that of Roquefort is, however, made with a mixture of goat's and sheep's milk. There is no doubt but that the nature of the milk must exercise some influence over the qualities of the cheese; yet this influence is not so marked as one might at first sight be led to believe. That which chiefly modifies the properties of the cheese, is the mode of manufacture, which varies greatly in different localities. In this respect, we may remark that variations which, appear but slight, in the manner of preparation of the cheese, are in reality capable of giving to the products essentially different qualities. In a scientific point of view, it becomes a difficult matter to render an account of the cause of these variations; we may even affirm that, in the actual state of science, we are totally ignorant of the character of the modifications which the caseine must undergo to become transformed into cheese. Hence, we may conceive that the operations of which we have been speaking are, in the absence of theoretic indications, entirely based on rules deduced from experience.

The following is the course usually adopted in the making of cheese. We commence by heating the milk to about 28° or 30° C. The water-bath is, perhaps, the best medium for effecting this operation. We then add the *rennet*. This is the name given to the peculiar ferment destined to effect the coagulation of the milk, and which is prepared, as already stated, from the stomach of the newly-born calf. This agent may be employed under the form of infusion, or in its simple state, by placing it in a small bag, which should be allowed to remain in the milk for a certain time. From eight to twelve *grammes* of rennet are sufficient to coagulate ten *litres* of milk. A contact of one or two hours is necessary to obtain a complete coagulation.

When the clot is well formed and sufficiently firm, we are to break it, so as to separate the whey. This operation is usually performed by means of a three-bladed knife. The ruptured coagulum soon accumulates at the bottom of the vessel, when we are to pour off the whey and collect the cheese in a sieve. After having allowed it to drain, it is put beneath a press or under a board loaded with weights. About half an hour afterwards, the cheese is to be removed, broken into small pieces, and ground into fine particles by the aid of a mill. The homogeneous pulp, thus obtained, is once more subjected to a graduated compression, which lasts from twelve to twenty-four hours. In some localities, where they wish to give a greater degree of hardness to the rind, the compressed cheese is *scalded*, by steeping it for the space of a couple of hours in a vessel filled with hot whey or water, after which it is again subjected to the action of the press.

The operation of salting consists in plunging the cheese, when pressed and surrounded by a proper cloth, into some strong brine, in which it is to remain for the space of several days. At other times, for the purpose of salting the cheese, its sur-

face is carefully covered over, and the sides well rubbed with pounded salt, taking care to turn it from time to time. When we consider the operation to have been continued long enough, which usually happens at the end of about ten days, the surface of the cheese is to be washed with hot water or whey, and it is then to be put upon a board to dry.

Having dried the cheeses, they are carried to the cellar or storeroom, and there ranged on shelves or tables. Here they are left for a longer or shorter time, so as to undergo a species of fermentation, the progress of which is slackened by the salt with which they are impregnated. When they have acquired their proper taste and qualities, they are sent to market for use.

Such are the different operations comprised in the manufacture of cheeses. As might be imagined, these stages undergo certain modifications according to the nature of the cheese which it is intended to fabricate. The process which we have just been describing is very similar to that employed in making the cheese of Gruyères. We need merely add, that the coagulum, when properly prepared, is heated in a stove until it attains a temperature of about 33° C., after which it is subjected to pressure, as already described.

Parmesan cheese is made with skimmed milk; its paste is ordinarily coloured with saffron.

The cheese of *Brie* is manufactured with unskimmed milk. This is a rich cheese, of excellent quality, when well prepared, but which presents the inconvenience of not keeping long.

The fabrication of *Dutch* cheese is different: it is made cold, and with the entire milk.

The qualities of the cheeses of *Chester* vary according to the quantity of cream which they contain. In some dairies, they separate a portion of the cream formed during the night for the purpose of making butter, and add the milk thus skimmed to what is drawn in the morning; while, in other places, they use the whole cream, or withdraw any portion of the milk which has been skimmed.

The cheeses of *Roquefort* are made with a mixture of goat's and sheep's milk. Their mode of manufacture differs but little from those which have been already indicated. They have, however, this peculiarity: that they are left for a certain time in caves, which are formed in the calcareous rock surrounding the village of Roquefort, and in which are found numerous fissures giving passage to currents of cold air. The temperature of these caves is consequently remarkably low. Chaptal observed, on the 21st of August, 1787, that a thermometer, marking in the shade 23° R., descended to 4° above 0° after a quarter of an hour's exposure in the vicinity of one of these rapid currents.

EGGS.—*Their Nature and Composition.*—The egg, the product of conception of the bird, is composed of three parts: the *shell*, a hard covering, lined internally by a membrane; the *white*; and the *yolk*.

The *shell* is ordinarily colourless; sometimes, however, it offers varied tints, among which grey is that most frequently observed. Shells are not impermeable; they are studded with pores which give passage to the air. The oxygen of this air undoubtedly plays an important part in the chemical phenomena which accompany the development of the young bird.

Vauquelin and Proust have analyzed the shell of the egg of the chicken, which, according to these chemists, contains:—

	Vauquelin.	Proust.
Carbonate of lime	89·6	97
Phosphate of lime with a little phosphate of magnesia ..	5·7	7
Animal matter containing sulphur	4·7	2

The shell is lined internally by a thin membrane formed, according to Vauquelin, of coagulated albumen; it constitutes about a five-hundredth part of the weight of the egg, and leaves, on incineration, a small quantity of ashes formed of phosphate of lime. At the large extremity of the egg, it is detached from the shell for a certain extent, and the cavity thus formed is filled with air which, if we may rely on the experiments of M. Bischoff, is even somewhat richer in oxygen than the external air itself.

The *white* of the egg may be said to consist of a somewhat concentrated solution of albumen, contained in very thin cellular bags, but which are sufficiently resistent to hold this liquid, and which give to it a peculiar gelatinous aspect. The outermost cells enclose a less concentrated solution of albumen than those which surround the yolk. White of egg contains from 12 to 13·8 per cent. of albumen. It coagulates at a temperature of 75° C. When mixed with water, we never obtain a perfectly clear solution; for the membranes, being torn by the effect of the agitation, and being of themselves naturally insoluble, invariably render the liquid cloudy. For the same reason, the albumen of the white of egg can be filtered only with great difficulty. But to give it a perfect fluidity, and to obtain a clear solution, we have merely to add a few drops of potass, which will at once dissolve the membranes.

White of egg almost always contains soda and chloride of sodium: we also find in it some traces of extractiform matter, soluble in alcohol.

Prout has determined the nature and the proportion of the inorganic matters contained in white of egg. The following are the results at which he arrived by incinerating this substance and analyzing the ashes:—

	I.	II.	III.
Sulphuric acid	0·29	0·05	0·18
Phosphoric acid	0·45	0·46	0·48
Chlorine	0·94	0·93	0·87
Potass and soda, partly in the state of carbonates ..	2·02	2·83	2·73
Lime and magnesia (ditto) ..	0·30	0·25	0·32

The *yolk* occupies the central part of the egg; it is separated from the white by a membrane which is attached to the outermost cells by two ligaments, called *chalazæ*. It is a true emulsion, formed by an aqueous solution of *vitelline*, and holding in suspension a peculiar oily matter. To isolate this latter principle, it is customary to torrefy the yolks, which have been previously coagulated by heat, until they acquire an oily appearance, and then to express them. We may thus extract from each yolk about three grammes of a thick oil, having a reddish-yellow colour, and which congeals under the influence of cold. It possesses a peculiar odour and an agreeable taste. As it almost always contains some *debris* of foreign animal matters, it turns rancid very rapidly. To purify it, and preserve it for any length of time, it is necessary to dissolve it in ether. The particular nature of this oil is not yet known. We are merely aware that, like cerebral matter, it contains sulphur and phosphorus—a fact which explains the difficulty of perfectly incinerating it. Very recently, M. Gobley has proved that the phosphorus is contained in this oily matter in the form of phospho-glyceric acid—a combination of phosphoric acid and anhydrous glycerine, recently discovered by M. Pelouze. M. Gobley has, moreover, found in the yolk of egg some oleic and margaric acids.

According to M. Lecanu, the yolk of egg should also contain about a third per cent. of a crystalline, non-saponifiable, fatty matter, fusible at 154° C., and which he regards as identical with cholesterine. As to the vitelline, it has been already described.

By incinerating the yolk of egg with nitrate of lime, Prout succeeded in determining the proportion of inorganic matters which it contains. The following are the results he deduced:—

	I.	II.	III.
Sulphuric acid..........	0·21	0·06	0·19
Phosphoric acid	3·56	3·50	4·00
Chlorine	0·39	0·28	0·44
Potass and soda, partly in the state of carbonates	0·50	0·27	0·51
Lime and magnesia (do.)	0·68	0 61	0·67

OBITUARY.—On the 9th inst., at Bath, Joseph Kearsley, Esq., M.D., formerly deputy-inspector of the Ordnance Medical Department, aged 82.

ORIGINAL CONTRIBUTIONS.

ON THE PHYSIOLOGICAL AND PATHOLOGICAL CAUSES OF SUDDEN DEATH IN CONNECTION WITH THE VASCULAR OR CIRCULATORY SYSTEM.

By M. W. HILLES, Esq.

(Continued from p. 451.)

Part 1.—Cases of sudden death produced by a lesion or morbid alteration of some portion of the nervous system.

Part 2.—Cases of sudden death produced by impressions made on the nervous system, or some part thereof, without lesion or morbid alteration.

PART 1.

ON CASES OF SUDDEN DEATH PRODUCED BY A LESION OR MORBID ALTERATION OF SOME PORTION OF THE NERVOUS SYSTEM.

When we reflect on the great importance of the cerebrum, as well as all parts of the nervous system, we are surprised at the amount of injury that may be inflicted on, and the extent to which disease may spread in, this organ, with comparative impunity.

Numerous cases are on record where extensive injuries have occurred to the cerebrum, and even considerable portions of its substance destroyed and removed, without causing any serious symptoms to the patient.

Even a brief detail of these cases would occupy many pages: it will be sufficient for our purpose to mention some of the particulars of one of those remarkable cases:—

"In the year 1843 there lived in the quarter San Pablo, at Mexico, the family of an officer of cavalry. A son of this man, a boy of about twelve years of age, was one day rashly playing with a loaded horse-pistol, when, by some accident, the pistol was discharged; the bullet struck the young child, traversing his head from temple to temple, and afterwards buried itself in the plaster of the opposite wall.

"The child survived until the twenty-ninth day after the accident, and was, in the interim, seen by many Mexican and foreign physicians. He was lively and cheerful, except during the dressing of the wounds, manifesting the possession of all his mental faculties.

"After death it was found that the cranium had been perforated about 1½ inch above the external orbital process on each side; the anterior part of both hemispheres had been traversed by the ball; in front of the canal, occasioned by its passage, there was a layer of cerebral tissue, six or eight lines in thickness, and the grey matter above it was also intact."—*Medical Gazette*, vol. 1, sess. 1845, p. 38.

Sir Charles Bell states on this subject:—"Whole masses of the brain may be destroyed by disease, or actually removed with impunity, that is to say, without any immediate influence on the mind, or on the power of motion or of sensibility; yet the very slightest impression on the brain will, on the instant, deprive the individual both of sense and motion."—*On the Nervous System of the Human Body, by Sir C. Bell.* Edinburgh, 1836; p. 208.

This fact, at first view, appears to oppose the opinion that the brain is the organ of the mind, but it is equally opposed to this organ being of any use whatever in the animal economy.

Although whole masses of the brain have been lost with impunity, these cases are but exceptions to the rule, and are to be observed only in certain situations, where the tissue of the brain is not of a *fibrous* character, as on the surface and in the anterior lobes, where, in fact, the organ does not possess that material structure apparently so necessary to the exercise of the cerebral functions.

In all cases where the fibrous structure of the brain, or those bodies, such as the corpus striatum, optic thalamus, &c., which exert a peculiar influence in the development of its functions, have been injured or destroyed, corresponding symptoms have been present.

The brain must be regarded as a compound

organ, composed of a number of peculiarly shaped bodies, some of which minister to special functions, whilst all are necessary to the complete perfection of the organ itself.

Its external surface appears to contribute to such functions as a secreting structure, which eliminates that which is designated as the nervous fluid, and which, by its passage through the various bodies in the interior of the organ along its fibrous tissues, and ultimately conducted by the nerves to its destination, produces those manifestations of sense, motion, or sensibility, which indicate the presiding influence of a sentient structure.

A loss, therefore, of a portion of this may occur without any serious result: it is but the loss of so much secreting substance, whose office may be carried on by the remaining tissue, as a portion of the liver, lung, or other organ may be destroyed without any serious injury to the functions performed by these structures.

Any injury which affects the whole mass of brain, simultaneously, is on the contrary attended with serious symptoms: the pressure of a depressed portion of bone, a clot of blood, or even the pressure exercised by the finger, is sufficient to destroy all its functions, mental or otherwise, the patient, in many instances, recovering from, or relapsing into, a state of unconsciousness, according as the pressure is removed or applied.

Considerable extravasations, however, occur in some situations in the brain without producing very urgent symptoms, as into the corpus striatum, optic thalamus, lateral ventricles, &c.; at first the pressure exercised by the extravasated blood causes apoplectic symptoms, but after some little time part of the blood and portions of the brain become absorbed, so as to relieve the remainder of the organ of pressure and enable it to resume its usual offices so far as these are compatible with the permanent injury done to the cerebral tissue.

It is far otherwise with regard to those parts of the brain which, partaking of the fibrous or other more highly organized character, are more actively engaged in the elaboration or transmission of that nervous fluid, on the due supply of which all the functions of life depend.

Here the smallest extravasation usually proves immediately fatal, that is, in the course of a very few minutes after the rupture of the vessel occurs. I have already stated the situation of the pons varolii to be most unfavourable to the patient, in consequence of the various fibres of the brain, both cerebrum and cerebellum, being collected here; it frequently occurs that, in consequence of some mental or other emotion, a rupture of the basilar artery takes place, followed by immediate death. Several cases are recorded of sudden death occuring during the act of coition from this cause. Can this artery be more immediately affected during this act, as it chiefly supplies the cerebellum with blood?

The same observations apply to extravasations of blood about the upper extremity of the medulla oblongata and in the cerebellum. As this latter presides over the animal life of the individual, the suddenly fatal nature of such extravasations is easily accounted for.

INTERMITTENT FEVER IN LOWER NORMANDY.

By W. G. DALGAIRNS, Esq., Surgeon to the Strangers' Hospital, Havre.

To compare the diseases of one people with those of another, must always throw some light upon their cause and mode of treatment; that the same malady will affect individuals of one nation differently from those of another is now pretty generally acknowledged: for the *rationale* we must look either to the constitution of the person, or climate of the place. A disease which appears for the first time in a country is more virulent and fatal to the inhabitants than when it has existed for centuries, the system becoming, in some measure, accustomed to its influence, and the once being affected by it often ameliorates, if not prevents, its recurrence. The African frequently falls a victim to an attack of smallpox, but lives a healthful life in Sierra Leone, so fatal to the European. The inhabitant of a malarious district suffers less from ague than the stranger who pays merely a casual visit; a knowledge of his fact has led to the recommendation by the French General Monnet, of stationary garrisons in these districts, the troops becoming, as it were, habituated to the air, much in the same way as the opium-eater to the juice of the poppy.

On the coast of Normandy, bordering the Seine, there is a low sandy tract of open country, once entirely covered by water, but now only partially so during the heavy rains in the winter. This extends from the town of Harfleur to that of Havre, a distance of about five miles; here ague is so common that few escape the disease, and one house especially, has the reputation of being haunted, from the fact that the families who have inhabited it have one by one died off, and the landlord can only obtain a tenant by letting his property at a rent much below its value.

Having had the care of about 1000 men, employed on the Rouen and Havre Railway, which passed through this tract of land, I have collected some facts which perhaps may prove interesting to those who take interest in this disease. The workmen were chiefly composed of British, French, Belgians, and Germans, and employed under ground making the tunnels, or on the road where they were surrounded by marshes and bogs, and in the summer exposed to a hot sun without a tree in the neighbourhood to shelter them.

It has been frequently observed that the diseases which attack persons inhabiting malarious districts occasionally take an intermittent form; this was well exemplified in some of those men who were employed day and night in the formation of tunnels, many of whom became affected with a disease which had all the symptoms of typhus, but was accompanied by profuse perspiration, recurring at the same hour daily, or every second day. As the cases are interesting, it may be as well to give them.

1. John Biselle, native of Switzerland, aged thirty-two, a sober, steady man, was admitted into the Strangers' Hospital, February 10, 1847, complaining of headache, noise in his ears, flashes of light in the eyes, bleeding from the nose, and pain in all his limbs and in his abdomen. He was taken ill a week before his admission with shivering, followed by fever, loss of appetite, thirst, &c. His pulse, on his admission, was quick, about 100; his respiration 40 in the minute; his abdomen was tense and tympanitic; his bowels not opened for one day before his admission; tongue covered with a dry, brown fur; his teeth with sordes; rhonchus and sibilus audible over the whole chest, before and behind; sputa thick and viscid, light coloured; skin not so dry, except about the middle of the day, when he perspired profusely for some hours.

℞. Ammoniæ carb., gr. x.; ant. pot., tart., gr. 1-6; decoct. serpentariæ, ℥j., 4tis horis; and arrowroot, beef-tea, &c., as diet.

He gradually got better under this treatment; the sweating being less profuse each day, until the 30th, when he was taken with a perfect fit of ague in all its stages, which a few doses of quinine cured.

2. André Seigneur, a Bavarian, aged thirty-five, was admitted into the Strangers' Hospital, Dec. 6, 1846. He stated that he had been ill about a week, and that his illness had commenced with shivering. He complained of great headache, and pain in the abdomen and limbs; his tongue was covered with a dry brown fur, and his teeth with sordes; his skin was hot and dry, except every second night, when he perspired so profusely that his shirt, in the morning, was as wet as if it had been dipped in water; his bowels were opened no less than five or six times a day; his pulse 80; respiration 20.

℞. Ammoniæ carb. gr. x.; tinct. opii, m. x.; aquæ, ℥j., 4tis horis.

As the bowels still continued to be loose,

℞. Tinct. opii, m. xxx.; decoct. amyli, ℥ij.; f. inject., was ordered after every motion.

For fourteen days the diarrhœa continued, on an average, from five to eight times a day. The same diet as for Biselle was also ordered, and sponging with vinegar and water every morning and night.

He continued to improve up to the 30th of December, when he had an attack of tertian ague, which was also soon cured under the use of quinine.

In other cases, there were perfect fits of ague, but accompanied with such excessive *continued* pain in the head—worse, it is true, shortly before and during the fit—that the patients were unable to bear exposure to light, or even sit up in their beds. In one man, especially, of the name Austin, the pain was so excruciating that he implored of me to bleed him; and, as I strenuously refused to do so, he consulted another medical man, and persuaded him to take some blood from his arm; the consequence was, that all the symptoms were aggravated, and the man had an attack of hemiplegia, there being weakness and numbness of one side. He, with another man of the name of Marquis, had frequent hematemisis during the cold stage. The fits continued in both cases for six weeks; and, although quinine at one time and arsenic at another were administered freely, still the sweating continued regularly at the same hour daily (the other stages having disappeared under the above-mentioned treatment), and it was not until they had both left the country that they became perfectly cured.

In another case, a woman named Clarisse, medicine of any sort had little effect; but change of air cured her directly. Shortly after her return she had a miscarriage (being then in the second month of her pregnancy); the hemorrhage attending it was so great as to cause a succession of fainting fits, which nearly carried her off. Two days afterwards the ague returned, and could not again be got rid of until she had taken a second trip.

It is strange that in the French there is a great intolerance of anything like a large dose of quinine; so much so that some prefer allowing the disease to take its course, rather than induce the symptoms of gastritis which in them it frequently occasions.

The treatment generally adopted in this hospital is quinine in doses of ten grains a few hours before the attack is expected; and for the pain in the head and region of the spleen the application of blisters. During the cold stage, heat to the surface, and in the hot warm drinks to induce sweating. Frequently a full dose of laudanum tends to shorten the fit.

Among the French this form of giving arsenic is frequently of use:—Aquæ ferventis, Ojss.; acid, arsenios, gr. ij. Boil for a quarter of an hour, and when cold give a table-spoonful every morning. They also induce vomiting during the fit by giving pulvis ipecac. simpli, gr. xx.; aquæ calidæ, Oj.

For the diet, the most nourishing food as well as the easiest of digestion, such as arrowroot, jelly, beef-tea, and sometimes wine.

DEXTRINE BANDAGE IN COMPOUND FRACTURES.

Finding the application of this bandage in simple fracture so beneficial, I have been led to make use of it in the compound also: thus, a dextrine bandage is to be applied in the usual way on the sound limb, and when dry removed by cutting it down both before and behind, being careful behind only to cut through the dextrine, leaving the under bandage so as to form a hinge by which it may be opened and shut; but in the front both bandages are to be cut through. This is to be applied to the broken limb, and kept together by means of straps.

The object is to be able to open the bandage so as to dress and keep clean the wound, and to close it again without moving the limb; and if care be taken in the cutting it will sit as close as if applied to the broken limb itself. A many-tailed bandage and oil-silk may be used, and removed when soiled without altering the position of the fracture.

CANCER OF THE LIVER AND STOMACH; POST-MORTEM APPEARANCES; AND OBSERVATIONS.

By H. EVANS, Esq., Pwllheli, North Wales.

An unmarried man, aged thirty-two, by trade a miller, of temperate habits, had always enjoyed good health till two months prior to his application, when his illness came on, as he supposed, from having injured himself in carrying a heavy load upon his back.

When I saw him he was able to take a little exercise, but compelled in walking to stoop to ease his back; the pain was limited to a small space over the angles of the false ribs on both sides, which was so violent as to prevent him from getting any rest, either by day or night.

About a fortnight afterwards he was seen, when he had, in addition, jaundice and ascites, with anasarca of the extremities; he was much thinner, continually suffering the greatest torments in the back, which nothing but enormous quantities of opium relieved; the hepatic region was now examined, and found to be very tender, so much so as to prevent a careful examination being made. He lingered a fortnight longer in the greatest torments, when he died exhausted.

Inspection.—Three quarts of fluid in the abdomen; the liver studded with scirrhous growths of various sizes, the larger ones containing *serum;* the adhesions between the liver and diaphragm were limited to these growths, which presented the same appearances as so many suspensory ligaments; the organ weighed six pounds. The left lobe was the part perceived to be enlarged; during life it reached below the level of the eighth rib; the gall, hepatic, and pancreatic ducts were unaffected, surrounding the lesser curve of the stomach; for a short distance upon its anterior and posterior wall was a scirrhous mass of a crescentic form; and to examine it the stomach was slit open along its greater curve, when a large ulcer was exposed, the base of which was formed by this mass; the coats of the stomach it had all but perforated; the ulcer was circular and hollowed in its centre, much like two equal halves of a large-sized orange peel; its surface, as well as the cavity of the stomach and all the small intestines, was full of blood, which was traced to a small arterial branch.

The history which this man gave was to the following effect:—That he was quite well until he carried a heavy weight upon his back, for a distance of six miles, and that from that time he had never been well, but from that day he daily got worse. It should be mentioned that the urine, from the beginning, held a large quantity of bile and lithates in solution. Notwithstanding the imperfect sketch which he was able to furnish, yet a correct diagnosis was formed, based upon a deduction of Dr. Geo. Budd, that jaundice, in conjunction with ascites, leads to the supposition of organic disease of the liver; and, this occurring in a person whose habits had not been such as to bring on cirrhosis, the inference would be in favour of cancer.

A farmer, aged fifty, of temperate habits, had always enjoyed very good health till a year before he applied to me. His illness commenced as indigestion; he had pain in the pit of the stomach, especially after eating; flatulency, and occasionally vomiting of his food. He had tried change of air and scenery, and, I should imagine, no trifling stock of physic, without any lasting benefit. When I saw him, he was thin, and his complexion sallow; he experienced nearly constant pain in the pit of the stomach, and invariably confined to one spot, which was so tender as to prevent a careful examination of the part being made; now and then, he had sudden attacks of pain, followed by cold sweats and great depression, and, towards the latter end, constant hiccough. He lingered on for a month, and died fairly exhausted.

Inspection.—Before opening the body a large tumour was felt, and supposed to be the pylorus, which afterwards proved to be the *liver* in a scirrhous condition; the whole of the anterior surface of the stomach was glued to the under surface of the liver; the stomach itself healthy, but the first portion of the duodenum was involved in a large ulcer, which penetrated into the substance of the right lobe for about three inches. The pylorus and the stomach, in this instance, were the parts supposed to be diseased, and, in all probability, in a cancerous state. It may be that the cancerous tumours in the liver were not sufficiently numerous to cause that impediment to the secretion of bile and the passage of blood through the vena cava and porta as to produce dropsy and jaundice; the disease was, however, pretty clear from his rapidly failing strength; the constant pain, always referred to one spot; the constant hiccough—all, taken in conjunction with the cachectic complexion, a peculiar feature in malignant diseases. The searches of a well-known pathologist leads me to believe the disease *to be* primarily limited to the stomach and duodenum respectively; that in both instances the liver became secondarily contaminated with cancerous cells, in the same way as pus contaminates the system in purulent phlebitis.

A labouring man, aged thirty-one, of temperate habits, said that his illness commenced with shortness of breath, ascites, and anasarca of the extremities, and shortly afterwards became jaundiced. When I saw him, he was too ill to be tormented with a minute examination; the abdomen was very much distended; the liver could be traced a handbreadth below its usual limits; the urine contained bile and lithates in great abundance. He died comatose four days afterwards.

Inspection.—Liver studded with scirrhous growths, the larger ones containing a large quantity of serum, the organ itself weighing eleven pounds. The diagnosis formed in this case was correct, though it suggested no remedy. How could it? Notwithstanding, it is a consolation to be aware that the less we do the better, except that occasionally an anodyne may be of inestimable service in enabling the dying to settle his worldly affairs, or to receive spiritual consolation.

DE MOTU SANGUINIS.

By J. JACKSON, Esq., Long Clawson, Leicestershire.

If the spleen were a heart, *i. e.*, an auricle and ventricle, in the former of which the gastro-intestinal or mesenteric veins terminated, and if the splenic and portal vein and its ramifications in the liver were an artery like the pulmonary or the aorta, the vessel which takes the blood to and propels it through the capillaries of the liver would be as well understood as the vessel which takes the blood to and propels it through the capillaries of the lungs, or as the vessel which takes the blood to and propels it through the capillaries of the general system. Physiologists understand the pulmonic and systemic afferent vessels, which consist each of a heart and artery; but not the hepatic afferent vessel, which consists of a spleen and vein. They perceive that the pulmonic and systemic afferent vessels produce a constant and rapid motion of the blood through the pulmonic and systemic capillaries; and if the hepatic afferent vessel had consisted, like them, of a heart and artery, they would have perceived that it also produced a constant and rapid motion of the blood through the hepatic capillaries; but, consisting as it does of a spleen and vein, they do not perceive that it produces an *intermittent* and *slow* motion of the blood through those capillaries. Heart and spleen, and artery and vein, are anatomical antitheses, and produce opposite physiological effects:—

Heart + artery = constant and rapid motion of blood.

Spleen + vein = intermittent and slow motion of blood.

If the right auricle and ventricle were a spleen, and the pulmonary artery and its branches a vein in the middle of which the superior and inferior venæ cavæ terminated, there would be an intermittent and slow motion of the blood through the pulmonic capillaries; and if the left auricle and ventricle were a spleen, and the aorta and its ramifications a vein in the middle of which the pulmonary veins terminated, there would be an intermittent and slow motion of the blood through the systemic capillaries; and if the spleen were a heart in the auricle of which the mesenteric veins terminated, and the splenic and portal vein and its ramifications an artery, there would be a constant and rapid motion of the blood through the hepatic capillaries.

A PIN EXTRACTED FROM THE VAGINA OF A CHILD.

Communicated by J. JONES, Esq., Llanfair, Montgomeryshire.

A fortnight ago, a girl, seven years of age, was brought to me, having the body of a pin protruding from the vagina. It was situate on the right of the clitoris, between it and the meatus urinarius. It was the pointed end that presented itself. Being retained merely by the knob, it was detached with the slightest force. A dose of aperient medicine was administered, and quietness enjoined. In a couple of days afterwards, my patient had suffered no inconvenience, and was quite well. All I could learn of the history of the case was, that she had swallowed a pin a week previously, but that she had felt no ill effects from it until within a few hours of her being brought to me, when, on her suddenly informing her mother that something very much hurt her, the latter found the pin in the situation described.

It may well be asked, what route could the pin have taken in this instance? If, as may be supposed, it traversed and worked its way through the intestines, and perhaps the urinary bladder, is it not astonishing that there were no symptoms of indisposition, or, what we might rather expect, of violent inflammation? And yet can we on no other supposition so satisfactorily account for its appearing where it did.

August 4.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of Aug. 2.

Mercurial Treatment recommended previously to the Operation for Cataract.—M. Tavignot remarked that all physicians acknowledged the favourable influence of mercurial salivation upon the progress and cure of keratitis and of iritis—two complications by which the success of the operations for cataract was often endangered. In order, therefore, to prevent the occurrence of these inflammations after couching or extraction, M. Tavignot had in three cases placed the patients under the influence of mercury before the operation, and in all three the results had been extremely satisfactory. Dr. Tavignot was of opinion that the ptyalism should be at the highest towards the fourth or fifth day after the operation, as it was at that period that inflammatory symptoms were most to be feared.

Development of the Testis.—M. Charvet, professor of zoology at the Faculty of Grenoble, forwarded the description of a case of complete inversion of the viscera, recognised during life. This case induced M. Charvet to endeavour to ascertain the cause of the difference of situation of the testes, and arrived at the conclusion that it was due to the large size of the fœtal liver, which caused the spermatic glands to occupy in the abdomen different positions on each side, and also occasioned the difference in the length of the spermatic chords.

ACADEMY OF MEDICINE.

Meeting of Aug. 3; M. Begin in the Chair.

Waters of Balaruc.—The debate was resumed on this subject; and, after a long and uninteresting discussion, the academy adopted the following conclusion, viz.—That the waters in

question appear to be endowed with some degree of efficiency in the treatment of certain paralytic affections.

PELLAGRA.—Dr. Roussel being on the point of starting for Spain, for the purpose of studying the pathology of this disease, M. Gibert requested permission to make some remarks on the subject. Towards the middle of the eighteenth century, Casal first mentioned the existence in Spain of a special disease, of which an exanthematous eruption was the most striking symptom. Its determining cause appeared to him to be exposure to the sun; and the malady was observed to attack chiefly persons belonging to the lowest orders of society, reduced, by misery and starvation, to a state of cachexy. Indian corn was their principal food. Some years later an analogous affection was observed in Italy by Antonio Pujati, and ascribed to the same causes, although the resemblance of the Spanish and Italian diseases was not detected. About eighteen years since, a physician practising in the neighbourhood of Bordeaux, Dr. Hameau, also recognised a similar affection in the département des Landes, but was not aware of its identity with the Italian pellagra. In 1830 Dr. Brière de Boismont, having observed the disease in Italy, called the attention of the French practitioners to the subject, and considered the origin of the disease to lie in a primary lesion of the nervous system and of the digestive organs. Finally, in 1842, M. Gibert had recorded the first case of sporadic pellagra observed in Paris. This case, in which *mania* occurred, was soon followed by a second, and both were published by Dr. Roussel, who ascribed the disease to the use of badly-prepared Indian corn. This opinion Dr. Gibert did not coincide in; and he begged to lay before the academy those facts connected with the history of the disease which, at the present day, appeared to be sufficiently demonstrated:—In the first place, pellagra was found to be endemic in those parts of Italy, Spain, and France, where the heat is excessive, the population poor, and food debilitating. Its first appearance was generally in spring. In all cases the malady was one which had its origin in want, and the name of "mal de misère," which it had received in some places, was perfectly justified by its nature. Certain geographical and hygienic conditions seemed, however, to be connected with its development; and towards the observation of these, M. Gibert hoped the academy would direct M. Roussel's attention. Finally, it was desirable that M. Roussel should prolong his sojourn in Spain as far as spring, in order that he might be enabled to study the disease in the early stages of its appearance.

Meeting adjourned at five o'clock.

LA CHARITE.

CLINICAL LECTURE, BY PROFESSOR VELPEAU.

Lipoma, meliceris, and steatoma, are expressions on the precise signification of which surgeons are not of one mind. The tumours characterized by these names have resemblances with each other, and differ also in some respects. Thus, they are generally of small prize and very numerous in the same subject: on the head of one person M. Velpeau had counted no less than thirty-nine. The prognosis for the three sorts of tumours is not serious; all finally require to be removed, and each in a particular manner. Formerly they were all commonly called wens; but of late years, in consequence of the progress of morbid anatomy, that designation has been specially applied to lipoma.

A lipoma is a tumour, evidently formed by the agglomeration of fat in hypertrophied adipose cells; it is not encysted, and may exist in all parts of the body where fat is to be met with.

Meliceris, on the contrary, always occupies the skin or the textures immediately subjacent; it is constituted by an obliterated sebaceous follicle in which the secretion has slowly accumulated. When the tumour has been removed, all the elements of the skin are found in the primary cyst, but its contents vary considerably. If the disease be ancient they may be fluid, and when the cyst has been inflamed, these contents may be increased by the addition of serosity or of pus.

Like the former, steatoma is always found under the skin, but always on the cranium or chest. It is constantly separated from the skin by an inorganic but completely independent sac, in which no vessels can be detected. The matter contained in the meliceris is soft; that enclosed in the steatoma is hard, at least at first. Softening of the tumour begins at its centre, but often shows itself only when the swelling has acquired a considerable size.

Lipoma is, therefore, a soft fatty tumour, without a cyst; meliceris a hard tumour—a sebaceous cyst hypertrophied; and steatoma an encysted round swelling, produced by exudation.

The same operative process should not be employed in these three cases; lipoma and meliceris must both be dissected out, as they adhere very firmly to the neighbouring parts. Steatoma may be removed by an easier method, separated as it is from the vicinous structures by its inorganic envelope, it is easily forced by lateral pressure through a simple incision performed on the surface.

These apparently trifling operations may, however, give rise to dangerous erysipelas; and, as these tumours are none of them capable of assuming a malignant character, we would advise surgeons to refrain from removing them, except when they occasion considerable disturbance of the habits of the patient. It is better to bear with what is only a deformity than to incur the risk of accidents which are not unfrequently fatal.

POLYPUS OF THE RECTUM.—The occurrence of polypus is much more uncommon in the rectum than in other regions, such as the nose, the pharynx, the womb, the ear, or the urethra. We may also add, that in the rectum polypi assume special characters. They often resemble hemorrhoidal tumours. They are very vascular, particularly rich in venous blood, soft, and, as it were, fungous to the touch. I have seen other polypi of the rectum presenting a totally different appearance: thus, I found in one man a polypus of the size of the index, supported by a long pedicle, not thicker than a crowquill. The tissue of the tumour was homogeneous, did not present any vascularity, and resembled a piece of skin rarefied by prolonged maceration in water. In another instance I had to do with a globular purple tumour, in which no vessels whatever could be detected. These growths, at first, are only mechanical impediments to defecation, but they may, under the influence of various causes, ulcerate and become malignant, and then they are the seat of pain, both during the motions and during their intervals; hemorrhage occurs, and by the frequency of its repetition weakens the health, and may even endanger the life of the patient. Cauterization, excision, and ligature are the three most efficient methods of treatment. The former is rendered difficult by the position of the tumour; excision is far preferable when then growth is not very vascular, in which case we employ ligature.

BATHS MEDICATED WITH CORROSIVE SUBLIMATE.—In a very great number of diseases Professor Trousseau recommends these baths in simple eruptions, such as eczema, when obstinate, and also in syphilitic affections of the skin; again, in that form of rheumatic gout which occupies chiefly the small joints of the hands and feet the baths appear efficacious; for infants affected with syphilis it is the only treatment employed by the professor; in no instance, however long the continuance of the method, has salivation been observed. To each bath are added 15 grammes (℥ss) of corrosive sublimate dissolved in ℥vj. of spirit, and the quantity is rapidly increased to 30 grammes (℥j.).

PRESERVATION OF LEECHES.—M. Rodet, an apothecary at Lenzburg, recommends, for the purpose of preserving leeches, to place them for a quarter of an hour in forty-eight ounces of water containing four or five drops of liquid chlorine.

FISTULA IN ANO IN TUBERCULAR CONSUMPTION.—In a recent article in the *Gazette des Hôpitaux* a new cause is assigned to the frequency of fistula in ano in cases of phthisis. The author attributes the accident to the embarrassment of abdominal circulation; this may be true, and, indeed, the enlargement and fatty degenerescence of the liver in tubercular disease militate, to a certain degree, in favour of the theory; but still it is only a supposition. Andral and Louis have not found in their statistics of phthisis that fistula in ano is a common accident; the contrary opinion, in spite of numerical statements, prevails, however, and is supported by the observation of many. We have heard these abscesses explained by the continual paroxysms of coughing, and we were inclined to adopt this view, when accident led us to discover what we consider to be the most frequent cause of fistular abscess of the anus in consumption. In a consultation on a singular case of disease of the kidneys and bladder, one of the physicians, Dr. Ricord, diagnosed the presence of tubercles in the prostate gland. Another surgeon, who was also present, M. Amussat, stated that he considered the tubercular degenerescence of the prostate gland as excessively rare, and for his part had never seen a single instance of it. M. Ricord, to whose wards we were then attached as *interne*, mentioned the circumstance to us, and expressed his surprise at M. Amussat's assertion. We were thus led to examine the prostate gland in a large number of cases of phthisis, and in many we found tubercular deposits, easily to be recognised on examination per anum. In general, the prostate was only diseased on one side, and the vas deferens often participated in the alteration. It is to this that we attribute the formation of anal and periurethral fistula in cases of consumption, and we consider that the embarrassment of the abdominal circulation mentioned by the contributor of the *Gazette des Hôpitaux* can only have a secondary influence in occasioning the development of abscesses.

SUICIDE IN FRANCE.—From the documents published by the Minister of Justice, it appears that during the year 1845, 3084 suicides occurred in France. In 1843, 3020, and in 1844, 2975 took place. These 3084 suicides were committed by 2347 men (76 per cent.) and 737 women (24 per cent.). 16 men and 4 women were under 16 years of age; 137 from 16 to 21 years; 176 from 21 to 30; 1215 from 30 to 50; 959 from 50 to 70; 217 from 70 to 80; and 50 above 80. During the three months of summer, 922 were observed; spring, 861; autumn, 756; winter, 545. 1110 were found hanged. 995 drowned, 432 used fire-arms, and 213 charcoal.

D. M'CARTHY, D.M.P.

Statistics of Ligature of the External Iliac Artery.—Dr. Wm. Norris, of the Pennsylvania Hospital, United States, has given an elaborate table, from the various works of surgery and other sources, in which operations on the iliac arteries have been recorded. Of 118 cases of ligature of the external iliac, included in the table, 85 recovered, 33 died, while three of the patients who recovered underwent amputation for gangrene of the limb. Of 113 cases in which the sex is noticed, 107 were males and 6 females. Of the 6 females, 5 laboured under aneurism, and 1 had secondary hemorrhage. Of 79 cases, in which the affected side is noticed, 44 were on the right and 35 on the left side. Of 99 cases, in which the age is noticed, 4 were under 20 years old; 23 were between 20 and 30; 32 between 30 and 40; 25 between 40 and 50; 11 between 50 and 60; 3 between 60 and 70; and 1 was above 70. Of the 118 cases included in the table, 97 were for the cure of aneurisms; 18 were on account of wounds or secondary hemorrhages; and 3 for the cure of varicose aneurisms. In 4 of the 97 cases of aneurisms that disease existed simultaneously in both the ham and the front of the thigh; and in 3 of these the operation cured both tumours. Of 78 cases, in which the period of the separation of the ligature is noticed, in 41 the ligature came away before the twentieth day; in 24 between the twentieth and thirtieth;

in 7 between the thirtieth and fortieth; in 3 beyond the fortieth day. The earliest period at which the ligature came away was the tenth day, and the latest was the sixty-second day. In 9 cases pulsation returned in the sac after the application of the ligature. In 14 cases hemorrhage occurred: of these 7 died, and 7 were cured. In 10 cases suppuration of the sac took place without any fatal consequence. Gangrene of the limb occurred in 16 out of the 118 cases, 3 of which were cured after amputation, and 13 died. Of the 118 cases, 33 died as before stated, viz., 6 from hemorrhage; 3 from sloughing of the sac; 13 from mortification of the limb; 1 from the bursting of an aneurism of the aorta at its bifurcation, ten weeks and six days after the operation; 2 from prostration, respectively on the third and fifth days; 2 from peritonitis; 2 of tetanus; 1 on the eleventh day, from some affection of the chest, probably disease of the heart; 1 on the second day, of delirium tremens; 1 of diffuse inflammation; and in 1 the cause is not noted. In two instances the peritoneum was wounded in the operation, but both patients recovered. In one the sac was accidentally wounded after the ligature was applied—the case above referred to, in which the patient was cut off by delirium tremens. In one the vena circumflexa ilii was a source of much embarrassment to the operator.

Nature of Caries of the Teeth.—Mr. Hassall, in his "Microscopic Anatomy," says that various opinions have been entertained in reference to the nature of the peculiar decay denominated caries, to which the teeth are liable. Some have supposed that it is a vital process resulting from inflammation. The fact that dead teeth, that is, teeth which have been removed from the jaw and are again employed as artificial teeth, undergo a similar decay to that which affects the living teeth, proves that it is not essentially a vital action, although it cannot be questioned but that the condition of vitality and the state of development of the teeth must exert a powerful influence over the progress of the decay. Other observers regard the decay of the teeth as a purely chemical phenomenon, the earthy matter of the teeth being removed by the action of free acid in the saliva: this view of its nature certainly explains many of the circumstances connected with dental caries, and is supported by the fact already cited, viz., that dead teeth are susceptible of the change. Mr. Hassall has long entertained the idea that the real and proximate cause of the decay of the teeth was to be found in the presence of some parasitical production, and that the condition of vitality of the teeth and of the states of the saliva were to be considered merely as predisposing causes to the affection. This idea acquires some confirmation from an examination of the carious matter of a tooth: in it vast quantities of minute threads or filaments, possibly those of a fungus, are invariably to be discerned, as well as numberless dark granules and irregular masses bearing in some cases the aspect of true cells. The question may be asked, are these threads, granules, and cell-like masses anything more than the decomposing elements of the dentine, in which tissue it is that the chief ravages of the decay occur? The answer is, possibly not; but the surprising number of these filaments and the testimony of Mr. Tomes are opposed to the idea that they are the remains of the tubes of the dentine.

Nerves of Bone.—Nerves have not hitherto been satisfactorily traced into bones; nevertheless, the great pain experienced in diseased conditions of them proves incontestably the existence of nervous fibrillæ.

Paraplegia from Suppression of the Perspiration of the Feet.—Dr. Romberg cites the case of a man, aged forty-six, who had been troubled from his youth with profuse perspiration of the feet, and had suffered for two years past from frequent pains in the limbs, which were worse towards night, evidently of a rheumatic character, and had followed his getting cold and wet in the feet. The perspirations at last were suddenly suppressed, and immediately after the patient experienced a feeling of weakness and loss of sensibility in the lower extremities. At first these phenomena were confined to the leg, but extended subsequently to the thigh and lower abdomen, and were accompanied by enuresis and constipation. He was able to move about on crutches, dragging the lower half of his body after him; but when seated, he could move his legs in any direction. Perspiration was limited to the upper half of his body, ending just below the umbilicus. The lower half was dry and desquamated continually. Sexual power was lost. The most careful exploration of the spinal column could discover no lesion. It was then conceived, that the suppression of the habitual perspiration from the feet at least indicated the therapeia in the case, and the foot-bath was prescribed, with half an ounce of nitro-muriatic acid, thrice a week. In a fortnight the gait became steadier, the patient was able to stand; the feet, hitherto cold and dry, became warm and moist. From gr. $\frac{1}{4}$ to gr. $\frac{1}{2}$ of the spirituous extract of nux vomica was then administered, and in fourteen days the urinary bladder recovered its tone, and sensation returned to the lower extremities. After a few months perseverance in the treatment, the patient recovered perfectly, except a slight tottering in his gait. Another case somewhat similar occurred in a drunkard. Here the bladder and rectum were not paralyzed, nor was sensation lost, and the patient could move his legs when seated. It was found, on inquiry, that a profuse habitual perspiration from the feet disappeared immediately previously to the accession of the paralysis. Footbaths thrice a week, medicated with caustic potash instead of acid, and continued for a month, effected a cure without the use of any other remedies.

A New Form of Atrophy of the Face.—A woman, aged twenty-eight, had, at the age of thirteen, an attack of tertian ague. Three years afterwards she made a journey on foot through heavy rain, and very soon afterwards was attacked by what was probably scarlet fever. The mucous membrane of the pharynx was inflamed, the voice was hoarse, deglutition was painful, the uvula enlarged, and an abscess formed in the left tonsil. Externally the cervical glands were swollen. The general health was soon re-established, but it was found that the right side of the face appeared full, plump, and blooming, as it should be in a female of twenty, while the left was shrivelled and wrinkled like that of an old woman. The median line of the face constituted a sharp and distinct boundary between youth on the one side of the face and age on the other. On the wrinkled side the hair was scanty, and the forehead less convex; but, from the want of muscle and fat, the superciliary arch on that side was more strongly marked than on the right. Further, the eyebrow was nearly all gone, the eyelashes scanty, the caruncula small and pale, the eyelids large and thin, as compared with the right. The left side of the nose presented a curiously-atrophied appearance, as also the left side of the mouth and chin; and the morbid change could be traced down the same side of the neck to about the middle. The atrophy also implicated the left tonsil, left side of the uvula, &c. There was no loss of motion or sensation on the left side, and the secretion of tears, saliva, and perspiration, was not at all affected or interrupted. The only difference was, that the pulsation of the left carotid was weaker than that of the right, and was accompanied by a dull bruit not perceptible in the latter. Dr. Romberg, who relates the case, mentions others also, selected from the writings of other medical men.

Condition of the Kidneys in Diabetes Mellitus.—Dr. Romberg, in his work, noticed in "The British and Foreign Medical Review," mentions one case which came under his treatment. The urine was analyzed by Simon, and found to contain two ounces and three drachms of sugar to each quart. Iodide of iron, with a purely animal diet, was the treatment adopted, and at first with apparent benefit. Ultimately, however, the case terminated fatally. On an examination of the body, both pleuræ were found to contain serum; the upper lobe of both lungs contained crude tubercles, and in that of the right there was a circumscribed cavity of the size of a hen's egg. The lower was very voluminous and congested; the spleen wasted, flaccid, and internally of a brown colour, with soft macerated portions. Both kidneys were hypertrophied, firm, congested; the uterus normal; the bladder dilated, and its coats thickened. On more minute investigation by Dr. Remak, the cortical substance of the kidneys was found hypertrophied in consequence of thickening of the tubuli uriniferi, and especially congestion of the Malpighian glands, which were thus rendered visible to the naked eye. The tubuli had an opaque appearance, dependent on a deposit in the outer coat of fat-like granules. Free fat in the form of large globules was also strewn over the inner surface of the tubuli, and on the mucous lining of the pelvis of the kidney. The cellular tissue connecting the tubuli and Malpighian glands was indurated. No trace of sugar could be detected. It is very justly argued that the changes in the kidneys and bladder were secondary, caused by the stimulus of the saccharine urine.

Iodide of Iron in Albuminuria.—In the case of a drunkard, forty-five years of age, with febrile symptoms, headache, vertigo, &c., and œdema of the legs to the knee, and of the upper parts of the neck, the syrup of the iodide of iron was given with success, gradually from one-third of a grain of the salt to a grain.

Treatment of the Sequelæ of Scarlatina.—In simple anasarca uncomplicated with fever, the antiphlogistic diuretics, and particularly bitartrate of potass, were administered by Dr. Romberg. If there were febrile symptoms, and especially those of bronchitis, a small general bleeding was ordered, with infusion of digitalis, and the bitartrate of potass. In those cases in which thoracic effusion took place, this method was actively followed, conjoined with the inunction of sublimate ointment, which was considered of great value. A drachm of sublimate is to be mixed with an ounce of lard, and the size of a hazelnut, or of half a tea-spoonful, is to be rubbed on a circumscribed spot on the chest about the size of a crownpiece, every hour until the skin becomes red. Shortly bullæ, like those of pemphigus, will appear, and when these have dried up, a new spot is to be selected, and treated in a similar manner.

Acute Rheumatism.—In the treatment of recent cases, general bleeding was first practised by Dr. Romberg; the painful limbs enveloped in wadding or tow to keep them at an equable temperature, and from seven to ten minims of the tincture of colchicum seeds given every two hours, combined with two scruples of sulphate of magnesia. In mild cases, this mixture was sufficient without venesection. The remedy found to be most efficient in shortening the duration of an acute attack, or in very obstinate chronic cases, especially those in which one joint was affected, was the bichloride of mercury. To adults, it was administered twice or thrice a day, in doses varying from one-sixth to one-third of a grain; to children, the doses varied from one-twelfth to one-eighth. Counter-irritants were applied in conjunction with the remedy. Rheumatic periostitis was a frequent disease, and was best treated with iodide of potassium.

Gangrene of the Mouth in Children.—This disease occurred in the Berlin Policlinic, under the two forms of stomacace and noma. It began in the alveolar periosteum, then the gums were affected, and lastly the teeth dropped out. Noma commenced in the cheeks, with an ashy grey speck that gave little annoyance, and was at first overlooked. This first began with swelling, hardness, and a peculiar fatty appearance, and then a dark gangrenous spot appeared, the preliminary to perforation of the cheek. The disease would then proceed with the most frightful ravages on the face, and not sparing

even the bones. Sometimes gangrene would attack other parts, as, for example, the labia pudendi of female children. It was, as usually, complicated with gastric disturbance and profuse diarrhœa, but seldom with typhus fever. It usually attacked cachectic children recovering from an infantile exanthematous fever, as measles, or scarlet fever. In the treatment an emetic was first given, if the patient was not too feeble, but generally a stimulating diet with cinchona was prescribed, and locally the application of sulphate of copper, five grains to half an ounce of honey of roses; or sulphate of zinc, ten grains to half an ounce; or the hydrochloric acid combined with honey, as an application, or diluted and used as a gargle.

Scirrhus of the Œsophagus.—The leading symptoms observed in two cases were, violent pains in the throat, vomiting immediately after and even during eating, acidity, and rapid marasmus. In the one case, the scirrhus was situated just above the cardia; in the other, there had been no pain felt for some months previously to death, but a most tormenting cough supervened in its stead, accompanied by the expectoration of a dark offensive matter. On a *post-mortem* investigation, the upper third of the thoracic portion of the œsophagus was found affected with scirrhus. There was a fistulous opening from the diseased part of the upper lobe of the right lung, to which, and also to the vertebral column, it was strongly adherent. The fistulous opening ended in a cavity in the lung about the size of a walnut, containing a carcinomatous ichor, and the whole lung seemed infiltrated. Contrary to expectation, a second scirrhous degeneration was found in the cardia, which was united to a tumour the size of a walnut, situate on the under surface of the small lobe of the liver. There was also a small tumour of stony hardness on the pancreas. This case is interesting, as proving that in scirrhus of the œsophagus other parts of the body may be implicated, contrary to the opinion of Rokitanski.

Psoriasis Inveterata.—Dr. Romberg found the aqua picis liquidæ to effect a cure when all other means failed. The aqua was prepared by pouring a quart of cold water over a pound of pitch, and leaving it to stand for twenty-four hours in a cool place; and a beer-glass of the water, filtered through paper, is to be taken every morning fasting, and the parts affected to be bathed with it twice or three times a day. Its use may be continued for months, the only apparent effects resulting being slight diuresis. Six cases are related in proof of the great efficacy of this remedy.

Chronic Pemphigus.—A very remarkable case was treated at the Berlin Dispensary, the patient being a highly hysterical female. The attacks recurred at intervals during three years. The last-mentioned was in January, 1840, and commenced with febrile symptoms, and a sensation as if hot water was being poured over the legs. In four-and-twenty hours the burning sensation extended to the surface of the body; on the next day, the epigastrium was covered with red spots, and in twelve hours afterwards bullæ appeared on the chest, generally of an oval form, and varying in size from that of a pea to a hen's egg, and even larger. One bulla formed by the union of several minor ones contained at least four ounces of fluid. The bullæ were developed from day to day on the body, on the face, within the mouth, and even in the vagina, old bullæ drying up, and fresh ones appearing. On the seventh day from the first eruption, when it was thought the disease had ceased, suddenly a new crop broke out on the face. On the tenth day these began to dry up, but, suddenly again, on the fourteenth day another eruption took place, but was principally confined to the mouth. When desquamation occurred, the hair and eyebrows fell off. Tar-water appeared to be the remedy that gave the patient most relief.

Influence of the Weather on Health.—Dr. Caspar, professor in the University of Berlin, in his essay on this subject, gives the following practical conclusions:—In Berlin, while the month of January is the least, December is the most, favourable to health. The greatest number of deaths occur in spring, and the smallest number in summer. Extremes of temperature are dangerous to life. A high barometrical pressure tends to increase, while a low pressure tends to decrease, the rate of mortality. The influence of atmospheric pressure on human life varies in different seasons. No condition of the air is so dangerous to life as dry cold. On the contrary, humid cold has the greatest tendency to support life. Of all seasons of the year, the winter gives rise to the greatest number of cases of inflammatory diseases, while the spring is most fatal to them, especially to cases of pneumonia. Cold winters, warm springs, summers, and autumns, increase the danger and fatality attendant on inflammation attacking the brain and respiratory organs, and *vice versâ*. The maximum mortality from phthisis occurs in spring, and after this season in winter. The minimum mortality in autumn and winter. Variations in the state of the atmosphere appear to exert but little influence upon the relative number of deaths from phthisis. Nervous fever is most frequent and fatal in autumn—least frequent and fatal in spring. The influence of weather and season on health varies with the different periods of life. This influence is most marked in the ages of infancy and puberty, but it is least marked in the first septennial period of existence. From the twentieth year upwards, the winter is the most dangerous, and the summer the most favourable, season to life and health; and the older the individual the more striking is this difference.

Influence of the Periods of the Day upon Births and Deaths.—Dr. Caspar has arrived at the following conclusions:—The greatest number of births occur between nine o'clock in the evening and six in the morning, while the smallest number occur between nine o'clock in the morning and six in the evening. The pains of labour commence most frequently between twelve o'clock at night and three in the morning; least frequently from six to nine in the morning. The influence of light is more marked with respect to the commencement of labour-pains than with respect to complete delivery. Amongst those births in which the pains commenced by day, the greater number were male children, and *vice versâ*. On an average, the delivery was more protracted when the pains commenced by day than by night. The preponderance of nocturnal over diurnal births is more striking in respect to children born dead, than in respect to those born living. The maximum mortality occurs in the hours before noon, and the minimum mortality in the hours before midnight. Individually regarded, the ratio of deaths from inflammations, phthisis, and pulmonary hemorrhage, is greater in the afternoon; from fevers and exanthemata, just before midnight; from cerebral apoplexy, during the day; and from diseases of the nervous system in general, in the hours which immediately follow midnight.

Cyst in the Uterus of a Child three months old.—Dr. T. Lee exhibited to the Edinburgh Obstetrical Society the uterus and ovaries of a child that had died of an acute disease after a few hours' illness, and had previously exhibited no symptoms which had indicated any derangement of the genito-urinary organs. It was during the examination of the body after death that a vascular protuberance was discovered in one of the ovaries, similar to that which is observed when a corpus-luteum is present. A section of this ovary disclosed a cyst, corresponding to the bulge upon its surface, having a dense fibrous capsule, thinly coated with a yellow curdy matter, and containing serous fluid. Both the ovary and Fallopian tube of this side were much larger than those of the other side. When the vagina and uterus were slit open, the lips of the os uteri appeared somewhat thicker and softer, and more pink in colour, than usual; and a round cyst, about the size of a small pea, and of a leaden hue, was found on the womb, closely and organically attached to it, just below the opening of the larger Fallopian tube, by a fibrous base, the diameter of which was fully half of that of the cyst itself. This cyst, which was filled with fluid blood, was also composed of dense fibrous tissue, and became quite white, like the texture of the uterus, when the blood contained in it was washed away.

Preservation against Syphilis.—M. Debrosse states that he has discovered a method of preservation against the attacks of syphilis; that any part plunged for five minutes in the prophylactic liquid may be exposed with impunity to the contact of mucous membrane impregnated with the syphilitic virus. The liquid is said to be an astringent preparation; and the Government of Spain has referred the matter to the decision of the Academy of Medicine and Surgery of New Castile.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.*

M. T. N. *informs us "that he has been studying the primary cause of respiration and circulation, in hope of discovering the origin of the power which gives motion to the lungs and heart. The result is, I am able to advance a theory which I think will bear the test of physiological scrutiny." The "theory" is, that "vitality, or the primary cause of action in the lungs and heart, is derived from two fluids, or spirits, which contain opposing faculties. That is, one has the power of contracting the fibres through which it is diffused, and the other has the power of repulsing them. The first, or contractive spirit, is generated in the brain, and conveyed to the heart, lungs, and intercostal muscles, through the eighth pair and sympathetic nerves. The second, or repulsive spirit, is generated in the liver, lacteal, mesenteric, and conglobate glands. It exists also in the carbonic acid which is given off in respiration, and in the oxygen of the atmosphere. This spirit is conveyed to the heart and lungs through the veins." Our correspondent has very liberally offered to dispose of the details of the "theory" if we should think them interesting to the readers of the* Medical Times.

Chirurgus *wishes to be informed where the bougies used by Mr. Briggs may be purchased, a review of whose work appeared in the* Medical Times *a short time ago.*

A Union Surgeon.—*The Halifax meeting has been followed by one at Matlock, a notice of which appeared in our columns last week. Our correspondent suggests that similar meetings should be held throughout the country; with which opinion we perfectly coincide.*

M. S.—*The assurance-office may be trusted.*

Senex.—*The preparation is a "patent medicine," professing to cure all diseases, merely to put money in the quack proprietor's pocket.*

One who Signed the Irish Medical Protest.—*The newspaper was duly received; the blustering of the state journals, we are quite aware, will not deter the Irish members of the medical profession from advocating their right to a fair remuneration for their services.*

R. N., Gosport.—*The subject will not be lost sight of; we continue to receive numerous communications, portraying in vivid colours the miseries of navy assistant-surgeons, and condemning the supineness of the Government.*

Galen *asks "if the members of the College of Surgeons possess any peculiar privileges?" We do not know of any. An unqualified person may recover for surgical attendance, as for work and labour done. The membership of the College, how-*

from certain facts therein stated we must, for the present at least, abstain from publishing it.

Mr. E. Manvers.—*The paper lies at our office and may be had on application.*

A Medical Student, Edinburgh.—*There is no professor of military surgery that we know of in any of the London medical schools.*

Lector.—*Pericarditis, as a disease accompanying acute rheumatism, was known to the profession long before auscultation was practised.*

An Inquirer.—*The report is correct; the parties had no shorthand writer present, as they pretend, who published another statement.*

A Constant Reader, Colchester, *wishes us to caution the profession against an impostor, who is going about the country representing himself as a surgeon in distress. This is a trick, we are sorry to say, which is often practised, and with too much success.*

A Cadidate for the Diploma.—*We are not in the habit of recommending "grinders;" practical knowledge is the best preparation for an examination.*

A Medical Traveller.—*In order to obtain the degree of M.D. from the University mentioned, the candidate must undergo five examinations and defend a thesis.*

Amicus.—*Our correspondent asks too great a favour. We cannot give the name of a person forwarding information to one who conceals his own; nor do we ever betray the confidence reposed in us.*

A Retired Surgeon.—*The facts stated are very important, and we should be glad of further information.*

Mr. T. Coates.—*There is no law prohibiting any class of persons from commencing business as chemists and druggists. The Pharmaceutical Society has no power to compel certain persons to possess their certificate.*

A Young Surgeon.—"*Chelius's System of Surgery*" *is now complete, and will suit our correspondent's views.*

A Country General Practitioner.—*Mr. Guthrie's Lectures on the Treatment of Wounded Arteries, lately published in the* Medical Times, *will give all the information required.*

Veritas.—*We have repeatedly given our opinion respecting the diplomas obtained by purchase. The trade, we hope, is now annihilated, Giessen having resolved that in future it will only grant the degree of M.D. to those who submit to an examination.*

M.D.—*The case has not been overlooked. We shall attend to it when we procure all the details.*

Discipulus.—*The* Medical Times Almanac *contains all the information our correspondent requires.*

Mr. E. Williams.—*The matter will be better understood when the whole of the papers are published.*

G. L. G.—*The manuscript has been unfortunately mislaid.*

A Correspondent *warns us against a practice advertised to be sold at Liverpool. He asserts that it is got up by a most arrant quack.*

Civis.—*We are aware that the graveyard nuisance is not abated. We have no doubt, however, that the time is not distant when the public will be sufficiently roused to insist that all interments shall take place at a distance from densely populated localities.*

Dr. Wane, Putney, *has requested us to insert the following reply to a correspondent, which we do with much pleasure:—"Extract from 'The Provincial Medical Directory':—'Wane, D., Putney, Surrey; General Practitioner, M.D., Edinburgh, 1839; M.R.C.S., Edinburgh, 1837; for three years resident physician and house-surgeon in the Royal Infirmary, Edinburgh. By a mistake, directed too late to be remedied, the name appeared on the unqualified list of the London Directory.'"*

Medicus.—1. *Not as an apothecary, but the debt can be recovered as for work and labour done.* 2. *Yes.* 3. *The law is imperative in granting fair remuneration "for work and labour done."* 4. *We do not.*

Mr. Farmer's reply to Dr. Rose Cormack will be inserted, if possible, in our next number.

Letters and communications have also been received from M. T. N.; Chirurgus; A Union Surgeon; M. S.; Senex; One who Signed the Irish Medical Protest; R.N., Gosport; Galen; Dr. Robertson; Mr. E. Manvers; A Medical Student, Edinburgh; Lector; An Inquirer; A Constant Reader, Colchester; A Candidate for the Diploma; A Medical Traveller; Amicus; A Retired Surgeon; Mr. T. Coates; A Young Surgeon; A Country General Practitioner; Veritas; M.D.; Discipulus; Mr. E. Williams; G. L. G.; A Correspondent; Civis Dr. Wane, Putney; Medicus; Mr. Farmer, Putney

THE MEDICAL TIMES

SATURDAY, AUGUST 14, 1847.

MEDICINE *v.* GOVERNMENT.

"Low remuneration!" "insulting niggardliness!" "parsimonious injustice!" "hard work ill pay!"—these are the "cries of London" and of the provinces too, as far as medical men inhabit them. Thirty thousand underpaid *gentlemen* spread over the British empire, and fighting a forlorn fight under one Hippocratic banner,—such is the spectacle we offer the country in this middle of the nineteenth century! We suffer under the plague of one wide-spread poverty; our groans are heard in every highway; thousands of our petitions darken the columns of the journals; and there is the sum of the picture! We lie as in some dark bottomless pit of despair, exhausting in useless, hopeless groans the energies that should bring extrication and light. We are "men of science," and "gentlemen," as we unceasingly do cry; and as if these precious privileges environed us like the Spanish king, with an etiquette of nullity or self-destruction, we live out our social torture in the screaming, fidgety, ineffective querulousness of hypochondriacal do-nothings!

Of course we are underpaid, ill used, kicked, cuffed, maltreated, in all the possible moods and tenses, in which social indifference or official ingenuity can do such things. *But why?* Are there two men in the profession that don't know the answer? It is because we work, and work very hard and very concurrently, for such treatment. We do our very best to merit it. The whole mass of us are toiling our utmost to uphold, extend, and perpetuate a system of low pay. Each does his best—pockets the small results—and then throws the onus on his neighbours! Every one of us is a rascal *except* the "gentleman" speaking to us, and he, "poor man," is a victim! "The system is shocking—dreadful—intolerable, especially to a man of fine 'gentlemanly feeling;' but, then, where there are such fellows as Jones and Smith, and that low-mannered fellow Tompkins, perking about one, ready to snap up everything, "what *is* a man to do?" And so the farce goes on from day to day, and the profession goes down from day to day. Everybody is a paragon to himself and a villain to his neighbours; and nobody seems conscious that we are all, all—nearly to the last man—tarred with the same brush.

Let us for a moment look our attacks of Government clearly in the face. Their official appointments are mean and niggardly. No doubt of it. Government deserves rebuke, and more than that—*correction*—for the unstatesmanlike parsimony. But if they *give*, we *accept*. The receiver is surely not *better* than the thief. But mark *how* we receive! What competition, what zeal, what anxiety, for the "disgraceful appointment!" We have in London some fifty medical appointments for the metropolitan police army. There are always many men on each sick list: they are spread over a widely-extending district: hundreds and thousands of painful and troublesome visits are given in the year, and what does each "staff-surgeon" get for his pains? Why—and we state it on irrefragable evidence—*not so much as pays for his medicines!* His drugs—his mere drugs to the police—are not fully paid for! Yet, if there be a vacancy, there are at least FORTY applicants, each with powerful influence and pressing claims, and the fortunate man who *succeeds* to the *loss* dubs himself "Surgeon to the Police" as if it were some great indication of good *fortune* or ability, and wears out his after-life in drugging his police patients with underpriced medicaments, and his reading-"club" journal with high-toned dissertations on professional standing!

What say we, then, to the low-paid union officer, and the non-paid police doctor—when they murmur, as they often do, their discontent in our editorial ear? This: "You are taken at your own price: why, then, complain? You fix your own price on your services by giving them: how, then, expect to have them higher rated? You, and men like you, *alone* support the system you *condemn*. You are as much the *authors* as the victims of the ill-doing. For the most paltry of advantages you have run to the "unclean thing," and while you adhere to it there is professional defilement. Unite—understand each other—combine with the rest of the profession: by your present activity make up for your past wrong: let there be a general resignation—and we shall soon have a general reformation." Here is the voice of justice as of policy: it is attainable, as every other good, by *effort*, by great effort, possibly; why, then, is something not done? We will say why. Because it is more pleasant to write a whine to the *Medical Times* than to make active common cause with a medical brother. Because we think worse of our neighbours than we even avow—which is saying much. Because, in fact, we are true to the *character* of our profession—which has less fellowship, less *esprit du corps*, and less public conjoint spirit than any other calling in the empire!

It is absurd in excess, though, by the way, a habit of our own, to abuse everybody and everything *extra nos* for our ill payments. We are better paid than we deserve to be, all things considered: and society estimates our services, if humbly, still far more highly than we do ourselves.

Where is there a man so fond of giving away his stock in trade—his visit and assistance—his scientific skill and advice as the doctor? He is never happy unless he is turning business to *no* advantage to himself. There is an actual contest who shall give advice *gratis* on the largest scale!

Observe that army surgeon, Mr. Screwloose: he is in full pay: he has his regiment to attend—and yet there, in one morning, he is writing prescriptions gratis for the over-fed flunkey of a young Lord Dukeling who dined the day before at the mess; for the two Miss Tisicks, the major's maiden aunts; and so the good, benevolent doctor goes on, morning after morning, till the end of the chapter. On what principle does Mr. Screwloose thus undertake heavy, alien responsibilities for nothing — withdrawing from legitimate medical practice the very persons who should be made honestly to contribute to its support? It is unprofessional—

it is ungentlemanly—it is *unfair*: but *then* it is "*benevolent*," "charitable," and "*so* good of him!" Benevolent to aid a *peer*, by *chousing* son medical man of a fee! "charitable" to help a niggardly old woman to starve the doctor of her parish! "so good of him" to *encourage* and to uphold a system which is the ruin and degradation of the profession!

It is that miserable public hoax, that passes under the name of "*charity*," which is, indeed, answerable for much of our system of low payments. We have been active as a certain gentleman in a gale of wind—in teaching the world that our skill is a pure matter of unearthly generosity and philanthropy. It is a man's own fault if we cost him anything. We have been ingenious in devising modes by which the public shall be physicked, and we be nothing the better for it. There is Dr. Smallbeer, who founds a dispensary for the patients of other people! He was quite unhappy that the sick people of "so large and populous a district" as —— should be actually *paying* (other people) for their medical attendance. Accordingly, getting a fair list of patrons and patronesses who pay each as *charity* one guinea for five guineas' worth of attendance, he opens an establishment which impoverishes his brother practitioners, and hurries himself into the *Gazette!* And this is charity—a charity which Lord Robert Grosvenor, through the "height of the season," disports over, like a May linnet, at the London Tavern, and which swells even into eloquence, during that genial time, the expansive bosom of the Duke of Cambridge! Oh, *Charity!* What iniquities are perpetrated in thy beauteous name! If by any accident the walls of our Free (ay, *very free*) Hospitals could open out and show our readers, *as they may*, the handwritings that "charitable" guilt has photographed on them, what lessons might we have for the public! —what improvements for the profession! We withhold, however, our hopes and expectations; they would be despair and gnashing of teeth to more than one professsional philanthropist!

SAMSON AMONG THE PHILISTINES CRUELTY OF "THE LORDS."

פלשתים עליך

The laconic epistle which the Irish medical remonstrants first received from Dublin Castle was indicative of what would follow from the Treasury gentlemen whose head-quarters are in Downing-street, London. "Coming events cast their shadows before;" and the Irish Government officials, knowing the minds of their masters, prepared the way for the decisive document which was intended as an everlasting *ictus* for refractory medical practitioners. Two brief letters the Government has thought sufficient to settle the remonstrants, in addition to the baiting which they should receive from those bulldogs of the press who are ready to worry and destroy anybody at the command of their official masters. The Castle has attacked the little band of medical patriots through the columns of certain newspapers, charging the gentlemen who signed the protest with a desire not so much of obtaining increased pay for dangerous professional services, as of injuring the Government by a religious and political agitation. Ireland, we know, is a "*palma nimborum*," and it was not to be expected that a movement like that which originated with some of the most illustrious members of the profession there, and which has for its object the attainment of something approaching to a just remuneration for perilous duties, should arrive at the wished-for haven without encountering storms. No sooner had the medical patriots launched than the breeched Junos of Phœnix-park secretly implore the Æoluses of the press to let loose upon them such a hurricane of words as should accomplish their destruction.

"Incute vim ventis, submersasque obrue puppes;
Aut age diversos, disjice corpora ponto."

It was rather funny that this was to be accomplished by charging medical gentlemen with being political agitators and religious enthusiasts; in fact, with becoming conspirators against the Whig Government and the Protestant Church. Now, what this medical remonstrance has to do with "church and state," we cannot for the life of us imagine, as amongst the 1106 who signed the memorial are to be found men of every political sect, and of every religious denomination. It would have been utterly impossible to have gathered such men together in one band to effect the tremendous revolution which they are represented as contemplating. Medical men are proverbial for their noninterference with religion and politics: this does not arise, however, from the circumstance of their being powerless in the state: for their position, their education, and their services give them an influence which would tell greatly upon society if exerted, but on account of their being shut out from the holding of official stations under the Government. The neglect which they have experienced from the supreme Executive has produced a listlessness in political affairs which has operated greatly to their own disadvantage, and, now they have approached the Treasury doors requesting something like a fair remuneration for their services, they are repulsed with a haughtiness which shows themselves and their skill both lightly esteemed.

The insolence of officials has always been proverbial, and in the present instance it has manifested itself by calling the gentlemen who signed the remonstrance "combinators for a rise in wages, whining supplicants for a dole of public money," who exhibit none of the attributes of common sense, and whose statement of the most important facts is nothing better than vulgar "botheration."

To this tirade of the Government hirelings against the medical profession we append the last official document received from the Lords Commissioners of the Treasury, through the Lord Lieutenant: it is as follows:—

"Dublin Castle, July 26, 1847.

"Sir,—I am directed by the Lord Lieutenant to state that the memorial from physicians and surgeons, complaining of the rates of payment allowed under the temporary Fever Act, having been submitted to the Lords of the Treasury, their lordships are of opinion that the remuneration is as high as, under the circumstances of the case, they should be justified in granting.

"I have the honour to be, Sir,
"Your obedient servant,
"T. N. Redington.

"To J. W. Cusack, Esq., M.D."

There is something about the conduct of the Government, as exhibited by its notes and through the medium of the press in its service which certainly reflects anything but credit upon its members. The Irish medical profession is just informed that its case is handed over to the Treasury Commissioners; and forthwith these gentlemen send back to the memorialists a declaration that the remuneration for their services "is as high as, under the circumstances of the case, they should be justified in granting." Be it remembered that this proclamation has been addressed to men whose labours have shed a halo of glory over medical and surgical science, and who are revered by Christendom for the services they have rendered to the world. It is a high honour for Ireland to number amongst her children some of the most illustrious medical philosophers; and it is a deep disgrace to any set of men, however high in office, to deliberately insult them. The Board of Health, composed of medical men, have been cognizant of this, and they exhibit at the present time the power of office to put a gag in the mouths of upright individuals who ought to be forward in speaking loudly against any acts of oppression towards their brethren. Better far had they have given up all connection with the Government, than to have become parties to the degrading remuneration of five shillings a day to the members of their own profession for the jeoparding of their lives in the very hotbeds of disease; better far would it have been for their honour, if not for their pockets, if they had declared their entire disapproval of the conduct of the lords, when their official notes were flung in the faces of the 1106 remonstrants. In dealing with these the "lords" were as niggardly of their paper and of the time of their clerks as of the public cash; and no voice from the board is lifted up to rebuke the unjust parsimony. Present ease and honours may now sufficiently compensate for the loss of that esteem and confidence which the medical officers of the Irish Government once experienced from their fellow-labourers in the same vineyard; but the deeds of public men are registered in the archives of their country; and no Government patronage can bribe posterity to admire a dereliction of public duty.

But let us look to the circumstances of the case, which, in the opinion of their lordships of the Treasury make 5s. a day a fair remuneration for medical services. Did they consult the paper of Drs. Cusack and Stokes, lately published in the "Dublin Quarterly," before they issued their fiat? We trow not. These we have a statement of the mortality of medical practitioners, from fever, in Ireland. From this disease that ill-fated country is never free; epidemic after epidemic occurring, so that, in town and country, its ravages are frightful. In Dublin, the deaths from fever actually double the deaths from the same cause in London; and it is a singular fact, that when medical men are attacked the disease develops itself in them with far greater malignancy than in the patients whom they attend. It is generally of a low type, with eruptions of maculæ often coming out at a late period of the case; and, as we learn from Drs. Cusack and Stokes, "the nervous symptoms, of all the phenomena of fever the most alarming, commonly exist to a great degree." As a natural result the mortality of medical men is astounding. The census of 1841 gives the proportion of deaths from fever, to the mortality from all causes as 1 in every 10·59, and 1 in 3·4 of the deaths of the total class of epidemic diseases; whereas the deaths from fever among the medical profession show a mortality of not less than 1 in 2·29.

Dangers in the field of battle are nothing to be compared to those which are encountered in attending upon the sick; four-and-twenty per cent. of the profession fall in the discharge of their duties, while in war, we learn from official documents, that amongst the officers the mortality is not more than ten and a quarter per cent.

Truly this is a melancholy picture to contemplate; but we have not yet seen its darkest colours. How many widows and orphans are left to bemoan their hapless condition! Cast upon the world, with but few resources, their days are embittered by poverty and neglect, and the grave is looked upon as the only quiet resting-place from all their sorrows. These are the "circumstances of the case" that justify the Lords of the Treasury in adhering to the resolution of rewarding Irish medical practitioners with 5s. per day for their arduous and dangerous avocations.

How different is the conduct of the Government when churchmen are to be provided for! Only within a few weeks the First Lord of the Treasury proposed to create four new bishops, each with a salary of some five thousand a year; and what have they to do? The question we will not pretend to answer; but of this we are certain, that they have not to undergo a tithe of the labours and privations which medical practitioners experience, for whose remuneration the Government can only spare as many shillings per day. A man whose head is immersed in a wig, and his body in lawn and satin, may count upon an after-life of ease and affluence, and the church inspires her sons with the hope of attaining to such a high vocation; while the members of the medical profession, with the most brilliant talents, may labour night and day for the State, without its making any provision for them in declining life. Of a truth the profession, like the ancient Hebrew champion, has slumbered; and the lords of the Philistines have for a season, at least, triumphed by their stratagems. The victory, however, reflects no honour upon those who have obtained it, and the profession will eventually acquire sufficient strength to force even Cabinets to act justly towards it.

We trust that the spirit which the memorialists have displayed will be felt by every physician and surgeon throughout the United Kingdom, and we shall then have no further reason to complain that professional services are lightly esteemed by the members of the Government, or to insist that our brethren deserve the ill treatment by their own supineness.

INADEQUATE REMUNERATION OF POOR-LAW MEDICAL OFFICERS.

The power of the press to rectify the evils with which society is afflicted is acknowledged to be great, and through its instrumentality some of the most beneficial reforms have been brought about. It has measured its strength with the oppressor, and has come off victorious; and it has prevented the perpetration of many acts which, had they been allowed to exercise their baneful influence, would have undoubtedly retarded the progress of civilization. It has proved itself the watchful guardian of popular rights, and tyrants have ever sought to curtail its influence or to annihilate its power. If we look to the medical profession, we shall find that its social advancement has been greatly promoted by this omnipotent engine, and that the position now occupied by the general practitioners of the empire, so advantageous for the ultimate attainment of just rights, must be mainly attributed to the press. Through its exertions political hypocrites have been unmasked, collegiate despots have been made to quail, and thick-headed poor-law guardians have been unable quietly to sack the maintenance of the sick upon parochial medical officers. Medical men themselves have, through its exertions, been aroused from an apathy which for years had so paralyzed their energies as to make them an easy prey to the numerous enemies who sought to use them as tools for their own aggrandizement. It has proved the palladium of our liberties—the Ægis which has shielded us in the day of peril.

We have been led to these remarks by contemplating the movements of the profession in different parts of the empire to resist acts of oppression, whether emanating from Government authorities or poor-law functionaries. We recorded last week, in the pages of our journal, a meeting of poor-law medical officers connected with the various unions of the midland counties, which was held at the Royal Hotel, Matlock, Bath, to take into consideration the subject of pauper medical relief. The facts which were then developed are as humiliating to the profession as they must be astonishing to the public. The latter are scarcely aware of the very inadequate remuneration which medical men receive for those important services they render to the sick poor; and, as parochial burdens are anything but light, there has been little concern manifested for any acts of injustice towards deserving medical officers, so that some saving may be effected in parochial expenditure. It is a false economy, however, that would lessen a present outlay of money which must ultimately require greater calls upon the public purse. This must be inevitably the case when medical officers are inadequately paid. Very few will be found who will ruin themselves to benefit others: nor is it required, for we are commanded to love our neighbours as ourselves, and not more.

From the statements made at the meeting referred to, we find that the scale of pay for the medical officers is such as must make them either unjust to themselves or to others. In some cases we are told that the remuneration is as low as 1s. 3d. per case; for which very liberal sum the medical attendants have to provide drugs, horse expenses, and a dispenser; the distance over which they have to travel, in numerous instances, being enormous. Here is a sacrifice required of time, strength, and money; and it is absurd to suppose that duties will be as efficiently performed under these circumstances as if they were paid for by liberal stipends. The "screws" have endeavoured to remove all blame from themselves by placing it upon the medical attendants. We are told in the fable that Jupiter has slung one bag on a man's back containing his own infirmities, and another on his chest, containing the infirmities of others. To reverse the order is to make a man turn his back upon himself, and is an insult which he will not fail to resent. Poor-law guardians are not prone to look behind them to discover their own faults, being too busily engaged in contemplating the supposed faults of others. Of the tempter and the tempted, the former has always been considered the greater sinner of the two; and so it is in the present instance. If the poor are neglected, the sin lies at the door of the parochial authorities: for it is not to be expected that medical men will give their labours for nothing.

After all, the evils of which the profession now complain, in reference to the pay its members receive for their attendance upon the poor, can only be removed by their own efforts. It is not enough for the press to advocate their cause, but they must take it in their own hands, and firmly resolve to effect their own salvation. This is only to be accomplished by the general practitioners following the example which has been set by the medical men of the midland counties. Meetings must be held, unity preserved, and Government memorialized. Boards of guardians should be no longer permitted to ride rough-shod over their medical servants; and this they will be prevented from doing by a firm resistance of their aggressions, and by keeping their conduct constantly before the public eye. Blunted in intellect, and parsimonious in disposition, as the greater part of them are, nothing but the force of public opinion or a sense of shame will compel them to perform acts of justice to others; and it is truly galling for educated men to be placed under the authority of such boobies.

We think that the suggestion made at the Matlock meeting is worthy of consideration, viz., that a Government medical inspector, acquainted with the value of general practice, should be appointed to fix the salaries upon a just and equitable footing, and correct the abuses which have crept into the system through a parsimonious policy. We would say to our medical brethren, that, if they would expect success, they must meet, resolve, and act. We shall then hear no more of those acts of oppression towards medical men which disgrace parishes, injure paupers, and degrade the profession.

THE PROVINCIAL ASSOCIATION.

This body met at Derby on the 4th and 5th inst. From sixty to seventy gentlemen were present at various portions of the proceedings. Dr. Heygate presided. The report spoke of 1858 members, of whom nearly 600 are nominal or non-paying members. The following is the financial statement:—

Balance brought forward ..	£113	7	7
Receipts	1304	1	8
Total . .	1417	9	3
Expenditure	1439	19	7½
Balance due to Treasurer ..	£22	10	4½

In other words, the Association is twenty-two pounds in debt. On the questions of Medical Reform, Poor-law Medical Relief, and the Benevolent Fund, the council had no satisfactory information to offer. Something had been essayed about some of them, but nothing had been done for any. After the report several speeches were made, and a very laudable anxiety was shown to rest the future utility of the Association more on its scientific exertions than its political manifestations. Several medical and surgical contributions were successively received (some of which we shall feel it our duty to notice), and the sittings terminated by a public dinner, much to the satisfaction of all present.

INQUEST AT PUTNEY.

We beg to correct a mistake which appeared in our leader of last week, in reference to this inquest. The stomach-pump, we understand from a correspondent, was *not* used.

NATIONAL INSTITUTE.

The first annual general meeting of the National Institute was held on Wednesday evening last, at the Hanover-square Rooms. The proceedings were animated and harmonious, and the fullest confidence was expressed in the Council. The treasurer's report exhibited a balance in hand of £195. 9s. 11d. He proposes in our next to give a full report of the proceedings, from which, on account of the lateness of the week, we are precluded in our present number.

MEDICAL TESTIMONY.

Two questions are raised by the late assiz trials in Northumberland.

A medical gentleman of Newcastle, Dr. Glover, **was examined as a witness. He had made a nice and laborious analysis, absorbing considerabl time, and demanding the exercise of** great skill **His testimony was of the first** importance to the **public. It is to the interest of** the public that **such witnesses should be adequately remunerated. Yet the law requites them with a** miser's hand **Dr. Glover said as much to the Judge:** he put **it to his lordship whether** he ought not to be **more liberally rewarded** for his services, and **named a not immoderate** sum as the fee to which **he considered** himself entitled. It is to the **honour of** Mr. Justice Wightman, but far from **honourable to** our laws, that he admitted the **justice of** the claim, and said he would have **awarded** even more than was asked, but he ha **not the power** to add one farthing to the ordinary **pittance.**

The other matter to which we wish to draw **attention is** the false economy which rejects the **services of** medical men at coroners' inquests, **and degrades** those inquiries into idle farces. **We have** often said, but it cannot too often be **repeated, that** there are many inquests which it **is absurd to hold,** if no *post-mortem* examination be made. In such cases as those to which we refer, it is impossible to ascertain the cause of death, unless the body be opened by a medical man. Yet Mr. Coroner holds his court, and twelve men, in the absence of any conclusive evidence, pronounce an unhesitating verdict, which further and more searching inquiry not unfrequently shows to be false. In the case which suggests these observations, a man was committed to take his trial for manslaughter, and appeared before the Judge for that purpose; but the cause of death could not be shown, no *post-mortem* examination had been made, and the prisoner was dismissed from the bar, his lordship bestowing a very proper rebuke on the coroners who decline the aid of medical men, and the magistrates who begrudge them their fees. The admonition was much needed, and we trust that it may have due weight in the proper quarters.

FORGERY OF MR. ROLPH'S NAME.

SIR,—I am instructed by Mr. Rolph, of Paradise-row, Bethnal-green, surgeon, to apply to you with reference to a letter purporting to be written by him, and published in the *Medical Times* of Saturday last. My client never wrote nor authorized the publication of such letter; and as the same reflects upon his character, and likely to be, and in fact is, highly injurious to him, I have to request you to give up the name of the author of it, and publish this, his denial of having written or sent it, or authorized it to be done. I remain, Sir,

Your obedient servant,

FREDERICK TRITTON.

Three-Crown square, Southwark, Aug. 11.

*** We need not say that we were the innocent, *passive*, agents of this very foolish and wicked imposture. The MS. is at the service of Mr. Tritton, with any aid we can offer to trace the author of the forgery.—ED.

ASSISTANT-SURGEONS OF THE ROYAL NAVY.

[To the Editor of the Medical Times.]

SIR,—Many thanks to you for your exposition of the abuses which assistant-surgeons experience in her Majesty's naval service, and for your advocacy of their rights to an altered position on board ship. Nothing can be more degrading to a man of talent, and a member of a learned profession, than the society he is compelled to herd with while an assistant-surgeon, and the consequent indignities he is exposed to. The gun-room officers intuitively identify us with th class we are condemned to associate with, be cause the service makes the distinction, and the conceive their importance is being swelled by carrying it out. The exceptions to this are, I am happy to say, numerous, but the general rule holds good. The following remarks exemplify the cruel hardships which we have to endure. My first appointment was to an eighteen-gun sloop, where I, in common, with five others, shared a dark habitation which could just afford us sitting room. The furniture consisted of a well-hacked table, with lockers (narrow bins for keeping messtraps and drinkables in) around that served the purpose of chairs. On entering this blackhole, the measure of my disgust was complete, and my desire to separate myself from a service where everything was so repulsive was extreme; but, as I had incurred an expense of £150 in obtaining the necessary outfit, I felt I could not make the sacrifice, so I was necessitated to remain. To add to my miseries, I could find no companion amongst my associates. They were composed of a clerk, who did not possess two ideas beyond writing a letter on service, and an acquaintance with the Queen's regulations for the navy; a newly-created mate, swelling with the importance of being the senior member of the mess, and an executive officer; a master's assistant, who must have been dug out of some very obscure situation, for he exhibited the most complete ignorance of the every day usages of civilized society; and two naval cadets, just emancipated from school, whose continual occupation consisted in skylarking, *alias*, doing everything calculated to prevent your pursuing any occupation requiring quiet. Reading is quite out of the question. To add to the sum of my misery, I had to sleep in the same part of the ship as the men (in a hammock), the only distinction being that I slept farthest aft. I leave you, Mr. Editor, to draw your own deductions from the above statement. The remedy is palpable enough. Assistant-surgeons ought to have a cabin, and mess with the lieutenants, &c., in the gunroom. Their education demands it. Is not their claim stronger than that of the naval instructor?

ONE WHO CANNOT FORGET THE PAST.

Dublin, July 24.

THE MEDICAL PROFESSION ON THE OCEAN!

[To the Editor of the Medical Times.]

SIR,—Having noticed an article in your valuable journal relative to the miserable condition of assistant-surgeons in her Majesty's navy, I beg leave to bring before the profession and public, through the same valuable channel, the equally unfortunate lot of surgeons serving on board emigrant ships. All ships carrying more than 100 passengers are (or soon will be) obliged to carry a professional man; be this, however, as it may, in these times, when typhus fever is raging violently in most large seaports, captains prefer doing so to risking their own valuable lives! Ships leave this port monthly for New York and all American ports with passengers. My remarks apply chiefly to these. They are American-built vessels, the owners being men of large property. About a week before sailing the agents advertise for surgeons. Many men wishing to settle in the United States apply, and this especially in the summer season, and on demanding terms are very generously informed that their services will be remunerated by a free passage to the port of destination. Many fools (for such they undoubtedly are) catch at the opportunity of saving the price of a cabin passage (never dreaming that the trouble they will have would not be a quarter recompensed by the berth), and engage, depriving others, perhaps, more competent of their bread; but, what is in my estimation worse than all, lowering the honourable profession of which they are members by offering their services for nothing! Should these gentlemen have a rough passage, and any considerable sickness on board, my own experience tells me repentance will be their lot long before they have made half-passage, leaving wholly out of consideration their own unavoidable sea-sickness and the many unmentionable disagreeables of the hold of an emigrant merchantman. The purport of this paper is to bring before young surgeons, in a clear light, the absurdity of accepting such disagreeable and, I may safely say, dangerous berths at no remuneration, or even at a *small* remuneration!

Let all surgeons serving on board emigrant ships (and especially American ships, where the greatest meanness is practised) demand their six or eight pounds a month, and thereby raise themselves, at all events, to the rank of a second mate. Let all do so, and all will be well paid. But where men can be found to undertake such abominable situations *gratis*, such men will always keep more deserving brethren in poverty and in the background. Let all demand a liberal remuneration for their services, and when the law comes into force which will compel ships to carry surgeons, the owners (who are, as I said above, all rich men) will be obliged to treat them as gentlemen. At this present moment there are fifteen or twenty ships carrying surgeons to New York, who only receive their free passage, and who have to find themselves while in port. This is a subject which requires serious consideration, and which I am convinced can only be remedied by liberal-minded men. The professionals are, indeed, badly paid on shore; but nothing can equal the degradation they suffer on the sea. I speak from experience, having myself crossed the Atlantic in the capacity of surgeon. I have often applied for a similar berth, and, on stating my terms, have been told that they could get men for nothing. I know that some captains are in the habit of giving their ailing passengers bread pills, instead of carrying a professional man. Such meanness requires trampling under foot.

A WELL-WISHER TO HIS PROFESSION.

Liverpool, Aug., 1847.

VALUE OF THE APOTHECARIES' LICENSE.

[To the Editor of the Medical Times.]

SIR,—In your answers to correspondents of last Saturday you tell Mr. Oldfield that the "Apothecaries' Society would feel it an honour to rid the place of such mountebanks." When has this change come o'er the spirit of their dream? for, when any application is made to the Society for protection or assistance against quacks and illegal practitioners, they send back a *printed letter*, ready cut and dried, signed by the clerk, that they can afford no protection or assistance, and if you want any you must prosecute at your own expense. Well might Mr. Ebsworth and others ask "if the Society was in existence:" for any benefit or protection they are to their licentiates, they might as well be "down among the dead men." I have no hesitation in saying that the Company have acted false to their trust. Did the Legislature ever suppose, when they gave them a penal clause in their act, that they would abdicate that important privilege by calling on their licentiates to fulfil it, after they had pocketed their money?

May I ask, what was the meaning of that flourish of an advertisement that the Society published last winter in the *Medical Times*, setting forth that by the new interpretation of their act, &c., "any person so offending would be indicted for a misdemeanour, and that the Society were resolved rigorously to carry it into effect"?

Had the dread of the registration clause of Mr. Wakley's bill anything to do with it, think you? Many are of that opinion now. Even you, Sir, in your denunciation of that bill, asked "what benefit would it confer that the new reading of the Apothecaries' Act did not already possess, and was found to work well?" How has that pledge been since fulfilled?

Could not the National Institute form a fund for the protection of their associates? It would not be unworthy of them.

It may be all very fine to possess corporate privileges, &c. &c.; but I ask, what use would it be to confer the order of knighthood or any other title upon a *beggerman*, when he has not wherewithal to support it?

A case was a short time since privately submitted to you for your advice: it stated that a gentleman in a remote country village, who made for himself a practice sufficient to support his family in respectability, &c., and that, within the last twelve months, a fellow—a sort of half assistant, half porter, in a druggist's shop—had set up in opposition to him, as a general practitioner; and that his business and receipts were most seriously injured by this illegal intruion. You replied "that the Apothecaries' Society would certainly prosecute him." Well, he applied to the Society, setting forth the case; he received the usual printed circular, intimating to him that he should prosecute at his own expense. I this morning received a letter from him in the greatest affliction, stating that his affairs got deranged, he could not meet his engagements, and that the landlord had put in a "distress" and seized upon his furniture, and where to turn to he did not know; and yet a more high-minded, honourable fellow never existed; driven out upon the world by this unprincipled scoundrel, and by the shameful indifference of that body from whom he should have received protection and assistance.

Would it not be as well to publicly intimate to all quacks, that they may kill and practise with perfect impunity: they will not be interfered with; and that all medical students who may now be stewing, grinding, &c., may save themselves the trouble and expense; as the Apothecaries' certificate is perfectly worthless.

I trust, Sir, to your impartiality to publish this plain unvarnished letter, and that others, and doubtless they are numerous, may be induced to do so likewise, until public opinion be brought to bear against the Society, and compel them either to do their duty or resign a trust for the fulfilment of which they have proved themselves perfectly incapable.

AN OLD SUBSCRIBER.

COLLEGE OF SURGEONS.

Copy of a Letter from the President of the College of Surgeons of England to the Secretary of State, written in March, 1846; and of the Answer of the Secretary of State to such Letter.

Royal College of Surgeons of England, March 16, 1846.

SIR,—I have the honour to transmit to you a copy of resolutions passed by the Council of this College on the 11th inst., and confirmed on the 14th, relating to an application to her Majesty for a supplemental charter.

The Council will feel obliged if you will favour them, at as early a period as convenient to you, with your opinion on the propositions, in order that the draught of a charter may be prepared in conformity therewith, should they meet with your approbation. I am, &c.,

(Signed) SAMUEL COOPER, President.

The Right Hon. Sir J. Graham, Bart., &c. &c.

Copy of Resolutions of the Council of the Royal College of Surgeons of England, on the 11th of March, 1846.

That a petition be presented to her Majesty, praying for a short supplementary charter, enabling this Council, in the first instance, to arrange the two lists of members elected and appointed to the fellowship (under the authority of the charter) on the 11th of December, 1843, and the 26th of August, 1844; so as to place them in the order of seniority according to the dates of their respective diplomas as members. And further to give authority to this Council to admit, by ballot, from time to time, to the rank of fellow, without examination, all members of the College of twenty years standing, on producing to this Council certificates from seven members of the College, three of whom, at least, shall be fellows, that, on their own personal knowledge, the members to whom the said certificates are granted, are men of strict moral integrity and of high professional acquirements as practical surgeons; and that this manner of admission to the fellowship be limited to those who were members of the College on the 14th of September, 1843, the date of the late charter.

That all who were members of the College on the 14th of September, 1843 (the date of the late charter), and who have been, or may be, admitted fellows, shall take precedence on the chronological list of fellows, according to the date of their diplomas as members.

That those members who shall be admitted to the fellowship without examination, in the manner directed in the proposed supplemental charter, shall pay the same fee as is required by the by-law (sect. 3, para. 4) to be paid by members when admitted to the fellowship upon examination.

(Signed) SAMUEL COOPER, President.

Whitehall, March 23, 1846.

SIR,—I have taken into consideration the resolution of the Council of the Royal College of Surgeons of England relating to an application to her Majesty for a supplemental charter.

When the great change was made in the constitution of the College, rendering the Council elective by the fellows, it became necessary to constitute forthwith a body of electors, in aid of the gradual process of the introduction of fellows after examination. It appeared to her Majesty's advisers that the privilege of selecting members for this purpose might properly be given to the Council, who were accordingly empowered at once to enrol as fellows a list of 300 members, who might appear to them most deserving of that distinction. And, to obviate the consequences of any accidental omissions from this first list, this power was continued for twelve months after the date of the charter, which time seemed long enough to allow of the detection and rectification of any such omissions.

The charter provides that, with the exception of those who should be so admitted within the year, no person should be admitted a fellow until he should have passed a special examination and complied with the other requisites of the charter.

I have heard with great satisfaction that the beneficial effects which were anticipated from holding forth to young men the honour of the fellowship, to be gained by superior attainments, are in a fair way of being realized; and that a great encouragement has been given to those who aim at a high standard of professional education.

It has of course not escaped the consideration of the Council that there is room for apprehension lest the consequences of acceding to their present application should have a contrary tendency, and that the value of the fellowship may be proportionally impaired, as the number is increased of those who have been admitted to it, without giving open proofs of their superior qualifications.

I am not uninformed of the jealousies to which the distinction of classes among the members of the College has given rise, and I feel myself bound to suppose that the Council, having more ample means of information on the subject than I can command, have come to the conclusion that the probability of allaying these feelings by the alteration now suggested by them, is worth the risk of the inconvenience to which I have alluded.

Relying, therefore, as I have hitherto found myself fully warranted in doing, on the enlightened zeal of the Council to promote the best interests of the College, I shall not be indisposed to advise her Majesty to sanction the introduction among the fellows of those members contemplated by the resolution of the Council.

The other parts of the resolution refer to the future order of rank among the fellows.

If this were a mere question of ceremonial precedence, it would be of very secondary importance; but it assumes a very different aspect when viewed in connection with the manner of election into the Council.

It will not be forgotten by the Council that I from the first disapproved of the principle on which that mode of admission was formerly founded. In consequence of my representations, the Council agreed that it should be in some degree modified and rendered less objectionable in the recent charter, by affording a second opportunity for nominating a fellow for election to the Council, who had been once passed over; but the Council at that time were unwilling to abandon altogether the principle of nomination in the order of seniority, and I acquiesced in their final resolution, rather than be deprived of the advantage of their concurrence in the other important changes effected by that charter.

The inconvenience which I then anticipated will be greatly increased if I should advise her Majesty to sanction your proposal of ranking each fellow, upon his admission, according to the date of his membership, without making any change in the manner of election to the Council.

The consequences would be that, for the next seventeen years, none of the young fellows could calculate with any certainty on his chance of election to the Council, and the unlimited introduction of the certificated fellows, which will probably be viewed with jealousy by those who come in upon examination, will become a more palpable grievance, and will be more deeply resented. I understand that the settlement of this question is considered essential for producing the harmony which the Council hope to restore by the new measure; but, upon the most mature consideration I can give to the subject, I cannot recommend any alteration of the order of precedence among the fellows, unless it be accompanied by a change in the manner of election into the Council.

I do not think it desirable that every fellow should be indiscriminately eligible to that honour; nor do I wish to prescribe the exact conditions of eligibility; but it would appear to me a reasonable proposition, that the members of the Council should be chosen exclusively from those who had been fellows for at least ten years, or fellows and members for at least twenty-five years. On this question I shall wish to learn the opinion of the Council, when they shall have reconsidered this matter, after being made aware that I look on an alteration of this kind as an indispensable preliminary to a new arrangement of the order of precedence among the fellows.

I have, &c.,

(Signed) J. R. G. GRAHAM.

The President of the Royal College of Surgeons of England, &c.

GOSSIP OF THE WEEK.

UNIVERSITY OF LONDON.

First Examination for the Degree of Bachelor of Medicine, 1847.

The following is a list of the candidates who have passed this examination:—

First Division.

Richard Dechamp Ball, University College; Thomas Snow Beck, University College; Cornelius Black, Edinburgh School of Medicine; Charles Crighton Bramwell, University College; Thomas Bridgwater, King's College; Soorjoo Coomar Chuckerbutty, University College; W. T. Garret, Woodforde Clapp, University College; George Robert Cubitt, King's College; Samuel Weston Devenish, Guy's Hospital; Joseph Drew, Royal Manchester School of Medicine; Samuel Griffith, King's College; Frederick William Pearce Jago, London Hospital; John Cox Lynch, King's College; James Morris, University College; Hubert Shelly, Guy's Hospital; Josiah Willott, Guy's Hospital.

Second Division.

James Bailey, University College; Edward James Franklyn, University College; Thomas Green, Royal College of Surgeons in Ireland; George Renorden Kingdon, St. Bartholomew's Hospital; William M'Crea, St. George's Hospital; Henry Parfitt, King's College; William Henry Octavius Sankey, St. Bartholomew's Hospital; Edmund Whitaker, Royal Manchester School of Medicine.

Royal College of Surgeons.—The following gentlemen, having undergone the necessary examinations for the diploma of this college, were admitted members at the meeting of the Court of Examiners on Friday evening last, the 6th inst., viz.:—Messrs. A. Jubb, Halifax, Yorkshire; J. Ralph, Bethnal-green; W. Thompson, Addison-road North, Notting-hill; W. D Wilkes, Salisbury; R. E. West, Camelford Cornwall; J. Jngman, Treyddyn, Flintshire; J Willan, Kirkby Lonsdale, Westmoreland; J. C Nicholls, London; J. M'Cance Blizard, Belfast Ireland; D. De Lacy Ryan, Ennis, county of Clare; and J. F. Knipe, Stilorgan, near Dublin. —On the 9th inst., viz.:—H. J. W. Welch, W A. Duncan, C. G. Brown, C. Thompson, G Hother, R. C. Scott, D. W. Williams, T. F Heslop, S. J. A. Salter, and W. W. Edwards.

Apothecaries' Hall.—Gentlemen admitted members August 5: George Winter Rhodes Jabez Harwood, Edward Nason, John Edward Ellenton, John Waddington Hubbard, Walter Dawley Eddowes, William Daniel Michell and Henry Axford Mantell.

War-office, July 20.—5th foot: Dudley Hanley, M.D., to be Assist.-Surg., vice Batley, who resigns.—29th Foot: Assist.-Surg. Ludovic Charles Stewart, from the 50th Foot, to be Assist.-Surg., vice Young, who exchanges.—50th Foot: Assist.-Surg. W. Baker Young, from the 29th Foot, to be Assist.-Surg., vice Stewart, who exchanges.—August 6.—4th Dragoon Guards: Surgeon Chilley Pine, from the 58th Foot, to be Surg., vice William Gardiner, who retires upon half-pay.—11th Light Dragoons: Assist.-Surgeon Robert Bridgeman Wigstrom, from the 59th Foot, to be Assist.-Surg., vice Thomson, promoted in the 58th Foot.—12th Foot: Assist.-Surg. Nesbitt Heffernan, M.B., from the 17th Foot, to be Assist.-Surg., vice Chambers, promoted in the 35th Foot.—35th Foot: Assist.-Surg. James Walker Chambers, M.D., from the 12th Foot, to be Surg., vice Lister, deceased.—57th Foot: Assist. Surg. Johnstone Thomson Richardson, from the 60th Foot, to be Surg., vice Hunter, promoted on the Staff.—58th Foot: Assist.-Surg. Arthur Saunders Thomson, M.D., from the 14th Light Dragoons, to be Surg., vice Pine, appointed to the 4th Dragoon Guards.—59th Foot: Thomas Connor O'Leary, gent., to be Assist.-Surg., vice Bridgeman Wigstrom, appointed to the 11th Light Dragoons.—Hospital Staff: Surg. Robert Hope Alston Hunter, from the 57th Foot, to be Staff-Surg., of the First Class.

Guy's Hospital.—The triennial prize of 300l., founded by the late Sir Astley Cooper, Bart., has just been awarded by the physicians and surgeons of this institution, to Dr. Richard Halahan, for his essay on the "Uses and Structure of the Supervenal Capsules. Dr. Halahan is the son of the late Professor Halahan, of the Royal College of Surgeons of Ireland.

Bridewell Hospital.—Mr. Holmes Coote, the surgeon of the North London Ophthalmic Hospital, has just been elected assistant-surgeon to this institution, in the vacancy occasioned by the resignation of Mr. J. T. Crookes.

A Spotted Child.—A foundling child was brought to the New York Almshouses some time ago, a girl about sixteen months old. About one half of the body was of a fair complexion, and the remainder of a rich copper colour, and the dark spots were all covered with a long white hair. In the centre of its forehead was a round dark spot, and the same hue covered the breast and legs.

British Museum.—On Monday week several cases of Assyrian sculpture, from the ruins of the city of Nineveh, were deposited in the gallery of antiquities. They were originally intended for the French Government, but, from a misunderstanding that arose between the collector and the French authorities, they were offered to the trustees of the British Museum, who became the purchasers; they are considered the finest specimens yet discovered. The Xanthian collection of sculpture and architectural remains is now nearly complete, and will be open to the public in a few days.

Invisible Spine Supporter.—We have lately had our attention drawn to a valuable instrument of this kind, devised by Mr. Eagland, of Coventry-street. The grand purposes of such means, namely, the withdrawing of pressure from the spine, and the gentle opposing of force to the curvature, seem admirably answered. Mr. Eagland invites the inspection of the profession.

It has appeared in the *Gazette Med. Belge* and other papers, that a dentist in Paris has been arrested for using violence to a young person etherized by him. The Society of Dentists at Paris beg to assure the public that the culprit has been practising without a diploma. Consequently the honour of the legal profession remains unimpeached.

We learn that a well-organized medical society has been founded at Athens, and that it cannot fail to contribute greatly to the progress of medical science. Dr. Damianos Georgius, a physician of eminence, is the secretary of this society.

The number of prisoners increase every day in the gaols, both civil and military, at Gand, consequently the typhus fever is gaining ground. There are now twenty-five prisoners and two gaolers dangerously ill. Government should take some measure to avoid such an encumbrance. With every precaution, it is impossible for half a thousand persons to be heaped in a building only made to contain two hundred. We learn that the typhus fever continues to rage at Gand, in the lock-up house, so much that several prisoners have been sent to Saint Bernard and Vilvorde; others were provisionally set at liberty.

Harvard University, Boston, U. S.—Dr. Warren having resigned the chair of anatomy and physiology, the corporation has appointed three new professors, two of whom are to be attached to the Massachusetts Medical College in Boston, and one to the University at Cambridge. The new incumbents are O. W. Holmes, M.D.; J. B. S. Jackson, M.D.; and J. Wyman, M.D.

American National Medical Convention.—The delegates assembled on the 5th of May last, at Philadelphia, Dr. Isaac Hayes in the chair. Among the resolutions reported by the committee was one recommending to the medical schools of the country to extend the lecture term to six months, and to demand of the medical student higher preliminary attainments. It appears the amount of literary knowledge required is at present very slender. The meeting appears to have been highly satisfactory to all the members assembled, and it is expected that beneficial influence will be exerted by the convention, although the progress of reform must necessarily be slow and, perhaps, tedious.

Ship Fever in New York.—From the destitution of the emigrants who have recently arrived in New York, and the crowded state of the vessels in which they are brought, many are affected with ship fever. In several instances it has proved fatal, and is said to be contagious.

Naval Appointments.—Surgeons: W. Folds, to be Surgeon of Devonport Dockyard; James Wilson, to the Royal Sovereign yacht, vice Fields; Dr. John Robertson, to the Caledonia, vice Wilson; Charles R. Kinnear, to be Superintendent of the Cadet, convict ship; Hugh T. Beveridge, to the Imaum.—Assistant-Surgeon James Henry, to the Antelope.

The managers of hospitals in Paris are about to organize a small agricultural colony for deserted children.

Naval Promotions.—Assistant-Surgeons: Dr. W. M'Kinlay (1838) and Dr. A. Graham (1838), to the rank of Surgeon.—Deputy Medical Inspector Dr. R. Armstrong, of the Royal Hospital, Plymouth, to the rank of Medical Inspector, and appointed to that establishment, vice Sir D. J. H. Dickson, M.D., retired.

Novel Application of Ether.—Several successful experiments have recently been made in France on the etherization of bees, so as to be able to take their honey whilst they are in a state of inaction, without the necessity of destroying their lives.

The Astley Cooper Prize.—The subject selected by the umpires for competition for this prize for the year 1850 is, "On the State of the Blood and of the Bloodvessels in Inflammation, ascertained by experiments, injections, and observations by the microscope." It will be recollected that this prize was founded by the late celebrated surgeon whose name it bears, and is of the value of £300.

The Legislature of the state of Connecticut have just decided the question as to who discovered that insensibility could be produced by the inhalation of ether. They proclaim, after long scrutiny and debate, that this discovery belongs to Dr. Horace Wells, of Harford.

Great preparations are making at Haydar Pacha for the feast of the circumcision for the sons of the Sultan. Eight thousand children are to be circumcised with the two princes, who will each receive a complete suit of clothes and a sum of money. It is supposed the expense of this fête will exceed 60,000 bourses (about seven millions of francs). On Thursday, the treasurer, the steward of the Sultaness, Tahir Pacha, the chief physician of the kingdom, his Excellency Ishmael Effendi, and the chief eunuch of the Imperial Palace, were to repair to Haydar Pacha, to inspect the work, and to take down the necessary depositions.

We sincerely regret to announce the death of the eminent and amiable Dr. Andrew Combe, who died at Gorgie Mill, near Edinburgh, at twelve o'clock on the night of the 9th of August.

MORTALITY TABLE.

For the Week ending Saturday, August 7, 1847.

Causes of Death.	Total.	Average of 5 Summers.
All Causes........	998	940
Specified Causes...	994	935
Zymotic (or Epidemic, Endemic, and Contagious) Diseases..............	311	26
Sporadic Diseases.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat........	99	103
Diseases of the Brain, Spinal Marrow, Nerves, and Senses................	140	157
Diseases of the Lungs, and of the other Organs of Respiration	185	226
Diseases of the Heart and Blood-vessels...........	26	25
Diseases of the Stomach, Liver, and other organs of Digestion	106	94
Diseases of the Kidneys, &c.	9	8
Childbirth, Diseases of the Uterus, &c.	5	10
Rheumatism, Diseases of the Bones, Joints, &c. ...	10	7
Diseases of the Skin, Cellular Tissue, &c.	8	2
Old Age................	38	50
Violence, Privation, Cold, and Intemperance........	57	28

SUGGESTIONS

FOR A MORE SIMPLE ARRANGEMENT OF THE

MATERIA MEDICA,

BASED ON ITS PHARMACEUTICAL AND THERAPEUTICAL RELATIONS.

By GEORGE LEITH ROUPELL, M.D.

Cantab., F.R.S., Fellow of the Royal College of Physicians, Physician to St. Bartholomew's Hospital, Lecturer on Materia Medica at the College of St. Bartholomew' Hospital.

(Continued from p. 481.)

LECTURE VI.

The division of the alkaloids which I have next to consider is composed of such as are amorphous in form, not crystalline: these are aconitina, veratria, delphinia, and emetina.

11. Aconitina, one of the most powerful substances in nature, is so active that one fifteenth of a grain administered internally has occasioned the most alarming symptoms, which were not dissipated without much apprehension of loss of life; and a twelfth of a grain given to a bird destroyed it, we are told, with the "rapidity of lightning."

Aconitina has been introduced into the Pharmacopœia, and is made by precipitation of the alkaloid by ammonia from the solution of the sulphate, and then purifying it by animal charcoal.

Aconitina appears either in the form of a white amorphous substance, or in the shape of a transparent resin-like mass, having an acrid, bitter taste, benumbing the tongue, and causing a sensation of heat which lasts from ten to twelve hours. It is very little soluble in water, readily so in alcohol and ether. Its formula has not yet been agreed upon. Aconitina has only hitherto been employed in practice as an external application; and care must be taken even when this is done that there be no abrasion of the cuticle. Used in this way, aconitina, when pure, is a gigantic remedy, one hundredth of a grain creating a sensation in the part which will last a whole day. Aconite given internally, or applied topically, in the form of the dry leaf or the extract or tincture, produces various effects upon the system.

Applied locally, it allays pain and diminishes muscular power. Given internally, it acts upon the sentient and motor power as a direct sedative, producing at the same time a remarkable tingling in various parts of the body, especially the head, face, and extremities. It influences, moreover, the action of the heart, lessening the frequency of its beats, lowering its power, inducing a state allied, according to Dr. Fleming, to excessive exhaustion, and producing death by syncope, preceded by loss of sight, hearing, and speech. It is then a calmative, an anodyne, and an antispasmodic; and it has been recommended in cases of inordinate action of the pulse, in pneumonia, pleurisy, phrenitis, and rheumatism, both in the acute and chronic stage. In neuralgic affections, in spasmodic asthma, and in painful malignant disease, benefit is said to be derived from it.

The preparations of aconite are the dried leaf, the extract, and the pure alkaloid. A tincture is in use, and this is a good form both for the external application and for internal exhibition.

12. Veratria is the active principle of the veratrum album and the sabadilla. This alkaloid is met with in commerce as a light brown powder; but doubts are entertained as to whether it has yet been ever obtained in a state of purity. It is insoluble in water, soluble in alcohol, its taste is acrid, and its local action is that of an intense irritant, producing active inflammation when applied to the mucous membranes, and if to that of the nose violent and dangerous sneezing. It acts also upon the nervous system, giving rise to stupor and convulsions.

Veratria has been applied externally in the endermic method, and has been found serviceable in neuralgia, disease of the heart, rheumatism, paralysis, and dropsy. It is employed externally, also, as a means of destroying the parasitical animals which infest the human body.

Internally the preparations of veratrum are recommended in gout and rheumatism, but for these it has been superseded by colchicum. Veratria differs chiefly from colchicia in its greater acridity, in its insolubility in water, and in not crystallizing. In their therapeutic effects these alkaloids are nearly identical. The preparations of veratrum have also been used in cutaneous affections; but they need not occupy me longer, except to mention that they are a wine, a decoction, and an ointment.

13. Delphinia is the active principle of the staphisagria. It appears in a pulverulent form, insoluble in water, soluble in alcohol and ether, and has an acrid, bitterish taste. Applied to the skin, it creates a sensation of burning, and occasions a slight vascularity in the part. Delphinia is said to be equally useful with veratria in tic douloureux, paralysis, and rheumatism, and to possess one advantage, namely, that it may be applied to the mucous membranes without producing the irritation so characteristic of veratria.

At present the chief use of staphisagria is for the destruction of pediculi.

14. Emetina is white, slightly bitter, very soluble in alcohol, sparingly so in water. Its composition is $C^{37} H^{27} O^{10} N$. It exists in the proportion of one per cent. in, and is the sole active principle of, ipecacuanha.

Ipecacuanha acts as an irritant locally when in contact with the mucous membranes: thus it produces vomiting, or catharsis, when and in some persons its dust, if inhaled in smallest quantities, excites a severe attack of spasmodic asthma. Remotely, ipecacuanha occasions increased secretion from the mucous surfaces, acting as an expectorant and as a diaphoretic; it acts besides upon the nervous system as a sedative or narcotic. This combination of sedative properties with the power of increasing secretion from mucous surfaces, renders ipecacuanha, or its active portion, a most valuable remedy in the earlier stages of inflammation of the mucous membranes of the bowels and lungs, and in certain spasmodic affections relievable by free discharges of mucus, as asthma and hooping cough.

Ipecacuanha is of daily use as an emetic, not only as an evacuant, but as a means also of checking *in limine* many febrile disturbances. By it may the paroxysms of ague sometimes be stopped at once; by it may, in my belief, the accession of the eruptive fevers be arrested, or much mitigated; and by it may some forms of peritonitis be prevented or controlled. Nothing surpasses ipecacuanha in dysentery and other inflammatory affections of the bowels. But all the special adaptations of this remedy cannot be enumerated: its utility in some cases of hemorrhage alone deserves mention further; and with the enumeration of the forms in which it is used I shall conclude this notice of a most admirable remedy: these are a wine, a simple and a compound powder, and a compound pill.

The last section of the alkaline bases are volatile, and appear in the form of a transparent, oily fluid. Two are mentioned as the active principles of officinal plants, namely, nicotine and conia.

15. Nicotine, the efficient part of tobacco, is an oleaginous, colourless liquid, soluble in ether and alcohol. It is heavier than water, but miscible with it; its taste is acrid and burning, communicable to 10,000 times its volume of water; its odour is pungent, and is that of tobacco. It is strongly alkaline, forming salts very soluble in water, varying, however, in their tendency to crystallize. Nicotina is spoken of as a frightful poison; it exists in tobacco in the proportion of from three to ten or twelve parts in the thousand. The fraction of a grain will kill a rabbit; a single grain placed upon the tongue will destroy a dog; and a small quantity introduced beneath the skin

acts with greater rapidity than prussic acid, killing one of these animals in an instant. The symbol is $\overset{+}{N}$; its formula is $C^{10} H^{8} N$.

The effect of tobacco locally is that of a powerful stimulant, as we see exemplified when in the form of snuff, applied to the nostril, it occasions sneezing; or, when chewed, it excites the salivary glands; the effect remotely is that of a stimulant and sedative. It produces in those accustomed to its use a feeling of general tranquillity; it allays hunger, it overcomes fatigue, and it calms irritability. Under its influence the kidneys and the bowels perform their functions more freely. In those not accustomed to its use it produces sickness, fainting, emesis, great coldness, and depression; and, if taken in large quantity, tremors, lethargy, and death. It operation varies, as it may be exhibited either in the form of infusion or in that of smoke. When injected into the bowels in the officinal form of an enema, it produces faintness and depression; when smoked, it occasions the pathological states of vomiting, tremors, and lethargy. The disorders in which it is recommended are chiefly spasmodic, or in which it is purposed to relax the fibre; as, for example, in strangulated hernia, in constipation of the bowels, with distension of the intestines, and vomiting, as in ileus, or the advanced stages of peritonitis. In retention of urine and other spasmodic affections of the urethra, as also in tetanus, it has afforded effectual relief in some cases.

Tobacco is a ready poison to the inferior animals, and quickly will destroy pediculi; but its external employment is not in younger persons, at any rate, free from risk or danger.

The only officinal preparation is the enema tabaci.

16. Conia, the volatile, oily principle of the conium, may be produced by adding a fixed alkali to the seeds, leaf, or extract of conium, and then distilling. This alkaloid has an intense, suffocating vapour, and an acrid, benumbing taste; it is colourless at first, but afterwards becomes of a light brown; it is a powerful poison.

To Professor Christison is due the merit of studying more accurately than had been done previously the effects of this substance. He considers that when it destroys life it does so by paralyzing the muscles of respiration, exhausting the nervous energy of the spinal chord without affecting the heart, exciting spasms, or occasioning insensibility.

The diseases in which conium has been found useful are irritation of the mucous membrane of the lungs, carcinoma of the uterus, irritable ulcers, in some forms of spasmodic and neuralgic affections, and in acute rheumatism.

Conium is employed advantageously as a sedative and discutient in some painful but not malignant glandular enlargements.

The dried leaf, an extract, a tincture, the cataplasm, and the compound pill, are the officinal preparations of this plant.

With conium I conclude my first class, which comprises those drugs which owe their activity to an alkaloid. It contains some of the most powerful of the medicinal agents with which we are acquainted. The individuals, indeed, which compose it form a most interesting group, physiologically, as well as constitute a highly energetic body of therapeutical substances. They all yield principles containing nitrogen; oxygen is wanting in one—in nicotine; and this, in seeming obedience to a law, holds deadly enmity to life. The alkaloids possess great powers of attraction; pertinaciously resisting decomposing agencies. Orfila has shown that morphia placed for months in the midst of putrefying animal substances remains itself unchanged. The disulphate of quina is, in truth, an antiseptic. We see the powers of digestion resisted in the instance of strychnia, conia, and nicotine, since the blood of animals to which they have been administered either yields those principles or is itself specifically poisonous. Quina, further, resists the process of excretion in addition, as it may be found in the urine and perspiration of persons taking it by the mouth.

Many of the alkaloids, again, can bear unaltered an elevated temperature, are sublimed unchanged; hence are made available as remedies in the gaseous form, as we see exemplified in the practice of smoking opium, tobacco stramonium, hyoscyamus, and digitalis.

Some few act as local irritants, as veratria, delphinia, and colchicia. One, emetina, would seem to act remotely as an irritant to the lungs. All, however, act upon the brain or nervous system with more or less activity, in whatsoever way they may be brought into contact with the body. Then thus circulating, we cannot but be struck with the diversity of their operation. Paralyzed limbs are forced to move, the voluntary muscles obey another power than the will, the involuntary muscles even are thus brought within our control, tone may be imparted, vital movements restrained, or contractility be annihilated. Consciousness again may be suspended, new and peculiar sensations induced, or sensibility wholly destroyed. All the nervous centres and their functions may be shown to be directly affected by the circulating fluid thus impregnated. Time does not permit me to enter further into this part of my subject; suffice it that some change must be effected in the nervous tissue by the formation of new or the transformation of the existing nervous matter, an observation of Professor Liebig, who has pointed out to us the fact that the vegetable bases containing nitrogen are of all the constituents of the body alone related in composition to that of the brain and nerves. What the exact change may be we are yet in doubt, but this we may hope eventually to discover by further improvement in chemistry, by reasoning, and by experiment.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), M.B.S., Physician to the Royal Infirmary for Children, &c.

(Continued from page 487.)

GENTLEMEN,—I shall to-day occupy your time in considering the treatment of *tuberculous meningitis*. At the commencement I am forced into the melancholy duty of informing you that, with the exception, perhaps, of pulmonary tuberculosis, there exists no disorder in combating which the resources of our art are more generally found unavailing. Yet this, though it be true, must not force you to the bedside as men without action; though disheartening, it must not paralyze all effort. When you can do good it will be by at once, at the onset of the malady, bracing up your powers and rousing your energies in the endeavouring to put a barrier to the onward progression of this much-dreaded disease. In talking to you of the treatment of it, I cannot better introduce the subject than with the emphatic word "beware!"—beware of not early diagnosing the nature of the affection—beware of not at once evincing decided behaviour. If the malady is not thus early made out, and then promptly treated, woe be unto the little sufferer of this lethean disease! Bad as I have told you its prognosis is, and unavailing in most cases all attempts at its cure, still I cannot go to that extent to which some, like Rilliet and Barthez, proceed when they say, "For our part we have never seen a single case of tuberculous meningitis terminate in a cure, and our experience confirms that of Rufz, Piet, Gerhard, Green, &c."

On the contrary, I believe that the disorder may be now and then cut short in its progress if the steps which it has already made be but few or initial. I am of opinion that cases will occur in which, by early attending to the indications and promptly acting on them, you may save the life of the child. One thing I am aware of, and I am bound to tell you of it: it is this:—That many of those cases which I could produce as having been satisfactorily treated would be affirmed to be, by the writers I have just alluded to, either as cases of certainly not developed tuberculous meningitis, but of simple meningitis of a subacute form, or else the less severe examples, merely ones of cerebral congestion or irritation of the nervous centre, &c. All I can say is this, that I have been most careful in endeavouring to diagnose the disorder, and my opinion is, that these cases have been, in the one class—though very limited I confess—cases of developed tuberculous meningitis in its first stage; the other, the more frequent premonitory state of disorder which, if allowed to run on, would be in all probability followed by that disease. To express my opinion of the numerical relation of these cases to the fatal ones, from the notes I have by me, it would be in the ratio of about thirty per cent., in which the disease has been attacked and warded off when only advanced to the premonitory form, and six per cent. of cases of averted fatality after *stupor* had been seen. This is about the ratio I would lay down, for, although I have not had a hundred cases to treat, yet, from what I have, this is the proportion. The great doubt, of course, will be with the first class of cases, as to what was really the nature of the disorder. I believe it to have been such as I have told you, and, if I am wrong, all I can say is, with Dr. Yeats, that "I confess I would much rather incur the charge of having twenty times supposed cases of water on the brain by attacking what I consider to be the early symptoms than once ultimately become a witness to this distressing scene by neglect, oversight, or mistake."

In relation to acute hydrocephalus, as to most maladies, the treatment may be said to be both preventive and curative. Of the latter I shall speak first. This, of course, has varied in the hands of practitioners, according to the peculiar views they held as to the nature of the disease, or according to what lesion, observed after death, was supposed to be, in the generality of cases, the cause of the fatal event. Those who have regarded the disease as essentially inflammatory, or as killing by the meningeal and cerebral congestion, by the exudation of lymph &c., at the base, and by the softening thought to be produced by inflammation, have treated the affection by purely antiphlogistic means. Those who have regarded it as a dropsy, or as essentially consisting in the phenomenon of ventricular effusion, have also treated it partly by antiphlogistic measures which would prevent such effusion, and partly by others which would cause such effusion to be absorbed or disappear. In modern times, however, a modified treatment has been adopted: for whilst it has been admitted that cerebral or meningeal congestion or inflammation form common elements in the series of phenomena, and have to be treated, yet it has been at the same time affirmed that a still more fundamental element exists, and to which attention is to be directed; and not only this, but that the origin, type, course, and effects of the—in most cases secondary—inflammation are of such a character as to oblige us to view it, in relation to its treatment, in a different manner to what we do inflammation of an ordinary form.

If you take the term *hydrocephalus* in its very loose, though very frequently adopted, sense, and ask which has been the more successful of these modes of treatment, you must be told that the first or antiphlogistic mode has been the one. But I have already pointed out to you the source of a great fallacy in respect to this point, viz., that those cases of so-called hydrocephalus so successfully treated by the antiphlogistic method have not been those cases to which the term *hydrocephalus* in its more limited, though appropriate, sense is applicable, or, rather, have not been cases of tuberculous, but, on the contrary, ones of simple meningitis, which is a different disease altogether. In those cases, however, in which the antiphlogistic method has been followed, and, even according to its most strenuous advocates, has failed, we have every reason to believe that most of them were examples of our present malady. Of course, if a person says, all forms of hydrocephalus are only different varieties of simple inflammation of the membranes

of the brain, or of the latter, and must be treated accordingly, I can only say here that such an opinion is a sad mistake. As this method of treatment, as well as some others, has been applied indiscriminately to both classes of meningitic and cerebral disorder, though only useful in one, I shall presently speak more in detail concerning them. At present I shall speak to you of that method of curative procedure I would advise you to follow.

You must remember you have two elements, if I may so call them, to treat in the disorder:—1st, the scrofulous, which evinces itself by the tubercular deposit, by the softening of the cerebral centres and the ventricular effusion; and the inflammatory, which proves its existence by the vascular congestion, the concrete or gelatiniform exudation, &c. You must also remember that this latter, the inflammation, in one sense is but an effect of the former: it is scrofulous inflammation, or inflammation of a peculiar character. These three great points must be regarded in your treatment. In one class of cases you will have the former, or the scrofulous element, making way for some time before the inflammatory phase of the disorder presents itself, or in others the latter is never seen at all; in another class, you will have the disease only made known to you by the prominency of the intercurrent inflammation; whilst in a third, you may believe that the latter precedes all the other elements of the disorder. Still this inflammation is soon followed by the tuberculous deposit, &c., and is always of a scrofulous character.

The symptomatic phenomena of every case will be those of irritation and pressure of the nervous centres, variously combined, and each of different degrees of intensity, according to the particular case. These symptoms I have already spoken of.

Now, suppose you are early called to a case in which either you dread the temporary congestion or vascular irritation of the membranes, &c., may be followed by the more marked characteristics of the true disorder, or in which you fear tuberculous exudation has commenced and has given rise to prominent signs of such irritation, you will at once have recourse to those measures which will diminish the vascular excitement: most carefully remembering, however, that the vascular excitement cannot be reduced in the same simple way as you would reduce common inflammation, and this for two reasons—first, it is of a subdued, asthenic, and specific type—in fact, is inflammation or congestion occurring in a scrofulous individual; secondly, the pushing of antiphlogistic measures to extremes would only still further incline to the outbreak of the other scrofulous manifestations—the tuberculous exudation, the serous effusion, the softening of the centre. You will have, then, to be careful in subduing the vascular excitement in question. In most cases, unless the child be very weak, very scrofulous-looking, and if you are called early, you are to apply leeches behind the ears; you must dry-cup at the nape of the neck, and purge pretty freely; have the hair cut quite close; prohibit the wearing of caps, &c.; have the child kept in a dark, cool room, with its head raised on a hard pillow, and its feet and legs clothed in worsted socks, and lint dipped in cold water applied to the forehead. You are aware of the obstinate constipation which exists in this disorder, and of the very great difficulty we have in overcoming it. There is also so much sickness, too, that the medicines will be repeatedly rejected. I advise you then, at the same time that you give (by mouth) *aloes* and *sulphate of potash*—for I have found them the best—in properly graduated doses, according to the age, that you have administered injections of *castor-oil* with *turpentine*, and the powders and injections repeated every three or four hours, until several evacuations are obtained. Do not be afraid of the aloes taking too long a time to act, as resinous purgatives are supposed to do: it will act as soon and better than most other things; and you will find the turpentine an admirable derivative from the brain. In some cases you cannot dry-cup behind the neck, it would cause such excitement in the child, and you would do more harm than good; if you cannot, apply mustard poultices there instead.

Suppose, however, that the child, when first seen by you, does not present much evidence of inflammation or congestion; suppose that the sypmtoms of pressure are the more prominent, that with the symptoms of the first stage there is considerable tendency to sleep or stupor: here you will do no good by leeches, and they may be set aside altogether. But purge freely as before, have the head shaved, and rub in the *iodine ointment* night and morning all over the shaven scalp; put a blister behind each ear, and either dry-cup at the nape, or put mustard cataplasms there, as before recommended, attending, of course, to the same hygienic arrangement, &c., previously mentioned.

Now, the question is, in the early stages of *tuberculous meningitis*, after attending to the counter-irritation, purging, &c., and local depletion when advisable, what else are we to do? Are we not to endeavour to affect the system by some internal remedies, such as *mercury*, *antimony*, *iodine*, &c.? All these, and other things, as I shall soon inform you, have been advised.

What *I* advise you to do, is to give the child the *iodide of potassium*, and *iodine*, internally, whilst you are rubbing the iodine ointment freely over the scalp. To the youngest child you may give a grain of the iodide with 1-10th of iodine, every three hours. In this severe malady, it is only up to a certain point in its progress, as I have told you, that you can hope to do any good, and this point is the end of the first stage, for as soon as stupor comes on, as soon as the second period is entered, as I have before said, ninety-four cases out of one hundred will pass on to a fatal event. So long, however, as there is only constipation, vomiting, listlessness, and cephalalgia, with heat of head and slight tendency to sleep, you are privileged in looking for a more favourable termination.

On reviewing my notes for what has been the more essential points of treatment in such favourable cases, I am more inclined to place confidence in free purging, by the turpentine injections, and powder of aloes, blistering behind the ears, and the rubbing in of the iodine ointment freely over the shaven scalp.

You may make slight variations, if you like, in some of the purging agents. I have used *scammony*, *calomel*, and *rhubarb*, together, with good effect. You may also put a blister, in older children, at the nape of the neck, instead of behind the ears. Internally you may give the nitrate of potash, in full doses, or two grains of calomel with one of ipecacuanha, every two hours, in lieu of the iodine mixture I before spoke of. All these means I have repeatedly tried, but I lay more stress upon the purging, blistering behind the ears, and application to the shaven scalp, than to anything else.

When stupor has come, when the second stage progresses, the above measures are still to be continued, the blisters behind the ears being kept freely open; towards the end of this stage a blister may be applied over the whole head.

Towards the third stage, if the child can be made to swallow, which it generally cannot do when that stage is completely attained, gentle stimulants, such as *ammonia* or a few drops of *ether*, may be administered, and turpentine injections repeated as before; warmth must be applied to the extremities. Up to the last moment, I never consider myself justified in standing by the bedside, and letting the child die without making some endeavours, although I too well know how unavailing they will be. In these cases, however, the inability of the child to swallow; the dislike of the parents to see the child forced, as it were, to suffer that which they believe will be unavailing; the refusal to allow blisters to be placed on the vertex or nape of the neck, or of cupping to be performed at the latter spot, place serious obstacles to our endeavours.

In some few cases, in older children, I have blistered the scalp and dressed it afterwards with antimony ointment, and for a short time it has aroused the power of the patient, soon afterwards, however, to sink. In other cases I have purged very actively with strong agents like *elaterium*, and for the time with good effect. In one or two I have given the *biniodide of mercury*, but with no especial benefit; and, although I cannot say I have from the *beginning* tried a stimulating plan, yet I have employed it from the commencement of the second stage, and found it as unavailing as any other.

In the two cases I before alluded to, in which the children got better after stupor had come on, free purging by turpentine injections, blistering the scalp and behind the ears, in one case, and in the other purging by aloes and rubbing in iodine ointment on the scalp, with, internally, calomel and ipecacuanha at first, afterwards the iodine mixture, were the means employed. Such are the principles of treatment upon which I would recommend you to proceed. At my next lecture I shall speak to you of other methods which have been followed.

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.

By Professor MATTEUCCI, of Pisa.

Part XII.

PHYSIOLOGICAL ACTION OF THE ELECTRIC CURRENT.

Galvani discovered, in the course of his experiments on the electricity of metals, that muscular contractions are excited in the leg of a frog, recently killed and prepared, in the manner described in a preceding paragraph, when two metals, zinc and silver, for instance, and of which the one touches the crural nerve, and the other the muscles to which this nerve is distributed, are brought into contact with one another (a).

Galvani interpreted this fact by assuming the existence of an animal electricity, which the metallic arch simply serves to discharge. Volta having subsequently demonstrated, however, that the muscular contractions witnessed in Galvani's experiments are attributable solely to the electricity evolved by the contact of the two metals, and passing along the nerves and muscles of the animal, the notion of animal electricity was universally abandoned. In the paragraphs immediately preceding this it has been shown in what animal electricity really consists; it must be admitted that Galvani was by no means wrong in assuming its existence, since a great many phenomena and facts, discovered by that distinguished philosopher, are most certainly attributable to the *electricity proper* of animals.

The contractions excited in the frog or any other animal, living or recently killed, when the electric current passes through one of its nerves, are, however, altogether independent of this animal electricity. With the examination of this fact we will now commence our remarks on the action of electricity upon animals.

During the first years immediately succeeding the discoveries of Galvani and Volta, every journal, and every treatise on physics, teemed with particulars regarding the action of galvanism. The convulsions and starts exhibited by recently-killed animals, when submitted to the action of a sufficiently energetic electric current, even induced for a moment the extravagant hope that the new agent could restore the dead to life. This illusion, of course, vanished speedily, and science re-entered within its proper limits. Valli, Lehot, Humboldt, Aldini, Bellingieri, and Marianini, and, more recently, Nobili, have studied the physiological action of the electric current. It would, of course, lead us too far to report the divers experiments made by these philosophers:

(a) The discovery of this fact is found mentioned first in one of Galvani's manuscripts, entitled, "Experiments on the Electricity of the Metals," and bearing date the 20th of September, 1786.

a simple statement of the facts that are well established in the actual state of the science will suffice.

If the sciatic nerve of the thighs of a rabbit (firmly fixed upon a table by its paws) be laid bare, carefully separated from the surrounding parts, wiped with unsized paper, and completely insulated from the neighbouring tissues by placing under it a band of taffeta induced with gum—and if the electric current produced by a pile of ten elements be then made to pass along the nerve, by applying to it the two conductors, at a trifling distance from one another, so as to send the current in the direction of from the central part to the periphery of the nerve—the thigh muscles of the animal will contract at the moment that the circle is closed, the back will become strongly bent, the animal will shake its ears and emit cries indicative of acute suffering.

The same phenomena will be observed if the respective position of the electrodes be changed—in other terms, if the current be made to pass in the reverse direction, viz., from the periphery to the centre of the nerve; they will be reproduced at the moment that the circuit is broken by interrupting the communication of the conductor with the nerve, no matter whether the direction of the current be *direct* (from the centre to the periphery of the nerve), or *inverse* (from the periphery to the centre).

But whilst the circuit is closed the animal will not exhibit any of these phenomena, no matter what the direction of the current may happen to be.

If the current be applied in a manner to traverse the nerve right across, instead of passing along it, the muscular contractions will be less marked, and even altogether missing whenever the experiment happens to be conducted skilfully enough to send the whole of the current into the nerve in the desired direction.

When repeating these experiments upon divers animals, it will be generally found that the signs of pain manifested by the animal are the most marked at the commencement of the passage of the inverse current, whilst the most energetic contractions will be observed during the first instants of the passage of the direct current. Marianini observed, that if the circuit of a pile composed of a certain number of elements is closed by touching the one pole with one, and the other with the other, hand, the strongest shock is invariably felt in the arm in which the direct current circulates.

Long-continued experimentation upon one and the same animal terminates in the disappearance of the whole of the phenomena described; and this will be the case the more speedily, the more energetic the current happens to be. If the animal be then allowed to rest for some time, or if the force of the pile be increased, the former phenomena will make their reappearance.

If we study the phenomena as they successively occur, in a prolonged series of experiments down to the time of their total cessation from exhaustion, we find that, upon interrupting the direct current, the contractions of the inferior muscles (*i. e.*, the muscles below that point of the nerve where the current is inserted) grow more and more feeble, whilst they continue still unimpaired in the muscles of the back, and whilst the agitation and, frequently, the cries of the animal persist. We find, also, that the effects of the direct current are limited during the first instants of its passage to the contractions of the inferior muscles. With the inverse current, the contractions of the muscles of the back, the cries and shaking of the ears, are, after a time, observed only at the moment that the circle is closed, at the same time the contractions of the inferior muscles are hardly perceptible; upon the interruption of the inverse current, on the contrary, the latter muscles are still found to contract, whilst contraction in the muscles of the back, emission of cries, and shaking of the ears have ceased to make their appearance.

There are, accordingly, two distinct periods in the action of the electric current upon the nerves of a living animal. In the first period the irritation of the nerve is transmitted in all directions, towards the centre as well as towards the periphery, at the commencement of the action as well as at the end; and this independently of the direction of the current. In the second period, the excitation of the nerve is communicated towards the periphery, during the first instants of the action of the direct, and at the moment of the interruption of the inverse, current; the irritation of the nerve is, on the contrary, transmitted towards the brain when the direct current is interrupted, or the inverse closed.

The preceding results may be expressed in more simple terms, viz.—the current acts in the sense of its direction when it commences, and in the opposite sense when it ceases, to circulate in the nerve.

The contractions of the muscles of the back and head are induced by reflex action of the spinal marrow. Upon subjecting rabbits recently killed, and prepared as in the preceding experiments, to the action of a single element or simple circle, the inferior muscles are observed to contract at the moment of closing the circle of the direct, or breaking that of the inverse, current. When employing a more powerful pile, the same muscles are found to contract both at the commencement and cessation of the circulation of the current, and this altogether irrespective of the direction of the latter. After the experiment has continued for some time, the contractions are observed only at the commencement of the action of the direct, and cessation of that of the inverse, current.

These phenomena are the same for all animals, but they are most clearly perceptible with frogs. Experiments with the latter animal show that it is not only a galvanoscope of most perfect susceptibility, but that it may be looked upon, moreover, as an instrument fit to do the office of a galvanometer, and to indicate, the direction of the current circulating in a portion of its nerves.

Marianini was the first to observe that contractions are obtained at the moment of breaking the circle, without there being any at the moment of closing it. To succeed in this experiment, it suffices to introduce a frog into the circuit of a pile, and to close the latter by touching one of the poles with one hand, and immersing the fingers of the other hand in the liquid in which one of the extremities of the frog is placed. During the first instants the current is very feeble, owing to the low conducting power of the hand; but it increases in proportion as the fingers get more and more moistened with the liquid, and it may then be observed that no contractions take place at the moment of the introduction of the current, whilst they are found to manifest themselves at the moment of interrupting the current.

We have to add here a few words on the action of the electric current upon the muscular fibre freed from nervous substance—as far, at least, as this can be effected. The result of several experiments in this respect would lead to the conclusion that the electric current acting upon a muscular mass excites contractions, both at the moment of closing and at that of breaking the current,—no matter what the direction of the current may be with respect to that of the muscular fibrils,—and that the contractions which take place upon breaking the current are the first to disappear.

We have now to treat of certain circumstances which modify the action of the electric current upon the nerves and muscles of living or recently-killed animals.

The phenomenon called the *voltaic alternations* consists in this:—If a frog, prepared in the usual manner, is placed astride on two small glasses containing either pure or slightly saline water, so that the spinal marrow plunges into the one, and the legs into the other, glass, and the circuit is then closed, allowed to circulate for a certain time (say twenty or thirty minutes, according to its force), subsequently interrupted and then closed again, no new contractions are obtained, but they make their reappearance if the direction of the current is reversed; they cease again to manifest themselves after the current has been made to proceed a certain time (less than at first) in the new direction, and reappear upon re-establishing the original direction of the current. These alternations may be repeated a certain number of times upon the same animal. The intervals of time required to elapse between the passage of the one and that of the other current depend upon the intensity of the current and the vitality of the animal.

It is easy to demonstrate experimentally that the weakening of the excitability of the nerve by the circulation of the current is most manifest in the portion more immediately traversed by the latter. If, after having passed a current through the nerve of a frog until contractions have ceased to manifest themselves, the conductors are applied to another portion of the nerve further removed from the brain than that acted upon at first, the contractions are immediately seen to reappear. Pursuing this experiment still further, other portions of the nerve still further distant from the brain may be laid bare and acted upon with the same results. It might accordingly be said that the excitability of a nerve aroused by the electric current withdraws towards the periphery of the nerve in proportion as the vitality of the latter becomes more and more extinct.

The author has made a series of experiments, with a view to ascertain how the electric current acts upon animals destroyed by poison. The results of these experiments tend to show that the action of the electric current upon the nerves of animals which have perished in hydrogen, nitrogen, carbonic acid, or chlorine, presents no difference from that upon animals which have not been subjected to the influence of these gases. But it is not the same with animals destroyed by hydrocyanic acid, or killed by repeated discharges of a strong battery across the spinal marrow. A current produced by one or even by several elements, and applied to the nerves of such animals, fails to excite muscular contraction, or, if there happen to be some slight contractions, they cease entirely after a few seconds. The muscles, however, give very marked signs of contraction when subjected to the same current, which is another proof that the muscular fibre possesses the property to contract under the influence of the electric current, independently of the nerve. The action of the electric current upon animals that have perished in sulphuretted hydrogen excites no contraction, except the current be very powerful, and even in that case the contractions cease speedily.

If an electric current is made to pass through a carefully insulated and tied nerve, *above* the ligature, it produces the effects of its action on the nervous centres, whilst, if applied *below* the ligature, it produces the effects of its action on the extremities of the nerves. But if the two poles of the circle be applied, the one above, the other below, the ligature, the phenomena will be the same as if the ligature did not exist, or they will, at all events, simply be less marked, since the current in that case is by no means interrupted, but simply weakened in its action.

From a series of experiments made by the author, it results that the excitability of a nerve is reduced much more by the passage of the direct, than by that of the inverse, current—nay, even, that the inverse current heightens the excitability of the nerve, as the following fact tends to prove:—

If the inverse current is made to pass through the nerve for two, three, or four hours, it happens, in the great majority of cases, that, at the moment of breaking the circuit, the limb to which that nerve is distributed suffers a very violent contraction, which lasts a certain number of seconds, and might, not inappropriately, be called tetanic. It suffices to close the circle again, to put an end to this tetanic tension; but (and this is most important and remarkable) the reclosing of the circle is attended with another contraction, after which the limb returns to the natural state. This contraction had ceased to manifest itself at the

commencement of the experiment, and makes thus its reappearance after the long-continued action of the inverse current.

The results of a great number of experiments made by the author, with a view to determine the force of contraction elicited by the electric current in different cases have led him to the following general conclusions. (The author used in these experiments an apparatus constructed by Bréguet):—

1. The contraction excited by the transmission of an electric current through a nerve in the sense of its ramification, and which, for that reason, is termed *direct* current, is invariably more energetic than that excited by the same current proceeding in a direction opposite to that of the ramification of the nerve (*inverse* current).

2. The direct current weakens and destroys speedily the excitability of a nerve, whilst the passage of the inverse current, on the contrary, augments this excitability within certain limits.

3. To produce these effects it is necessary both for the direct and inverse current to continue their action upon the nerve for a certain time, and this the longer the lower the degree of excitability possessed by the nerve acted upon.

With regard to the influence of rest upon a nerve that has been subjected to the action of the electric current, the author has ascertained that rest restores a portion of the lost excitability to the nerve through which the direct current has passed; whilst, on the contrary, it deprives a nerve through which the inverse current has passed of a portion of the excitability which it had acquired under the influence of this current. With a very irritable nerve a short rest suffices for either purpose: the duration of rest required to restore the excitability lost by the passage of the direct, or to carry off again that acquired under the influence of the inverse, current augments in proportion as the nerve acted upon possesses less excitability.

Upon the preceding facts the author bases the following theory of the action of the electric current upon the nerves, and of the phenomena produced by this current in animals:—

The passage or circulation of the electric current in the nerves produces no other effect except to modify the excitability of these organs. The muscular contraction is invariably excited by the effect of the *electric discharge*, properly so called. Every one knows that a spark is produced both by the closing and interruption of the circle of a pile; and it is precisely at the moment of closing or of breaking the circle that muscular contractions are manifested. A very small discharge from a Leyden jar suffices to excite muscular contractions in a frog; a jar that has been already discharged several times, and can consequently retain but a very trifling amount of electricity, is still capable of producing fifteen or twenty contractions in a frog.

When using the Leyden jar, the contraction excited by the inverse discharge ceases likewise more speedily than that excited by the direct discharge.

It is accordingly easy to understand why, the excitability of the nerve being diminished, the spark produced by the interruption of the direct current fails to excite renewed contractions. With the inverse current, the spark produced by the interruption of the current excites renewed contraction, because, during the interval of the circulation of the inverse current, the excitability of the nerve has increased. This augmentation of excitability ceases with the action of the current, and thus the spark produced by the subsequent closing of the inverse current fails to excite renewed contraction.

This theory explains likewise the phenomenon of voltaic alternations: when the direct current has circulated a long time in a nerve, and deadened the excitability of the latter, the spark produced by the closing or breaking of the circle fails to excite renewed contractions. The inverse current, which is subsequently applied, restores to the nerve a portion of the lost excitability, and the interruption of the circuit is accordingly attended with renewed muscular contraction. Upon returning afterwards to the direct current, the contractions obtained during the short time that the nerve preserves the excitability acquired by the previous passage of the inverse current are more energetic than the preceding ones (those excited by the interruption of the inverse current), since the direct current, when acting upon a nerve endowed with a certain degree of excitability, produces stronger contractions than the inverse current.

The results of some experiments made by the author would seem to show that the electric current produces neither contractions nor signs of pain, when applied to the cerebral hemispheres and to the cerebellum. However, if the conductors are made to touch the quadrigeminal tubercles, the pedicles of the brain, or the medulla oblongata, tolerably strong contractions are produced all over the body, and the animal gives signs of suffering.

The author and Longet have studied the action of the electric current on the roots of the spinal nerves and the fasciculi of the spinal marrow. They found that, when the interior or motory roots are acted upon, contractions ensue, during the first period, both upon closing and breaking the circle, no matter whether the current be direct or inverse; during the second period of excitability the action of the current upon the anterior nerves is the reverse of that upon the mixed nerves, viz., the *inverse* current excites contractions during the first instant of its circulation, but none at its interruption; whilst the *direct* current excites them at the moment of its interruption, but not at that of its commencement. The anterior fasciculi of the spinal marrow comport themselves in this respect like the corresponding roots.

With regard to the action of the electric current upon the nerves of the senses, Magendie caused the current to pass through the optic nerve of a live animal: he observed neither contractions nor signs of pain. When operating upon ourselves, by touching with the extremities of a pile, consisting of a single element, the ear and the eye, or the ear and the tongue, or the eye and the tongue, we perceive sensations of sound, flashes of light, and a peculiar taste. These effects can only be attributed to an action exercised by the current upon the sensory nerves of these organs, and not to contractions excited in their muscles; a very feeble current, quite incapable to excite even the most trifling muscular motions, has still the power to act upon the senses. Nor can we attribute the peculiar taste to an impression made upon the tongue by bodies resulting from galvanic decomposition of the salts of the saliva: since even a very feeble current, such as positively cannot effect this decomposition, creates still this peculiar electric sensation upon the tongue.

For the little we know regarding the action of the electric current upon the ganglionary system we are indebted to the celebrated Humboldt.

When the electric current is made to pass through the heart of a recently-killed animal, a few instants after the cessation of the pulsations, this organ is found to recover its usual motions a short time after the passage of the current, and to retain them for some time after it has been withdrawn from the electric influence.

If, instead of waiting for the entire cessation of the natural motions of the heart, the electric current is made to pass through this organ whilst its movements still continue (though enfeebled), the contractions grow more frequent after the current has circulated some time, and this augmentation persists a few instants after the interruption of the current. The electric current produces the same effects upon the peristaltic motion of the intestines.

Considering the vast importance of the ganglionary system in the performance of the organic functions of animals, this subject requires a much more extensive and profound study than has hitherto been bestowed upon it.

We have now still to examine the effects produced by electric currents interrupted and re-established at short intervals.

If a frog, prepared in the usual way, be fixed upon a table by means of small nails, to one of which one of the conductors of a pile is attached, and another of the nails be then touched repeatedly and at very short intervals with the other conductor, thus closing and interrupting the circle frequently within a very short space of time, the animal will be seen to stretch its limbs violently as in an attack of tetanic convulsions, no matter whether the current be direct or inverse.

The excitability of the nerves of a frog thus *tetanized* by the passage of the electric current is greatly reduced compared to that of the nerves of another frog which has been subjected to the action of the continuous current.

The author has made a great many comparative experiments on this subject. He took two frogs, prepared in the usual way, and subjected the one to the action of the continuous current produced by a pile of forty-five elements, the other to the action of a pile of equal force, but the current of which he frequently and at short intervals interrupted and re-established.

The experiment lasted from five to ten or fifteen minutes. Upon subjecting the two frogs subsequently to the action of an electric current applied to the lumbar nerves, the author found that it required a greater number of elements to excite contraction in the one that had been acted upon by the interrupted current than in the other which had been subjected to the action of the continuous current. He likewise subjected the two frogs, at one and the same time, to the action of a continuous current, and found the consequent diminution of excitability invariably greater in the former than in the latter.

The results of Marianini's experiments upon this subject correspond with those obtained by the author.

The reality of this great diminution of the excitability or, to speak with greater precision, of the *nervous force*, caused by the action of a frequently-interrupted electric current, has been demonstrated most clearly by Masson's experiments, made with a peculiar apparatus, by means of which the electric current may be applied and interrupted a great many times at very short intervals. This apparatus consists of a metallic wheel resting upon a metallic axis, and made to revolve by means of a handle upon two pads covered with the usual amalgam; one of these pads is in communication with one of the poles of the pile, the other pole is in contact with a wire which is bent in a spiral round a cylinder of soft iron, and abuts at an immovable metallic linget pressing upon the cogs of the wheel.

When the wheel is made to revolve, the circle is closed each time the linget touches one of the cogs, and interrupted each time the linget comes in contact with one of the non-metallic interstices of the wheel. If the two extremities of the conductor are laid hold of with moistened hands, whilst the wheel is revolving, a series of violent shocks are felt. If the motion of the wheel is sufficiently rapid, these successive jerks produce a very painful tension in the arms; the experimentalist finds himself unable to quit his hold of the conductors, he clutches them, on the contrary, involuntarily and with great force.

By means of this apparatus, and a pile composed of a small number of elements, Masson succeeded to kill a cat in five or six minutes.

Masson found that the violent shocks and spasmodic tension disappear upon imparting to the wheel a very rapid motion. Pouillet has demonstrated that, when the duration of the interval between two discharges of the current is reduced to about 1-300th of a second, the interruptions are no longer distinguishable, and the effect is the same as that produced by a continuous current.

A rabbit subjected to the action of a pile of ten elements, discharged by means of Masson's wheel, dies in a few seconds. These powerful effects are no doubt to be attributed to the great

loss of nervous force suffered in a very short space of time.

We will conclude with a few remarks on the application of the electric current as a therapeutical agent.

Leaving out of the question all purely theoretical notions, it may be safely asserted that, in certain cases of paralysis, the nerves have suffered an alteration analogous to that produced by the continuous action of the direct electric current; now, it has been stated in the course of the preceding remarks, that the excitability of which the circulation of the direct current deprives a nerve is restored by subjecting the same nerve to the action of the inverse current.

To this may be added, that a limb, although paralyzed, exhibits invariably some contractions when subjected to the circulation of an electric current, or to the action of electric discharges; and these contractions favour the re-establishment of the functions of the muscle.

If the two sciatic nerves of a live frog be cut, and one of the legs be left at rest for ten, fifteen, or twenty days, whilst the other is subjected twice or three times a day to the action of an electric current, the latter will continue to contract, whilst the former will be found to have lost altogether the power of contracting under the influence of the electric current.

There are a few plain rules to be observed in the application of the electric current as a remedial agent in paralysis. A very feeble current only should be used at first. The author saw a paralytic patient seized by truly tetanic convulsions, upon the application of the current produced by one single element. The circulation of the current ought never to be continued over long, more particularly if the current happens to be energetic. The interrupted current is preferable to the continuous one; but the patient should be permitted to rest after having received from twenty to thirty shocks *at the most*.

A pile with Masson's wheel or, still better, the electro-magnetic machine may be considered the most convenient and best-adapted apparatus for the application of the electric current as a therapeutical agent in paralysis.

For conductors, two bands of sheet-lead or sheet-copper may be used; the extremities intended to be placed in contact with the skin, are to be covered with pieces of cloth impregnated with salt water.

In some cases it is judicious to use, for extremities of the conductors, needles such as are usually employed in acupuncture.

There are already on record a sufficien number of well-authenticated cases of cure of paralysis effected by the electric treatment, to encourage physicians and patients to persevere in the application of this treatment; without perseverance, it would be altogether vain to look for satisfactory results.

The application of the electric current has been recommended against tetanus.

This application is founded upon the following principle: a current circulating by jerks, during a certain time, in the nerves of an animal excites tetanic convulsions; a continuous direc current, on the contrary, occasions paralysis, i sufficiently protracted. We are accordingly authorized to conclude, that the application of the continuous direct current to a tetanized limb will tend to destroy the tetanic state, by inducing a state more or less bordering on paralysis; and the correctness of this conclusion is, indeed, demonstrated by facts. When operating on frogs, tetanized by narcotics or by hydrocyanic acid the tetanic attack is found to give way under the influence of the protracted action of the direc current; the poisoned frogs die without exhibiting the usual convulsions.

The results of the application of the electric current in a case of tetanus (which application was made by the author himself, and the case reported by him in the "Bibliothèque Universelle," May, 1838—probably the first case of the kind tend, in some measure, to confirm the correctness of the principle upon which the application is based. At the moment of the circulation of the current, the patient felt no violent shocks, and was enabled to open and shut his mouth: the circulation of the blood and the functions of the skin seemed re-established. Unfortunately this amelioration did not last. The disease in this case was occasioned by the presence of foreign bodies in the muscles of the leg. Perhaps the results may prove more satisfactory in cases of tetanus occasioned by other causes than traumatic lesion. Moreover, though the electric current should simply prove a means to alleviate frightful sufferings attendant upon this cruel malady, even this would be matter for congratulation.

It has been recently proposed to apply the electric current as a means to dissolve stones in the bladder. But we need simply reflect that the substances composing urinary calculi are insoluble in water, to see at once that the electric current is inapplicable for this purpose. The electric current has, likewise, been recommended as a means to dissolve the cataract. To disprove this notion, it suffices to bear in mind that, if we change the position of the poles of a current that has been made to pass through a mass of albumen, we never find that the albumen which had coagulated at the positive, is redissolved at the negative, pole. It is, consequently, possible to *create*, but surely not to *cure*, a cataract by means of the electric current.

Petrequin, of Lyons, has recently proposed the application of galvano-acupuncture for the cure of certain aneurisms. The principle of this application seems to be based upon the property of the electric current to coagulate the albumen of the serum of the blood, and thus to fill in part the aneurismatic sac.

ORIGINAL CONTRIBUTIONS.

CASE OF DEATH FROM ARSENIC, MEDICINALLY ADMINISTERED IN SMALL, BUT LONG-CONTINUED, DOSES; IN OTHER WORDS, CASE OF SLOW POISONING BY ARSENIC.

By GEORGE S. HOOPER, M.D., Jersey.

Mr. ——, aged fifty-four, of spare habit of body, had for ten years been afflicted with shaking palsy, for which, at various intervals, he had been subjected to many modes of treatment, with only temporary, if any, benefit. His habits of life were always intellectual and arduous from the age of twenty, at which time he entered the civil service of India, rising through its different grades up to the highest office. Since the commencement of his malady he was always able to command the best advice within his reach, and he gave a fair trial to every treatment which he underwent. In spite of these advantages, however, he grew gradually worse, but, nothing daunted by previous failures, he again proceeded to London to consult afresh upon his inveterate complaint. By the advice of a distinguished physician he commenced taking Fowler's arsenical solutions, at the dose of five minims, three times a day, continuing it from October — to the 24th of the following June, when he consulted me for ophthalmia of the left eye. Having been made aware of the treatment he had been and was still pursuing, and finding that this local affection had been preceded by general lassitude, and uneasiness in the fauces, I feared it might be the effect of the action of arsenic on the system, and under that impression recommended its being instantly discontinued. What followed too clearly proved that my fears were not without foundation. In less than twenty-four hours the conjunctiva and palpebræ of the same eye became œdematous and of light livid redness, giving more the idea of congestion than active inflammation. No pain or aching in the globe of the eye. A very copious flow of tears accompanied the affection at this stage, and an equally abundant discharge of thin fluid, so like tears that the patient believed it was really the lachrymal secretion, took place from the corresponding nostril. On the third day erythematous inflammation broke out on the palpebræ, extending over the left side of the nose, and rapidly spreading over the entire surface of that side of the head, not extending beyond the medial line. The redness and tumefaction on the one side formed a remarkable contrast with the natural appearance of the integument on the other, the separation being abrupt and distinct. The external ear was the only seat of pain, beyond a feeling of tension and tingling heat.

While the foregoing local affection was proceeding, the patient experienced headache, drowsiness, nausea, with an inexpressible feeling of anguish and prostration. At first the pulse was rather below the natural standard: subsequently it ranged between 90 an 100; the tongue was moist, free from fur, and uniformly natural and healthy in its appearance; the bowels were sluggish, but not more so than before the present attacks; respiration natural; animal heat preternaturally high. This last phenomenon, however, was habitual to him in what constituted *his* state of health. His hand always felt hot. He used to call this increased temperature his *Indian* heat; and it made him so insensible to external cold that an additional garment out of doors was to him intolerable in any weather. Indeed, he never wore any wrapper, except at the earnest request of his friends, who viewed his apparent fool-hardiness in that matter with concern and apprehension for the consequences.

As to the paralysis, it now became much worse. The muscular tremours, especially, were increased to an extreme degree: affecting the lower jaw, the neck, the back, and both arms, they became so uninterruptedly harassing that the poor sufferer was unable to maintain the same position more than a few minutes at a time, night or day; a more pitiable state could not be imagined. Almost driven to despair by the perpetual agitation and dragging of the muscles, he felt the drowsiness consequent to protracted insomnia and bodily exertion, and yet was he almost totally denied the soothing influence of sleep. In his own words, he was in a constant struggle between sleep and motion; and, even when he did dose for a few moments, that short respite was purchased at the dear price of increased irritability of the muscles on waking.

The erythema, having run through its different stages, left the skin numb and liable to become hot, red, and shining, from the least local stimulus or increase of vascular action. On the nose and ear especially the heat and tingling were at times most unpleasant. The ophthalmia, which, as before stated, ushered in the erythema, became more acute as the latter subsided; and the œdema of the conjunctiva soon exchanged its pale, flaccid, indolent character, for the deep red, fleshy, irritable surface of organized chemosis. After vain attempts to subdue this morbid-action by scarifications, leeches, &c. &c., the cornea threatening more and more to pass into a state of irreparable disorganization, there remained no possible means of saving the eye except by the excision of the diseased conjunctiva all round the cornea, which operation was skilfully and successfully performed by my friend, Dr. H. Duval, a distinguished French oculist, who was on a professional visit to this island.

Six weeks had now elapsed, during which, owing to prostration, involuntary movements, and scarcely any sleep or rest of any kind, the sufferer's strength had, with great difficulty, been somewhat supported. He was allowed as much food as he could take, and he managed to take a good deal of one sort and another; but it was evident from his large alvine evacuations that digestion was but imperfectly performed. Hence little assimilation, and a gradual breaking down of the system, in spite of what appeared a sufficient quantity of food. Tonics were, of course, freely administered. The only medicines, however, which seemed for a while to bestow any sensible relief were carb. ferri with opium,

followed by O. ricini—the one being taken at night, the other the following morning, for several successive days. Under this treatment the patient was able to enjoy some sleep, and the aching of the muscles and general restlessness were certainly diminished. The hopes which this partial improvement suggested were, however, destined soon to vanish. Again the fauces became the seat of irritation, which rapidly extended to the larynx and trachea, causing a most troublesome hawking and cough, with ejection of phlegm in variable quantity. There was something very peculiar in this mucus: it was of a bright yellow colour, translucid, and readily soluble in water. When received in an empty basin, it adhered to its sides, spreading and drying up without losing its colour. In water it quickly vanished, merely tinging it with its colour.

Soon after this my wretched patient's appetite, or rather power to eat, completely failed him, and he sunk gradually till the 13th of September, when, in the full possession of his mental faculties, he welcomed death as the only relief from a state of bodily suffering never surpassed in severity, long continuance, and almost utter hopelessness.

REMARKS.

It might be justly said that, before commencing the arsenical treatment for his inveterate paralytic affection, the subject of the foregoing case was so sorely afflicted that to him life could have no attractions, and that, under such circumstances, any desperate attempt, with the view of curing or even alleviating his sufferinggs, was justifiable, both as regards patient and physician. Perhaps some such idea may have influenced both: for the patient himself had been repeatedly advised, by myself and some of the highest authorities in the profession in London, to give up all hopes of direct benefit from medicines, and to confine himself to paying great attention to diet, keeping his bowels in order, taking regular exercise in a carriage, and travelling during the fine season. If not to himself, however, his life was most valuable to his family in every respect: for, independently of pecuniary considerations, they had every advantage and assistance to look for from his strong mind, accomplishments, and thorough knowledge of the world—all which, fortunately, were in no way affected by his disease.

Arsenic, that most virulent of mineral poisons, having been stripped of part of its terrors by being ranged among the tonics, has, of late years, been rather freely administered as a remedy in neuralgic affections. Whether or not effects similar to those detailed in the preceding history have occurred under like circumstances; without being referred to the same cause, can only be conjectured as by no means impossible. There is, doubtless, a very natural disinclination in medical men to ascribe to the agency of drugs fatal terminations which may anywise be referred to the progress of disease. However, without questioning the remedial properties of arsenical preparations in certain diseases, it must be admitted that the properties they possess in common with tonics are secondary compared to their own specific action as poisons; and, therefore, the practical utility of such wholesale classification may be fairly doubted. The substances included under the head of tonics are, for the most part, innocuous in themselves, and might be taken in large quantities by a healthy person without any dangerous results. Under no circumstances were they ever known to accumulate in the system, and reverse or alter their ordinary mode of action by long-continued use. The latter property belongs essentially to the mineral under consideration, and to a few others, viz., mercury, lead, silver, and iodine, of which not only their use as medicines, but also the diseases incidental to certain trades, furnish abundant illustrations.

In the case before us, the arsenical solution was taken for an unusual length of time, viz., eight months and a half, in small doses, certainly, but without any cessation. Thus, at fifteen minims per diem, one pint of the solution, equal to sixty-four grains of arsenious acid, was gradually instilled into the system! What portion of that quantity remained, and what portion was carried off with the secretions, it would be impossible to estimate with any degree of precision. Certain it is, however, that an accumulation did take place to some extent incompatible with the physiological state of the vital functions. Indeed, a review of the phenomena of this curious case would lead one to infer that a combination had taken place between the mineral and the structures of the body, and that, in particular, to its presence as a sulphuret was due the anomalous colour of the mucus, which was ejected from the fauces. I regret exceedingly that, owing to this inference not having occurred to me at the time, and having been suggested to me by my friend Dr. Macreight too late to enable me to ascertain whether chemical analysis would confirm it, the fact here stated loses much of its importance. Nevertheless, I hope this inference will not be considered as too far fetched, presented as it is rather as a scientific conjecture than a positive deduction.

The mode of administering arsenic in the treatment of chronic diseases is to begin by very minute doses, increasing them gradually until the intended effect be realized, or the signs of the full action of the remedy on the system forbid its being pushed any further. These signs are stiffness of the palpebræ, heat and soreness of the tarsæ, and sometimes tenderness of the gums; by taking warning from which the practitioner may desist in time to avoid more serious injuries. From what occurred in the present instance, however, I should incline to think that the long-continued use of arsenical preparations in small doses may so insensibly impair health that, before the above signs are observable, the deleterious action which they indicate is already of too grave a nature to admit of being counteracted. Thus, Mr. ——— was not aware of any danger from the medicine which he was taking up to the time of its displaying its poisonous action on his system, by effects which showed themselves suddenly, and followed upon each other in rapid succession. Previously, instead of feeling worse, he thought himself better, and persevered in the treatment with increasing faith in its efficacy. But, alas! from that moment his hopes vanished before the two evident aggravation of his paralysis. He quickly lost all control over the muscular contractions of the upper extremities, and in a few days the agitation became incessant and general. Arsenic exerts a very remarkable action on the nervous centres; hence its rapid effects as a poison, not to say anything of those which it produces as a remedy in periodical headache and ague. It is well known that, when death takes place as a primary consequence of that poison, the local injuries in the stomach and bowels, or wherever it may have been deposited, do not alone sufficiently account for the fatal result. Was it the beneficial effects in the above-named diseases that suggested its use in the treatment of spasmodic affections, as the property of inducing erythema led to its internal use in the treatment of inveterate cutaneous diseases, such as lepra, psoriasis, ictyasis? Such generalizations would savour strongly of empiricism: for although *materia medica* is, confessedly, much indebted to accident, and owes not all its lore to scientific research or analytical deductions, still it would be wrong to conclude on that account that we may try dangerous experiments with substances with whose mode of action on the body we are imperfectly, if not totally, unacquainted. From these considerations it appears to me that, in the present state of our knowledge, the preparations of arsenic cannot always be safely administered in those diseases for the cure of which they need to be exhibited for a longthened period; and, consequently, that their use as remedies ought to be restricted to those diseases in which their efficacy may be fairly tested in a few days. A few cases like the preceding one would place that conclusion beyond all doubt; and, therefore, it is hoped that, should such have been observed by other practitioners, they will be laid before the profession in the same manner.

BLIGHTED OVUM SIMULATING POLYPUS OF THE UTERUS.

Communicated by S. W. J. MERRIMAN, M.D., Brook-street.

In page 455 of your journal you give, a short account of the extrusion by natural means of a polypus uteri, which is supposed to have existed for twelve months, and which the medical men in attendance were about to remove by a ligature. Whether a polypus can be strangulated by the contraction of the os uteri around its pedicle, though it has been asserted, may be doubted; but at all events the history of this case scarcely warrants such an opinion. Had the process of sloughing been going on, Dr. Johnson could scarcely have failed to recognise it; but the account adds that "the tumour had the appearance of bloody coagulum, and melted away, as it were, under the touch:" this certainly is not the character of a polypous tumour, but resembles much more a formation the result of conception. I have in my possession, from the minutes of a former physician-accoucheur to the Westminster General Dispensary, an account of a tumour which was considered to be a polypus, but proved, when brought away by the finger, to be a blighted ovum. As I believe it to be an analogous case to Dr. Johnson's, I beg to transcribe it for the benefit of your readers:—

"Mrs. Streeter, one of the most intelligent and respectable midwives of the Westminster General Dispensary, called upon me, and begged me very earnestly to visit one of her private patients who lived in Porter-street, Leicester-square, and whose case she thought a very alarming one. She particularly begged that I would see the patient that same evening, stating that she was suffering very much from uterine hemorrhage: accordingly I went. After making various inquiries, and having been told that this hemorrhage had been going on, more or less, for three or four months, I proceeded to make an examination *per vaginam*, and found the os uteri considerably open, and encircling a round bulging substance which I supposed to be a polypus, and partly withdrew my finger, intending to announce that there was a polypus, which must be tied and brought away; before I had quite withdrawn my finger, however, I determined to examine the tumour again, and, passing my finger more within the edge of the os uteri, I thought I felt an indentation on compressing the tumour. This led me to make a more minute investigation, and I was aware that I could dislodge the substance, which I still supposed to be a polypus, by the aid of my finger only. This, then, I effected, and, having brought the tumour into the light, discovered that it was not a polypus, but a blighted ovum, which, according to the midwife's account, must have been retained in the uterus nearly five months.

"When I had explained the case to my patient, and congratulated her upon having got rid of her malady, the midwife said that she must apologize for not having told me all the circumstances of the case, which were these: that the patient had been seen by another accoucheur of eminence, who had pronounced the case to be a polypus, round which he had proposed to pass a ligature, and had appointed the next morning for performing the operation; and this was the reason why I was so urgently desired to see the patient that evening, her friends having considered that it would be desirable to have another opinion upon the nature of the case before she submitted to what they expected to be a very formidable operation.

"I thought it right to state to the patient and her friends very expressly that I was just about to pronounce the very same opinion of the nature of the tumour, and to propose the same mode of removing it; but, under a wish of being quite correct, I examined again, and then found that I could at once remove it, and that probably the examination which the other gentleman had made had occasioned the uterus to sink lower into the pelvis, and thus had brought the parts into a position for a more accurate examination."

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of Aug. 9; M. Brongniart in the chair.

Inflammation of the Sheaths of Tendons after Amputation.—M. Robert, interne of the hospitals of Paris, forwarded a paper on the inflammatory accidents which may result from section of the tendinous sheaths after operation, and on the mechanism of their production. M. Robert concludes, from numerous experiments, that, after division of a tendon, it rises in its sheath, and, by a sort of succion, aspirates any fluid, such as blood or pus, which may be in the neighbourhood of the wound; the presence of this foreign body in the sheath explains its subsequent irritation, and would, according to M. Robert, be prevented by a ligature placed on the sheath in such a manner as to procure its obliteration.

Composition of the Intestinal Secretions in Cholera.—Professor Andral stated that the rice-water secretions found in the intestines of patients affected with cholera had been the object of his researches. Hitherto they were looked upon as composed of the elements of the blood—albumen and serum being asserted to exist in the fluid portion, and fibrin in the solid parts. Chemical observation had now demonstrated to Professor Andral the fallacy of this opinion. The fluid contained no albumen whatever, and the white grains floating in the liquid were not constituted by fibrin. Examined with the microscope, these particles presented the appearance of pus globules; but still they were not purulent. In the blood, albumen was found in its natural proportions. The learned professor concluded by stating as his opinion that the choleric matter consisted only of a modified mucous secretion.

ACADEMY OF MEDICINE.

Meetings of Aug. 7 and 10; M. Begin in the Chair.

Vaccination.—An official report on this subject was read by M. Desportes; a long debate ensued, which occupied both the meetings; it was decided that in the mayorlty of each circumscription, a register of vaccinations should be kept with as much regularity as that containing the entries of births and deaths. The reporter had further proposed that the authorities should recommend, in cases of pressing danger, during an epidemic of smallpox, inoculation of variolic pus, but this part of the report was not adopted by the academy.

Meeting adjourned at five o'clock.

Mercurial Treatment in Typhoid Fever, by M. Serres.—M. Serres begins by stating that, in his opinion, typhoid fever consists in an exanthematous affection of the intestines. The febrile excitement, the diarrhœa, abdominal symptoms, and cerebral manifestations are entirely governed in their progress and intensity by the intestinal eruption. In this respect M. Serres thinks that typhoid fever can be most properly compared with smallpox, in which Sydenham has shown that the violence of the malady is always proportioned to the confluence or mildness of the cutaneous eruption. The professor, therefore, concludes that, by keeping the intestinal disease under control in typhoid fever, the general reaction, its consequence, will be thereby prevented from attaining any dangerous height; and no medicine seems to M. Serres so well calculated to produce this result as mercury. Every second day M. Serres prescribes the following pills:—℞. Hydrarg. sulphureti cum sulphure, gr. xviij.; tragacanthæ, gr. x.; syrup q.s. fiat massa in pilul. iv. dividenda. Every morning inunctions with ʒij. of mercurial ointment are made upon the abdomen. The treatment is suspended when incipient stomatitis is noticed. Under the influence of mercury, diarrhœa is gradually arrested, the tympanitis reduced or prevented, and, although the average duration of the malady is not diminished, still its violence is much abated.

Physiology.—Use of the Salivary Secretion, by M. Bernard.—The recent researches of Mialke and others tended to show that saliva contains a ferment capable of changing starch into sugar. The experiments upon which was founded this opinion consisted in chemical researches on the fluid escaping, during a given time, from the mouths of animals. M. Bernard derives from a new series of experiments a contrary opinion. Instead of merely collecting the buccal secretions, he took the saliva from the glands themselves, and states that in this unmixed and pure condition that fluid is incapable of causing saccharine fermentation in starch. Pursuing his experiments, M. Bernard separated from the mouth of a dead horse several shreds of the mucous membrane, and found that, after prolonged desiccation, they still retained the power of transforming starch into sugar. It is, therefore, the mucous membrane, and not the saliva itself, which causes this change in amylaceous substances. The function of saliva is then simply, according to M. Bernard, to moisten the alimentary bolus, and to connect its various parts into a homogeneous paste.

HOPITAL SAINT LOUIS.

CLINICAL LECTURE, BY M. CAZENAVE.—IMPETIGO.

This is a non-contagious disease characterized by the eruption of small psydracious pustules, generally very confluent, and which, on drying, leave thick, rough, and yellowish crusts. The seat of the disease is in the lymphatic apparatus of the skin. It is often attended on its first appearance by loss of appetite, headache, and slight intestinal disturbance; small red patches soon make their appearance; on these the pustules form, and, desiccating in the space of three or four days, form a crust which has been compared to dried honey; the scabs fall off after a short time, and are replaced by others, unless the eruption is arrested in its progress: it is in this form that impetigo is most generally met with in childhood, and it may persist with the same characters for a considerable length of time. In a chronic form, it attacks all ages, and more particularly persons of a lymphatic temperament. One of the most severe varieties is met with in the aged, when an entire limb is often occupied: the skin thickens, motions become painful and difficult; œdema makes its appearance; the nails fall off, and fresh crusts rapidly replace those which drop away. This is Willan's "impetigo scabida."

We recognise four forms of impetigo, viz.—1, *I. sparsa*, chiefly observed on the limbs and about the joints; 2, *I. figurata*, principally occupies the face, and affects usually a circular or oval form; 3, *I. granulata*, invades the scalp, and betrays its presence by the eruption of yellowish pustules perforated by a hair, and are often followed by temporary baldness; 4, *I. larvalis*, common in first childhood, often covers the face like a mask, and has been subdivided into porrigo granulata and porrigo larvalis, which Willan believed to be constituted by a peculiar sort of pustule, viz., *achores*.

Impetigo is observed in all seasons and at all ages; lymphatic subjects are specially predisposed to it; but in general the eruption is attended with no sort of danger, although its appearance generally creates much unnecessary uneasiness in families.

From *ecthyma*, impetigo will be distinguished by the smaller size of its pustules and the brighter colour of the scabs; ecthyma chiefly attacks the lower extremities. *Sycosis* occupies generally the lips or chin; its scab is drier than that of impetigo, and covers a tubercular induration of the subjacent skin. The presence of the general symptoms in *variola* will prevent the possibility of any confusion. In *eczema impetiginodes* the scabs are thinner, lamellated, and greyish.

With regard to treatment, we recommend in the acute stage, acidulated drinks, a few baths, laxative medicines, and even when the disease is very intense general or local bloodletting. Internally we have tried the hydriodate of potass, but without benefit; we prefer cod-liver oil, sulphur, and bitter medicines; we particularly applaud ourselves upon the results yielded by the crystallized muriate of lime, which we exhibit in the following manner:—℞. Calcii chloridi (crystallizati), ℥ss.; aquæ, ℥xij. ft. mistura, capiat cochlearia, 3 ampla in die. Ointments of all sorts are more injurious than useful; we have seen some rebellious cases yield to vapour-baths and to Pearson's arsenical solution (liquor sodæ arsenitis).

Dislocation of the Femur upwards and forwards on the Pubes.—On Aug. 5, 1845, a workman was struck on the outer side of the right thigh by a bag of corn, which dropped from a height of thirty feet. When the patient was raised he could not use his right leg, and complained of pain in his hip and knee. Three hours after the accident Dr. Aubry was called. The wounded man was lying on his back, the right leg being one inch shorter than the left, everted, and lying on its outer aspect; the leg was slightly bent, and the trochanter less distinct than usual; immediately outwards of the middle of the inguinal fold was seen a round, hard tumour, formed by the head of the femur. For the purpose of reducing the dislocation, the patient was laid upon a table, and the pelvis being fixed by two assistants, the femur was bent with some effort at right angles with the body, at the same time that it was turned inwards. At the end of one minute and a half the bone returned to the cotyloid cavity.

D. M'Carthy, D.M.P.

Malignant Bilious Pneumonia.—This disease has prevailed very extensively in Georgia and South Carolina, U.S., during the last two years, and has been attended with an extraordinary degree of mortality. The disease called the "black tongue," which prevailed at one time to a great extent in the north-western extremity of Hall county, is thought by Dr. J. Rivers, who communicated the account of the bilious pneumonia to "The Philadelphia Medical Examiner," to be another form of this disease. The diagnostic symptoms are rigors, but never a shaking chill; coldness of the body and extremities; pain in the forehead, generally an inch or two above the orbits of one of the eyes, most commonly over the left eye; severe pain in the chest, usually on the right side; pain in the region of the liver and in the abdomen. As the malady advances in its inflammatory course the tongue thickens and expands laterally. In the outset of the disorder the pain is metastatic, sometimes moving from the head to either lung, usually the right one, frequently to the superior lobe of the lung, then its lower part adjacent to the diaphragm, then to the liver, and finally the abdomen, in the region of the large intestines. It is not uncommon for this moving pain to lessen in intensity in one part of the body and to increase in a corresponding ratio in another organ at a considerable distance. Sometimes the eye contracts and shrinks, and is turned towards its inner canthus, and vision becomes so impaired that objects appear double, the pain being much more acute in the region of the lungs and liver than in the head. In two instances there was noticed numbness of the extremities; in all there was serous congestion, and generally a corresponding increase of action in the arteries. In two instances abscesses formed, in the early stages, in the soft parts of the lower jaw. The treatment of this disease in its metastatic state yields to stimulants and diaphoretic ptisans. Brandy-and-water was found to be an excellent remedy in the incipient stages, during the metastasis of the pain. A tea made of the eupatorium perfoliatum, sufficiently strong to act as an emetic or purgative for a short time, then diluted and given as a diaphoretic, is also a valuable remedy in the first stages of the affection. But, whenever the disease becomes seated in any organ of the body, the antiphlogistic treatment is the best; and in no cases where expectoration had not taken place were stimulants, opiates, or animal diet given. Fari-

naceous diet is the most suitable before expectoration has become free.

New Mode of Operating for the Cure of Vesico-Vaginal Fistula.—Dr. Pancoast, professor of anatomy in Jefferson Medical College, U.S., has operated upon two patients, in one of which was a complete destruction of a cross section of the whole urethral structure at its junction with the neck of the bladder; in the other there was an elongated orifice in the *bas fond* of the bladder, which would more than admit the end of the finger. The peculiarity of the operation consists virtually in attaching the two sides of the normal opening firmly together, on the principle of the tongue and groove, so as to get four raw surfaces in contact, and thus increase the probabilities of union by first intention. For this purpose it is necessary that the margins of the fistula should have considerable thickness; and, when not found in this state, they are to be thickened by repeated applications of lunar caustic or, better still, of the actual cautery. Having exposed the fistulous orifice as thoroughly as possible with a Charriéré's speculum, from which the sliding blade has been removed, an assistant drawing the vestibulum well up towards the front of the pubes, the most posterior margin of the fistula is split to the depth of half an inch with a sharp-pointed sabre-shaped bistoury. The edges of the other lip of the fistula are then pared off so as to bring it into a wedge shape, first reverting it as much as possible with a small blunt hook, and trimming off the mucous membrane on the side next the bladder with the curved scissors or scalpel, and then detaching, in like manner, the vaginal mucous membrane, to the breadth of three-quarters of an inch, along the whole extent of the lip. This is a very difficult but most important part of the process; and great care should be taken to obtain a sufficient extent of raw surface at the two angles of the fissure, when the lips will rest merely in apposition. The bleeding being checked by astringent applications, the raw wedge or tongue, into which one of the lips of the fistula has been converted, is to be inserted into the groove which has been cut in the other, and held in close connection by means of suture threads, passed with short, sharp, curved needles, held in artery forceps, with handles made of twice the ordinary length. The sutures are left until they become loose. A gum catheter should be kept in the bladder to prevent the accumulation of urine. To keep down inflammation, a bladder of cold water should be applied for thirty-six hours to the vulva. On the second day after the operation, sulph. of zinc in solution must be frequently injected, to give tone to the parts. On the third or fourth day a solution of lunar caustic must be applied to the line of union with a camel's hair pencil, twice in twenty-four hours, the strength of the solution being gradually increased.

Traumatic Tetanus Successfully Treated.—Dr. O. H. Costill, of Frankfort, Pennsylvania, attended a coloured woman who, two days previously to the visit, had been wounded with a carpet tack in the right foot. It was withdrawn without any inconvenience being felt till the evening following, when she complained of pain in the foot and stiffness in the leg and back. The next morning, when Dr. Costill saw her, the arms, legs, and whole frame were perfectly rigid. Eyelids drawn down so tightly as scarcely to be lifted, and her jaws firmly set. The surface of the body being cold, she was placed in a warm bed, and hot applications directed to the feet. After some time the spasm subsided. The anterior part of the sole of the foot was now found to be so tender that the patient could scarcely bear it touched, but no point where the nail had entered could now be discovered. The pain extended up the leg and back to the neck and jaws, and there was stiffness about the root of the tongue. A rye poultice to be applied to the foot, and a mixture of castor oil and turpentine to be given every hour and a half till the bowels should be freely moved. At twelve o'clock the medicine had not operated, and she had had one severe spasm. During the afternoon she became worse, and had more than a dozen spasms. Her breathing was difficult, as if choking; jaws set, and foam proceeding from the mouth. The body was bent in a bow shape, resting on the occiput and heels (opisthotonos). There was excessive tenderness on the anterior part of the sole, about the size of a crownpiece. Within this space two incisions were made, crossing each other at right angles, into which lint saturated with spirits of turpentine was inserted, and the rye poultice reapplied. A pill containing two grains of opium and two of calomel to be taken every hour. At nine in the evening she had taken two pills, and had had no spasms. One pill to be taken every hour through the night. By nine the next morning she had taken four pills and had no spasms. In the evening of the same day had two, but not severe. A solution of caustic potash was to be applied along the course of the spine. Next morning she was sick and vomited a light green fluid. The pills to be continued, and an enema to be given, as the bowels had not been relieved. The bowels from this were freely relieved, the mouth shortly became sore, and, although she was distressed with occasional sickness, she began to sleep. The wound continued sore for a few days, and healed without suppuration. The spasms did not return after a free use of the opium and calomel.

Congenital Obstruction of the Colon in an Infant.—The child was a male, and lived three days from its birth. It was at first cheerful and took the breast, but gradually became languid, and sunk without evident cause, except the want of a discharge *per anum.* The *post obit* was conducted by Dr. James Bryan. The abdomen was very tumid, and on making an incision through the integuments a large quantity of fœtid gas escaped; the bladder was healthy and contained a little urine; the uracus was attached to the umbilicus and bladder; the peritoneum in every direction was engorged with dark-coloured blood, and the circulatory arcades of the mesocolon with the small vessels of the colon were filled with blood, and easily seen when the intestine was held between the eye and the light. The greater part of the hypogastric region was filled by a tumour about four inches in diameter. On opening the colon above this tumour (which proved to be situated in the segmoid flexure of the colon), large quantities of meconium and fæcal matter were discharged. The peritoneum when divided was found to cover a smooth surface of the tumour; this surface proved to be the outer coat of the intestine, which was very much distended, and contained the tumour in the form of coagulated blood, as black as pitch. The descending colon was distinctly traced into the covering, and was found to adhere to the margin of the pelvis, and to be entirely *imperforate* in the direction of the rectum. The anus was in a natural condition; a probe would pass without difficulty up the rectum to the obstruction. The explanation of this case would appear to be, that a rupture of some of the vessels of the sigmoid flexure of the colon took place during uterine life. A gradual discharge of blood into the intestine and between its coats supervened, producing pressure on the surrounding parts, and in this way causing adhesions to such an extent as to close the passage of the blood towards the rectum.

Gunshot Wounds in the different Assaults by the United States Armies on Monterey.—Dr. N. S. Jarvis, United States army, records ten cases of individuals wounded in battle. In the first, a corporal was struck by a musket-ball on the anterior and central portion of the os frontis, destroying it for a distance of two inches. Considerable portions of the brain issued from the wound, and, notwithstanding the severity of the case, the patient appeared to suffer little or no inconvenience until the third day, when coma supervened, followed by delirium, and he died.—A private received a wound in the right eye, supposed to be from a fragment of stone broken from the wall by a cannon-shot, and which struck the man with such force as to knock him down. Two or three hours after the injury the eyelids were so much swollen as to render it very difficult to ascertain the condition of the eye. A hard, sharp substance, however, was felt near the inner canthus on the application of the finger. This was immediately extracted with a common forceps, and found to be a fragment of grape three quarters of an inch in length, and half an inch in width at the centre, of an oblong shape. The eyeball was uninjured, the fragment having passed between it and the inner canthus, penetrating to the posterior wall of the orbit, destroying the lachrymal sack, the os unguis, and wing of the spheroid bone. Considerable inflammation and suppuration followed, and, though the wound healed, the pupil remained dilated, and the vision destroyed.—Another received a musket-ball near the angle of the inferior maxilla on the right side, fracturing the bone, passing directly through the tongue and the corresponding portion of the bone on the opposite side. The tongue was completely separated at its base, hanging only by a few muscular fibres. The patient died very speedily from excessive hemorrhage.—A major of infantry received a wound from an *escopette* ball (a ball one-third larger than that carried by a musket), directly in the centre of the upper lip. It passed obliquely backwards to the left, tearing away the bony palate, completely destroying the upper maxilla and malar bones of that side, and, fracturing the condyle of the inferior maxilla, passed out behind the ear near the mastoid process. The velum palati was completely separated from its superior connection, and rested on the tongue. The whole of the alveolar process, together with the teeth of the left side, was carried away. To enable him to articulate as well as swallow, the pendulous palate was fastened by a stitch, and afterwards by a ligature placed around the remaining incisor tooth. It was afterwards more completely secured by a strong ligature passed through it in two places, the ends being brought together, and by means of a probe carried up through the nostril, and fastened with adhesive plaister to the forehead. Intense inflammation followed, involving the whole side of the head, and during several days pieces of bone were constantly separated and discharged. Little recuperative efforts were made by nature in consequence, perhaps, of an attack of intermittent fever, and the patient ultimately died.—A private of dragoons was struck by a copper grape-shot at the same point as in the preceding case, passing obliquely backwards and downwards, wounding the tongue, and fracturing the lower jaw on the left side near its angle, then, coursing along the neck beneath the integuments and muscles, lodged near the left sterno-cleido mastoid muscle into the clavicle, where it was cut out. Fragments of bone came away, and considerable inflammation with difficulty of swallowing followed, but the wound progressed favourably, and, notwithstanding the size of the shot and destruction of the parts, is at the present time nearly healed. His head is considerably drawn down, and a rigidity of the jaw, with inability to speak, remains.—A lieutenant of infantry was wounded in three places at the same time. The most severe wound was one in which the ball, striking the upper and anterior portion of the thigh, entered the pelvis, wounding the fundus of the bladder, and passed out at the sacro-ischiatic notch. The femoral vessels in the course of the ball escaped being wounded. The urine, passing freely through the wound, produced considerable infiltration and inflammation of the cellular tissue of the thigh. By changing his position so as to be on the left side, and introducing a catheter, which was constantly maintained in the bladder, no more urine escaped through the wound, and the inflammation rapidly subsided. The usual separation of the parts destroyed in the course of the ball took place, succeeded by a healthy suppuration, but he expired on the twenty-second day after being wounded.

Number and Results of the Larger Amputations after the Assaults on Monterey.—The total number

in the three divisions of the American army was *twenty-eight*, viz., ten in the first division, four in the second, and fourteen in the third or volunteer division. Twenty were performed in the field, or on the following morning in the camp; the remaining eight at subsequent periods, varying from five to twenty days. Twelve of the number, including two of those taken prisoners and operated upon by the Mexican surgeons, proved fatal, and the remaining sixteen have nearly or quite recovered. This average of mortality was not confined to the wounded of the United States army. Dr. Hidalgo, surgeon in charge of the Mexican Military Hospital, reports that, of thirteen operations performed there, six had proved unsuccessful. The wounded of the United States army were subjected to repeated removals from the field to the camp, and from the latter place to the town; and in two cases this was evidently productive of a fatal termination. Moreover, the moment a limb was amputated, hosts of flies would light upon the stump, there speedily depositing their eggs, for when it became necessary to dress the stump, myriads of maggots were often found buried in it, which could be expelled with great difficulty—rendering it necessary, in some instances, to reopen the flap for their complete extermination. Erysipelatous inflammation frequently occurred of the integuments covering the stump, which generally set in two or three days after the operation, producing sloughing, which, if not causing death, rendered a second amputation necessary.

Penetrating Wound of the Thorax, with Protrusion of a Portion of the Lung.—Dr. Geo. Johnson, surgeon, United States army, relates the case of a man who received a wound in his chest, about an inch below the left nipple, from a large bowie knife. On examination a piece of lung, two inches and a half or three inches in length, was found protruding from the wound. The knife had passed between the ribs downwards and outwards. It was at least three inches in length. The wounded portion of the lung was introduced within the thorax, and the external wound closed with the interrupted suture. The man was kept under the strictest antiphlogistic treatment, [illegible] in twelve or fifteen days after he was convalescent. The knife with which the wound was given was two inches wide, and must have penetrated the lung four inches.

Case of Doubtful Sex.—Dr. Wm. James Barry, of Hartford, Connecticut, was requested, in March, 1843, to examine Levi Sugdam, twenty-three years of age, a native of Salisbury, Connecticut. The following are the appearances which were presented:—The mons veneris was found covered in the usual way; an imperforate penis, subject to erections, and about two inches and a half in length, with corresponding dimensions; the dorsum of the penis connected by cuticle and cellular membrane to the pubis, leaving about one inch and a half free, or not bound up, and towards the pubic region. This penis has a well-formed glans, with a depression in the usual place of the meatus; a well-defined prepuce, with foramen, &c. The scrotum not fully developed, about half the usual size, and not pendulous. In the scrotum on the right side was a testicle of the size of a common filbert, with spermatic cord attached. In the perineum, at the root of the corpora cavernosa, an opening through which micturition was performed, large enough to admit the introduction of an ordinary-sized catheter. It was found upon inquiry that this being of a doubtful gender menstruated as regularly, but not as profusely, as most women. He is five feet two inches in height, light-coloured hair, fair complexion, with a beardless chin, and decidedly of a sanguineous temperament; narrow shoulders, and broad hips; well-developed mammæ, with nipples and areola. On passing a female catheter into the opening through which micturition was performed, and through which the periodical bloody discharge proceeded, instead of traversing a canal, and drawing off urine, the catheter appeared to enter immediately a passage similar to the vagina, three or four inches in depth, and in which there was considerable play of the instrument. He stated that he had amorous desires, and that at such times his inclination was for the male sex. It was ascertained that, the second day after he was born, the accoucheur made, with an instrument, the opening through which he has ever since performed micturition. Notwithstanding his doubtful gender, he is admitted a freeman and citizen of the United States.

Death by Strychnine.—Dr. Warner, a medical practitioner, of Montpelier, U.S., having been accustomed to take sulphate of morphia for an inordinate action of the heart, a sequence of inflammation of the chest, called at an apothecary's shop for some, when he was served with strychnine by mistake. A portion of this was taken without unwrapping the bottle, which was found subsequently to be properly labelled "strychnine." He was immediately seized with constriction of the throat and tightness of the chest, with rigidity of the muscles on attempting to move. Dr. Horton was in attendance immediately after the accident, and found the patient on the bed in a complete *tetanic convulsion*; his head somewhat drawn back; his countenance livid, with some fatty matter issuing from his mouth, and moaning at intervals. The palpebræ were constanly in motion. The first paroxysm lasted about five minutes, which was succeeded by a perfect calm. During this interval it was somewhat difficult for him to articulate with distinctness. He made several attempts to vomit by exciting the fauces with his finger. After five minutes another paroxysm commenced by a little starting and stiffening of the extremities, and immediately the whole body was thrown into a tetanic paroxysm, in appearance like the first, and lasted two or three minutes, when death ended the struggle. From the information obtained, the patient could not have lived more than from fourteen to twenty minutes after taking the poison, which was, probably, from one-fourth to half a grain. The remedies used were, dashing cold water on the face, head, and neck; using the most powerful friction on the extremities; and, during the interval of calmness, administering an emetic of sulphate of copper, with ipecacuanha. Ground mustard and warm water were also freely used, to all of which the patient submitted, appearing very grateful for the efforts made to relieve him. The means used were without any apparent effects. In a medical point of view, the case is one of considerable interest, as it clearly manifests the true and energetic character of this medicinal agent. In the suddenness of its effects, and in the quickness of the fatality, the case has scarcely any precedent.

Nitrate of Silver a Remedy for Croup.—Dr. Bateman, United States, relates two cases of croup, in which, having used powerful emetics with mercury without any apparent benefit, he cauterized the larynx with a solution of nitrate of silver (a dram to the ounce). The application was somewhat difficult, and the dyspnœa very great. A quantity of thick tenacious substance was brought away by the sponge, and more by the vomiting which followed. After an interval of ten minutes a second application of the solution was made, which brought away a still larger quantity of membraneous matter on the sponge than before, and a much more copious discharge accompanied the vomiting caused by the application. The disease seemed to be arrested, the breathing became better, and the barking sound was heard only at intervals. A third application of the caustic was made five hours and a half after the first application, which brought, as before, some thick tenacious matter, differing from the first, in being of a yellow colour. The vomiting which followed threw off a large quantity of the same yellow-coloured, thick substance, so tough that it could be raised from the bowl by the fingers. After this no further treatment was required.

Poisoning from Swallowing Percussion Caps.—Dr. T. W. Foster, of Keene, Jessamin county, Kentucky, was called to assist an infant, fourteen months old, who, while playing with a box of percussion caps, swallowed some of them. When visited the patient appeared to be sinking fast. The eyes were hollow and glazed; great heat in the epigastric region, and coldness of the extremities; there had been eight or nine discharges from the bowels in an hour. There had been free emesis produced by some domestic remedy, and the vomiting was promoted by administering ipecacuanha and large quantities of warm water, of which the patient eagerly drank. The discharges becoming debilitating, an injection of eight drops of laudanum, suspended in starch mucilage, was administered, and a large dose of calcined magnesia given. An alkaline purgative was selected, for the purpose of neutralizing any acid which might be found in the stomach or intestines, and thus prevent any chemical change in the copper. In the course of an hour the child became composed, fell into a slumber, though it had previously suffered excruciating pain. The next day four caps were found in the fæcal matter, devoid of powder, and the child shortly after regained its wonted health.

Nervous Affections.—M. Pallas states, that as terrestrial electricity is the cause of many nervous affections, he has cured numerous patients thus afflicted by adapting to the bedsteads on which they sleep glass feet, and removing them about eighteen inches from the walls of the apartment.

REVIEWS.

The Microscopic Anatomy of the Human Body, in Health and Disease. Illustrated with numerous Drawings in Colour. By Arthur Hill Hassall, M.R.C.S.E., &c. Part X. London: S. Highley, 1847.

Mr. Hassall deserves well of the profession for the punctuality with which the numbers of his excellent work issue from the press, the way in which it is got up, and the scientific information it gives in comparatively a small compass. We have shown our estimation of this valuable addition to our professional literature by the extracts which we have occasionally made in that department of the *Medical Times* devoted to the progress of science. The tenth part, which has just issued from the press, well sustains the high character which the preceding numbers have acquired, the various articles being well written, and the coloured lithographic plates neatly executed. Three articles and four plates constitute the present number—the former treating of the cellular or fibrous tissue, muscle, and nerve, the latter of the structure and development of bone. On "cadaveric rigidity," which sometimes presents remarkable phenomena, we have the following remarks, under the section of muscular contraction:—

"The stiffening of the body, which occurs after death, known by the terms, 'rigor mortis,' 'cadaveric rigidity,' is due to muscular contraction. This rigidity usually comes on a few hours after death, and, after continuing for a variable time, not exceeding six or seven days, again disappears. There is much variety, however, in the exact periods of the advent and departure of the rigidity: it has been observed to come on latest, attain its greatest intensity, and to last longest in the bodies of robust persons, who have either died of short and acute diseases, or who have suffered a violent death. On the contrary, it has been remarked to set in soonest and to disappear earliest in persons of feeble constitution, and those who have died of a lingering and exhausting malady. The immediate cause of cadaveric rigidity has never yet been satisfactorily explained. Some have supposed that it depends upon the coagulation of the blood in the capillaries—an hypothesis scarcely tenable; others, with more reason, conceive that it proceeds from the solidification of the fibrine of which muscle is chiefly constituted—that it is, in fact, a phenomenon precisely analogous to the coagulation of the fibrine of the blood. An explanation, differing from both of the former, has suggested itself to my mind. I conceive that muscular

contraction may possibly be brought about by the stimulus of the thinner and more watery parts of the blood, &c., acting on the still irritable muscular fibre, and which are known to escape from their containing vessels very shortly after the extinction of life. Of this passage of fluid through the walls of its receptacle we have a familiar instance in the case of the gall-bladder and its contents."

Popular Cyclopædia of Natural Science. By W. B. Carpenter, M.D., F.R.S. In Parts.

Perhaps few men could be found in the present day better qualified for discoursing popularly on natural history than the author of the work before us. Possessed of untiring industry, that for years past has been devoted to the gathering and distributing of information on all subjects connected with human and comparative physiology; and possessing a remarkable facility in arranging and condensing matters of fact, and giving utterance to them in clear and concise language, we feel assured that, as a collector of natural-history truths, in a cyclopædial form, he will not only add to his own reputation, but considerably facilitate an acquisition with the fascinating science he has undertaken to teach. We wish him every success in his laborious undertaking. The work is neatly and very cheaply issued, and we have no doubt it will enjoy, as it deserves, an extensive circulation.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any ewsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription,* 13s.; *Quarterly,* 6s. 6d.

Scrutator.—*The instrument is a steel sound, so shaped as to combine the advantages of the wedge and the lever; it is said, that "by giving an obtuse edge to the cone of the instrument, which by the flattening of the two sides is nearly triangular, less resistance is made to its passage through the stricture, and a dilatation of the part is far more readily effected than by the mere conical sound, and more especially in the denser kind of stricture, the removal of which cannot be effected without great perseverance in the ordinary and tedious process of treatment by the common bougie."*

A Licentiate of the London College of Physicians.—*It does not come within our province to touch upon the subject mentioned; the paper is, therefore, at the disposal of our correspondent, with thanks for the offer.*

A Member of the National Institute, Rotherhithe.—*The meeting was extensively made known, and it must have been by some oversight that our correspondent received no notice of it. There was a good attendance, and a united disposition to maintain the Institute in all its efficiency.*

A Sufferer from Illegal Practice.—*We know of no better means "to stir up the Apothecaries' Society from their slumbers" than by teasing them with letters, or by personal applications to their officers. Our correspondent bitterly complains of the neglect which he has experienced from the Society in reference to an application he made concerning an illegal practitioner in his neighbourhood. The penal clause seems to be just now rather a troublesome piece of property.*

Mr. T. Ewins.—*The representation should be first made to the Council of the College of Surgeons, and, if no notice be taken, to publish immediately.*

Phil. Jobson.—*We think the subject of rather too serious a nature to be treated lightly. Draw out the facts in a plain unvarnished narrative, authenticate the communication, and it shall appear in our columns.*

Dr. T. Macpherson.—*A private letter shall be sent in the course of a few days.*

A Student.—*The questions are so many that we can neither spare time nor paper to answer them all. If our correspondent will be a little moderate we shall be able to accommodate him.*

M.D.—*To speak of Oxford as a respectable medical school is, in our estimation, little better than folly. Its degrees may be held in high estimation, but its capabilities of imparting anything like a respectable medical education are very few.*

A Young Surgeon, Queen-street, City.—*No engagements should be undertaken without a clear understanding in reference to salary. The duties of the surgeon on board such a ship would be laborious and responsible, and a young man would be very silly to undertake them without some consideration in addition to a free passage.*

A Candidate for Parochial Honours.—*Our correspondent is certainly not serious. He will, perhaps, find by experience that the honours for which he longs may be very empty ones. The double qualification is necessary to bring them within reach.*

An Assistant.—*We are aware that the condition of members of the class to which our correspondent belongs is very wretched, and we know not how it is at present to be improved.*

A Provincial Surgeon.—*The Government measure of sanitary reform did not pass into a law during the last parliamentary session.*

A Member and Licentiate *wishes to know how the case of Michael Sweetman has been disposed of? Apply to the clerk of the Apothecaries' Society.*

Mr. R. Reid, Bodle, Liverpool.—*The only alternative that we know of, under the circumstances, is to adopt the plan mentioned in the last clause of the note.*

Mr. G. C. Churchill, Manchester.—*We may very shortly be able to publish the lectures.*

***, Atherstone, *is thanked for the communication.*

Mr. Jas. Rolph, Paradise-row, Bethnal-green road, *wishes us to correct a mistake which appeared in the list of gentlemen who passed their examination at the College, August 6, 1847. The name was spelt Ralph, instead of Rolph.*

Mr. Corfe, Middlesex Hospital, *shall have his request attended to.*

Mr. Thos. Buchanan, Hull.—*The "Synoptical Table" came safely to our office, and at an early opportunity will be noticed.*

Medicus.—*Yes.*

Mr. Alfred Ebsworth, Bulwell, Notts.—*The letter has been received.*

A Correspondent *wishes to be informed what medical man of any authority was the first to notice the appearance of smallpox in Great Britain.*

Mr. Edward Fielding Palmer, Tamworth.—*The communication has been received.*

Mr. Edward L. Falloon, Liverpool.—*We will insert the case, and return the drawings as requested.*

S. H., a Subscriber.—*The difficulties are almost insurmountable, and, if our correspondent has had brilliant visions of the future, he will be assuredly disappointed. The church offers greater encouragements to talented young men, who are poor, than the medical profession.*

C. C.—*We can only recommend economy during the enjoyment of health. We know of no institutions which would render permanent help to such medical assistants.*

R. H. W.—*We can only publish authenticated communications relating to the Putney inquest. Our correspondent's wishes can only be gratified by his allowing us to use his name.*

Aner.—*We are unable to answer the question.*

Mr. J. H. Williams.—*Fair remuneration for such professional services as are mentioned will no doubt be granted at the quarter sessions.*

In consequence of announced legal proceedings against the Editor of the "Pharmaceutical Journal," *Mr. Farmer wishes us not to publish the letter which we announced from him last week, on the subject of the late inquest at Putney.*

*Letters and communications have also been received from Mr. Allison, East Retford; Mr. E. Daniell, Newport-Pagnell; Mr. Charles W. Webb, Imprest; Mr. Edward Fielding Palmer, Tamworth; Mr. Alfred Ebsworth, Bulwell, Notts; Mr. T. Buchanan, Hull; Mr. Corfe, Middlesex Hospital; Mr. James Rolph, Paradise-row, Bethnal-green; Mr. G. C. Churchill, Manchester; ***, Atherstone; Mr. R. Reid, Bodle, Liverpool; A Member and Licentiate; Mr. J. H. Williams; Aner; R. H. W.; A Provincial Surgeon; An Assistant; A Candidate for Parochial Honours; A Young Surgeon, Queen-street, City; M.D.; A Student; Dr. Thomas Macpherson; Phil. Jobson; Mr. T. Ewins; A Sufferer from Illegal Practice; A Member of the National Institute, Rotherhithe; A Licentiate of the London College of Physicians; Scrutator; Mr. Edward Falloon, Liverpool; C. C.; S. H., a Subscriber.*

THE MEDICAL TIMES.

SATURDAY, AUGUST 21, 1847.

FLOATING PESTHOUSES.—FRIGHTFUL MORTALITY AMONGST EMIGRANTS.

Quàm multa in sylvis autumni frigore primo
Lapsa cadunt folia, aut ad terram gurgite ab alto
Quàm multæ glomerantur aves, ubi frigidus annus
Trans pontum fugat, et terris immittit apricis.
VIRG., Æneid, lib. 6.

The condition of many of the vessels which are sent across the Atlantic crammed with emigrants is such as to reflect the greatest disgrace upon those merchants whose property they are, and by whom they are sent out for the purpose of putting money into their pockets, and upon the Government for permitting such craft to leave our shores crowded with human beings. Wealth is acknowledged to be omnipotent amongst us, and the despotism which it exercises has lowered our national character in the estimation of all the civilized nations of the world, because it has been guilty of perpetrating the most outrageous deeds upon those who have been too weak to resist its aggressions. At the present moment the health and energies of the people are suffering from obstructions which monopoly has placed in the way of social improvements, and multitudes of human beings are daily immolated upon the altars of a bloody Moloch, who derides the sufferings of its victims when the coffers of its treasury are replenished at their expense. Philanthropists have been bearded by this tyrant, and their best efforts have been counteracted by his unholy exertions, so that in the nineteenth century we suffer from abuses which would disgrace barbarous countries. In the midst of populous cities graveyards and sewers, filthy hovels and stagnant ditches, are suffered unmolested to send forth their pestiferous exhalations to slay their tens of thousands, while many of our ships, from causes which could be removed, are no better than floating pesthouses conveying to other climes the most deadly diseases.

Public attention is beginning to be directed to that part of the mercantile navy which is employed in conveying emigrants to different parts of the globe, as at the present time a fever is raging amongst those unfortunate beings who have voluntarily exiled themselves from their native country to settle either in the United States or Canada. At Grosse Island the quarantine hospitals contain two thousand patients, and the institutions for the reception of the sick at Quebec are so full that no more can be accommodated. Here, however, the great bulk of the emigrants do not remain, as they are conveyed by steamers on to Montreal, and to the western districts of the colony; and it is in these places the extent and power of the disease are so fearfully displayed.

It was early in May that the first vessel arrived with the fever amongst its passengers, and since then scarcely a day has passed without fresh cargoes of human creatures being landed, suffering more or less from the malady which they contracted on board ship. The mortality has been so great that at least one-eighth of the total number, who left their own country with the hope of bettering their condition, either found a premature grave in the waters of the Atlantic or on the shores of the Western Continent. It appears from the statement of some of the daily papers that no less than 57,000 persons had arrived in the river St. Lawrence, and that the deaths from typhus fever amounted to about 7000. They are as follows:—

Died at sea	2216
Died after arrival, but before landing	1011
Died at Grosse Island (up to 17th of July)	1201
Died in the Marine Hospital, in Quebec	150
Died at Montreal	1400
Died at various places in the provinces	800
Total	6778

Here is a mortality truly awful to contemplate, produced by a single disease, and which calls for a prompt and searching investigation, in order that its origin may be discovered and its ravages staid. It might have been anticipated that, as the emigrants are composed principally of the inhabitants of the "Sister Isle," where typhus has been prevalent, that there would be amongst them an increased amount of disease, and that, from the wretched condition of the quarantine establishments in Canada, there would be more than an average mortality amongst the fever patients. Yet we are to look for other causes than the Irish epidemic and colonial supineness for the vast increase of disease and death amongst the emigrants. The *Morning Chronicle* complains bitterly of the station at Grosse Island, which, it says, "was kept up rather as a comfortable farm for the superintending surgeon, than as the sanitary gateway of England's most valued colony. The dead, the dying, and the sick arrived; the buildings in the island, mere outhouses at the best, were rapidly filled; and then the luckless wretches, for whom no room could be found to die under a roof, were laid on the grass in tents, with the rotten beds they had brought from home; four hundred are thus provided for; and, as for some days past much heavy rain has fallen, their present state must be one of the most fearful misery. There are but eight surgeons to attend to two thousand patients, and it is said that many of them do not possess the qualifications which so responsible a position requires." We leave for the present the Grosse Island establishment, with its sheds, surgeons, and sick, to the tender mercies of the *Chronicle's* correspondent, in order that we may more especially attend to the merchant carriers and their craft.

Few, perhaps, are aware of the wretched hulks which are oftentimes "put in commission" to convey voluntary transports from the shores of Great Britain and Ireland to those of America. Every trick is resorted to to entrap passengers. Paint, putty, oakum, and pitch are liberally employed in all directions, in order that all defects might be so nicely covered as to escape observation. Chloride of lime, and other disenfecting agents, are used, while in port, to keep down the stench produced by the bilge-water and other impurities of the vessel, which would be anything but attractive to those seeking berths. These vessels, however, contain within them the latent elements of malignant disease, when, from any cause, individuals are so weakened in constitution as to render them susceptible of its influence. Some ships are scarcely seaworthy; and the steerage is not unfrequently so crammed with passengers as to completely vitiate the confined atmosphere. We have known instances where the gaseous emanations from the hold have been of such a character as to be especially offensive to the olfactory organ, and to blacken speedily any articles of silver that were exposed to its influence. The habits of the steerage passengers, moreover, are oftentimes so filthy as to render their part of the vessel little superior, in point of cleanliness, to a pigstie; and in some of the ships, where fever has recently prevailed, the boarding-officer at Grosse Island has actually had to lay down planks over the liquid filth and dirt which covered up the 'tween-decks to the depth of many inches, before he could force his way to the beds in which the unhappy passengers were dying. The food, also, has sometimes been so bad as to be productive of the worst effects: pork and beef in a state of high decomposition have been eaten, and these articles have become so offensive as to render it necessary to cast them into the sea. The captains of the vessels appear to have little concern for the welfare of those placed under their care so long as they have paid their fare, and they may wallow in filth or commit the most disgusting excesses without any exercise of authority on the part of the skipper. The Government, also, cannot be entirely freed from blame in permitting crazy vessels to be chartered, improper food to be shipped, and such multitudes of passengers to be taken on board, that necessary accommodation for them is out of the question. As a consequence, there is scarcely an emigrant vessel which crosses the Atlantic where fever does not break out either amongst the passengers or crew. The public are utterly ignorant of the sufferings which individuals in the steerage undergo, not only from improper accommodation, but from attacks of fever. Many die at sea the victims of typhus, and are speedily committed to the deep, without the real facts being brought to light, in order that when the ship gets into port the captain may exhibit a clean bill of health, and thus avoid detention under the quarantine regulations.

Another crying evil is, that many of their vessels either have no medical officers on board, or one without any legal qualification, or one who has engaged to exercise his vocation without any pay. We publish a letter in another part of our columns which will throw a little light upon this part of our subject. The fact is, that owners will engage any pretender to medical science to undertake the most responsible duties, without caring a rush whether he can diagnose a fever, or distinguish jalap from scammony. Apprentices just out of their time, young men who have attended a few lectures, or druggists' assistants, are the class of persons who are too frequently chosen to watch over the lives and health of those who become passengers in emigrant ships, while the owners parade before the public view the important information that their vessel carries a surgeon on board. Never was there a deception more impudently practised, or more productive of evil consequences. Legitimate medical practitioners are thus prevented from obtaining a proper remuneration for their services, while the passengers are deprived of that scientific superintendence which is necessary to preserve their health, or to restore it when their their frames are invaded by disease. The consequence is that, when fever makes its appearance, it is almost sure to seize on numerous victims, and to advance unchecked to a fatal termination. We should like to be informed how many of those vessels which have recently conveyed to the American shores such multitudes of human beings afflicted with typhus carried properly qualified surgeons, and what medicines were at their command to combat the disease. The Government is bound to institute immediately a searching examination, and to take care for the future that mammon-loving merchants shall not increase their wealth by refusing to adequately remunerate a proper medical officer. No vessel should be allowed to put to sea without such a gentleman, who ought to be furnished with a chest well stored with surgical instruments and proper medicines.

No one can entertain a doubt that much suffering and many deaths might have been prevented if the Government agents at the different seaports had efficiently discharged their duties. The poor who emigrate are unable to protect themselves, and it is the duty of those who are in authority to undertake their defence. It is high time that filthy hulks should be prevented from being used as passenger-vessels, and that with improved shipping there should be better regulations to preserve, as far as possible, the health and comfort of the emigrants. The colonists, we hope, will, in self-defence, move in the matter, and we are sure that the members of the medical profession will use their talents and influence to urge persons in high official stations to institute such regulations as are best calculated to check those abuses which entail a vast amount of suffering upon helpless individuals.

MISFORTUNES IN A MADHOUSE.

Only a few months ago the Grove-house Asylum for Lunatics, at Bow, became renowned in consequence of the brutal conduct of two of the keepers towards an unfortunate maniac, who died from the injuries which they inflicted upon him. The principals of the establishment very properly courted a public investigation into the conduct of their inhuman servants, and the judge who presided at their trial severely animadverted upon their conduct, and sentenced them severally to three and six months' imprisonment. Scarcely has the excitement subsided, than the institution is again introduced to the notice of the public in consequence of the death of another insane patient in the asylum, from fracture of the ribs. On this occasion it appears that no one connected with the establishment is chargeable with having inflicted the injuries upon the sufferer which produced his death; but that he himself, in the silent hours of the night, became so obstreperous as to beat himself against the sides of the bedstead till he produced those fatal lesions which were subsequently discovered.

It is most unfortunate for this institution to have, within so short a space of time, two of its inmates die from violence, and it shows how careful the managers ought to be in selecting proper servants, and in giving proper attention to all the patients. In the case of violent maniacs, it is necessary that they should be placed under a degree of restraint which is compatible with their safety, and it is equally proper that there should be a careful superintendence of

them, that no serious mischief should result to themselves or others, when they become obstreperous. In the present case, the patient appears to have been left to himself during the night, none of the servants visiting him for many hours, when they find him bruised and mangled from his own violent efforts. Such a system of management cannot be too strongly condemned, and we trust that this event will be a warning for the future to all superintendents of lunatic asylums. The public have an opinion that in licensed private madhouses many abuses still exist, and that the patients are even now doomed to occasional suffering either from improper treatment or culpable neglect. There is an impression, also, that keepers and nurses, not being allowed very high wages, seek every opportunity of using means to render their duties as light as possible. We do not pretend to say that this is the case in the asylum at Bow; but, however high the servants are remunerated there for their duties, they did not exercise that nocturnal vigilance which was necessary to prevent a patient from inflicting injuries upon himself which caused his death.

We would strongly advise the principal of Grove-house Asylum, Bow, that, as he on a former occasion very properly dismissed two savage keepers in his establishment, he will now discharge the sleepy ones, and that, to prevent any more maniacs from fracturing their ribs against the sides of the bedsteads, the wood or iron of which these articles are formed may be surrounded with a very soft padding of wool horsehair.

A VERY curious inquest was concluded this evening (Thursday) just as we were going to press, on the body of a poor man who died of alleged starvation, aided by pulmonic disease, in the union-house, Holborn. The peculiarity of the case consisted in these facts—1st. That twenty hours before his death he had applied at the Royal Free Hospital, and was denied admittance by Dr. Marsden, the founder of that institution. 2nd. That there were at the time, as is alleged, many unoccupied beds in that hospital. 3rd. That the inquest was held before Mr. T. Wakley, formerly the bitter opponent of that hospital, and since promoted to a seat on the committee, and the fathership of one of the surgeons.

We have a *verbatim* report of the proceedings, which we shall make matter of publication and notice in our next number.

LITERARY AND PARLIAMENTARY QUACKERY.

(LETTER FROM DR. EDYE AND SON.)

[To the Editor of the Medical Times]

SIR,—"Gracchos de seditione quérentes quis tulerit?" said the Romans. "Mr. Thomas Wakley indignant at quackery," or, in other words, quarrelling with his own bread and butter, is a spectacle which the world, from habit, regards with more philosophy. We are an age tolerant of a well-sustained comicality.

We, Sir, are as much quacks as Mr. Wakley, ay, even to the second generation: we are *avowed* quacks too, proud of a *profession* so extensive; and, if our dander do rise at Wakley's verbal renegadism, it is because we can't afford to lose so distinguished an ornament as the coroner-journalist and chirurgical M.P. Till he gets us our Charter we are not in a position to put up with his apostasy; and when the Charter does come, where—without Wakley—look for a president?

In retracing that worthy gentleman's career, I (Dr. Edye, senior) am lost in admiration at the wonderful point of development to which his daring genius has brought our art in England. See him addressing a Finsbury audience! How his *peculiar*, his *very* peculiar aims at party support, and profound schemes of parliamentary *business* are veiled in that face, those attitudes, and that voice, which recal so forcibly the heedless jackpudding of a Bartholomew fair! His head brooding over *such* other things, how complacently he fills open mouths with stale jokes! His bosom occupied by substantial matters so much nearer to it, how inimitably he M.P.-ricizes all characters — from Virtue's stern monitor up to Folly's glib buffoon! "Oh! the wonderful man!" I involuntarily exclaim, "would that my son would study, *nocte maneque*, that master of the science!"

And then turn to his coronership! Only remember how he managed that! How the *medici* were taught that it was to be all for their good! How *they* worked for it!—how *they* paid for it!—how *they* gave it him!—and then -(ah! ah! ah!)—and then—(ah! ah! ah!)—*how he* turned it "to *their* good"! *how he* "*worked*" it for them! *how he* made it "*pay*" them! how *he* gave it them! Ah! ah! ah! By Jove it was magnificent! Some of my Judaic brethren in Newman-street do a dashing thing now and then; but how their grandest *coup* fails in the comparison! The weak nerves of Lord Denman were astounded at *one* of these clever moves! He gave judgment against the Coroner forsooth! How little he knew his man! Doctors "were injured," said he, "law was twisted", "evidence excluded." But how else, or at what smaller price, could even Wakley have achieved so superb a stroke of judicial and political empiricism? Small matters, indeed, will be Hounslow inquests, like some of my own cases, if fellows like Wakley or myself must take our notions of legitimate practice from the simple-minded Chief Justice!

But if we would understand the full perfection of our chieftain's empiricism—an empiricism which the *sham* apostasy of his attacks on us only makes unique and more perfect —we must turn to his unrivalled and exquisite achievements in journalism.

Just as Messrs. MORISON and MOAT have their "Hygeist," *he* has his *Lancet*, to cut up doctors as *they* doctrines, and circulate f——s as they pills. With what skill has he not managed his prices and cash accounts! Morison's popularity never got *him* raised prices for diminished wares! Thirteen-pence-halfpenny were to him high and low water-mark. But mark the worthy Chevalier of Argyle-street! While a shilling could be got for a small dose of journalism he took no less; when eightpence -he took that; when only sixpence—he meekly took that! But, did he stop there? Not he. When the small dose would not sell for a shilling, nor for eightpence, nor for sixpence, he unhesitatingly doubled the quantum! What ductile sagacity! How it reproduces us the barrister who, accused of taking pence on a brief, triumphantly replied:—"While my client had gold, I took that; when only silver, I took that; and when there were only coppers, I was too faithful to my cloth to disdain that!"

We advertise our highly-respectable firm: well, with all his popular disadvantages, Wakley will *almost* do as much! We, of course, have fifty cures for five patients; but what's that to Wakley's hundred copies for *one* reader? *We* publish laudations of our *skill*; but what are they to that magnificent hyperbole, when Wakley announced himself to Hudson—from that best of advertising vans—the House of Commons—as a man knowing *something* of surgery!

But the true test of a quack is, after all, his advertisements! They are the measure of his empirical greatness; and here how indisputably does our President *in posse* vindicate his pre-eminence! I declare that a few months' lease of his services in this line of business would make the fortune of Messrs. Moses and Co., Professor Holloway, or myself. My difficulty has always been to get a man who, with the same fertile powers of imagination, can unite the same daring of assertion. *Our* "gentleman"* would blush himself into an apoplexy at the very idea of ushering into the world such *happy*—such heroic audacities as he perpetrates with the greatest ease and self-possession!

What a capital characteristic instance have we about "Lane's Lectures on Syphilis"! Just at a time (end of 1841) when your *Medical Times* was looking up, and his *Lancet* looking down, some striking *coup* was necessary, and out came the following telling, business-like advertisement:—

WAKLEY'S PERFORMANCE!!

Some four lectures were *published, and in the ten subsequent volumes not another word (of course) occurs about them!*

WAKLEY'S PROMISES!!

"*The first of a course of lectures on this subject*"
"*(syphilis) will be found in the present number of*"
"*our journal. Mr. Lane, the lecturer, has en-*"
"*joyed the most ample opportunities for making*"
"*himself thoroughly competent for the discussion*"
"*and treatment of this great branch of human*"
"*disease. Practitioners residing in the most*"
"*distant parts of the empire will now have the*"
"*opportunity of acquiring the best information*"
"*which the experience and practice of the London*"
"*institutions can afford the means of communi-*"
"*cating, regarding not only syphilis itself, but all*"
"*the complaints which simulate that direful,*"
"*odious, and destructive malady.*"

"*The demand for such a course of lectures has*"
"*been urgent and almost universal, many of our*"
"*professional readers having loudly complained*"
"*that the* Lancet *should have existed nearly*"
"*twenty years without a series of discourses on*"
"*the subject appearing in our columns. If we*"
"*be not much deceived, we shall, in presenting*"
"*to them now the fruits of Mr. Lane's ample*"
"*experience and sagacious observation, remove*"
"*from their minds the accusation of a previous*"
"*neglect of duty.*"

"*We trust that one of the useful effects of*"
"*publishing this valuable course of lectures will*"
"*be the shutting out, now and for ever, of a dis-*"
"*gusting set of impostors from the wide field of*"
"*quackery. The number of victims which some*"
"*of these knaves have entrapped is enormous.*"
"*The folly of a moment, through a devilish*"
"*species of fraud and cunning, has been made, to*"
"*innumerable innocent sufferers, the medium*"
"*of gross extortion, and a source of most dis-*"
"*tressing mental suffering during a long period*"
"*of years. Instances of this description are,*"
"*in fact, almost numberless. Many of the*"
"*weak-minded victims of indiscretion and cre-*"
"*dulity will now, indeed, really discover that*"
"*knowledge is power.*"—*Lancet*, Nov 13.

Now, is not this specimen capital? But no—*you*, Sir, are no authority. A man must know the arcana of a quack firm to comprehend all the cleverness of the *dashing coup*. The eminent

coroner, while writing it, knew, doubtless, that he should never be able to publish the course; yet how confident the tone!—how big the hopes!—how large the promises! The younger *gobe-mouches* of the faculty must have almost wished to have had syphilis themselves, to study the wonderful series with more practical advantage. If, in their fervour, they ventured, *à la* Ricord, on the experiment, how were they "sold" when the subject-matter *did*—and the lectures did—*not* appear!

I pass by SCHÖNBEIN and *his* "magnificent" lectures; which, on the principle "omne ignotum pro magnifico," remain "ignota," and therefore, "magnificent" still!

I pass by, also, the "complete course" on Physiology, by Dr. Todd, whose "completeness" remains untouched by the publication of a fragment up to this day!

I likewise pass over "Liston, the first surgeon of Europe," whose writings were to be published in apt conjunction with Baillarger's "Grand Elucidations of Insanity." I pass by, too, Brodie, with some half-dozen other advertised and non-appearing "courses," though any one of the advertisements of the *paulo-post-futurum* series would have made the fortune of fifty George Robinses, and I turn with concentrated, breathless admiration to the ILLUSTRIOUS LIEBIG ABORTION. It was there that the quackery of medical advertising reached its *acme!* We shall never, never more see anything similar or even secondary to it!

WAKLEY'S PROMI[illegible]!!

"*When we announce that amongst several*" "DISTINGUISHED AND NOVEL COURSES OF LEC-" "TURES *which we have secured for publication in*" "*the enlarged and stamped numbers of the*" "Lancet, *is one by the renowned* PROFESSOR" "LIEBIG, OF GIESSEN, ON CHEMISTRY *as ap-*" "*plied, in the great divisions of that science, to*" "MEDICINE, PHYSIOLOGY, AGRICULTURE, *and*" "MANUFACTURES, *it must be admitted that there*" "*is no mode of conveyance which could be ration-*" "*ally suggested that ought not to be employed for*" "*transmitting a knowledge of a* MORE IMPORTANT" "AND VALUABLE COURSE OF LECTURES THAN" "HAS EVER YET APPEARED IN PRINT, *to the*" "*remotest corners of the earth*" !!!!!!

Can anything—*could* anything be finer? more catching? more dazzlingly deceptive? more "drawing," as *we* say? *Yes!* BUT (and mark the *but*) *it is from the same pen!* In the *Times* of June 22, 1844, Liebig is again advertised, and people are asked to buy the *Lancet* and *see* Liebig's "DISCOVERIES *which at the moment*" "*of their development made the whole nervous*" "*system of the discoverer thrill as if by an*" "*electric shock, and the eyes of the observers*" "*glisten with delight*"!!! Conceive a better—finer—more glowing advertising climax! And then, to complete the perfection of the *description*, you have only to remember the subsequent *doing*—the sort of Liebigian "land of promise"—a fool's paradise indeed—into which the poor subscribers were led; viz.:—a few unfinished, trumped-up, commonplace lectures on commonplace, introductory, schoolboy chemistry—a miserable fragment of a more miserable series!—Ah! ah! ah! Such the affluence of his more than Wordsworthian poetry! As the *Times* says—"such the power of genius even in its most undisciplined moods!"

I am tempted to stop at this last achievement as a fit Waterloo for even this Wellington of quack advertisers; but no—better remains behind. Let me give you one of many inimitable advertisements on Müller—whose work was *not* given, *as usual*, in one-fifth part or less, simply because it was never given at all! Read, Sir—read—and I will give a thousand pounds if you can point out a man who could practise, with more coolness, a better hoax on a "discerning public"! It really *is*, what all the great advertised courses *were* to have been, "*magnificent*"!

"NATURAL PHILOSOPHY."

"A COURSE OF LECTURES"
"ON"
"PHYSICS,"
"OR"
"NATURAL PHILOSOPHY,"
"ILLUSTRATED BY UPWARDS OF ONE THOUSAND"
"TWO HUNDRED BEAUTIFUL AND HIGHLY"
"FINISHED ENGRAVINGS."
"BY JOHN MULLER, PH. D.,"
"PROFESSOR OF PHYSICS IN THE UNIVERSITY OF"
"FREIBURG."

"These Lectures are of surpassing interest," "and the Course will embrace an exposition" "of the general properties and laws of ponder-" "able matter, and the phenomena and laws of" "the imponderables; including the sciences" "designated Mechanics—Hydrostatics—Hy-" "draulics—Pneumatics—Acoustics—Optics—" "Meteorology — Electricity — Magnetism —" "Caloric—and consequently the Theory and" "Construction of Mechanical Instruments," "the Lever—Pulley—Wheel and Axle—In-" "clined Plane—Screw—Wedge—the Balance" "—the Barometer — Pumps — the Steam-" "engine — Hydraulic Press — Musical and" "Acoustic Instruments—Optical Instruments" "—the Telescope—Microscope—Instruments" "for Polarizing and Analyzing Light—" "Mirrors — Thermometers — Hygrometers—" "Machines for producing Electricity—Gal-" "vanic Piles and Batteries—Magnets, &c. &c." "&c. Animal Mechanics—the Circulating" "System—the Eye—the Ear, &c. &c."

"The First of these important Lectures will" "be published in"

"THE LANCET"

"of Saturday, the 3rd of April next, and they" "will be continued weekly in that journal" "without a single intermission until the Course" "is completed."

"The value of this contribution to the scien-" "tific records of this country may be duly" "estimated by the fact, that the cost of the" "original drawings and engravings alone has" "exceeded the sum of Two Thousand Pounds."

But, if it was a dashing thing to announce, for weeks and months, a course with an unheard-of and impossible number of engravings—and costing thousands of guineas—and which, therefore, Wakley, from the beginning, (a) "wished they might get!"—what do you think of the way in which this more than Joseph Ady, of *our* business, managed when the awful day fixed for testing his promises came? The stratagem deserves immortality; and hence *I* historicize it with my own hand. First came a specious *announcement* of the *receipt* of an "immense amount of correspondence," deprecating the publication of the course! There were "hundreds" of people who objected to his spending so much money for them! They protested against receiving so many thousand "highly-finished engravings" gratis. The work was "something" *too* much to their advantage! The editor, sympathizing with his worthy correspondents, began, therefore, on the 27th of March, to *doubt* what he should do. He would, however, so far oblige them as to pledge himself not to publish them for the present—he would, at all events, take time before forcing the "magnificent" work on his reluctant subscribers! The engravings were made of course—the work all ready for printing of course (for the day fixed for publishing them was but seven days off)—but still he really would deliberate! Another fortnight, and the discerning readers were told that the course, after all, was of a kind not to suit them! It, therefore, would really not be served up! The sciences of physics and meteorology, which originally were sciences "with which every medical man ought to be most intimately acquainted," and "which, *therefore, we have secured for publication*"! were now found out to be "inapplicable to the readers of the *Lancet*"! Alas! for the "upwards of 1200 beautiful and highly-finished engravings"! Alas! for "the original cost of more than two thousand pounds"! Alas! also, for the thirteen hundred readers!!

And now, Sir, was there ever a better "sell"? Was it not magnificent? grand! gorgeous? unsurpassable? No—not quite that. As none but himself can be his parallel in this line of business—so none but he can surpass himself. In the *Lancet* of * * * *

Your obedient servant,
JEROME EDYE AND SON.

[*** We must postpone to next week the conclusion of the letter of Doctors Edye and Son, to whom we must apologize for the long delay of their interesting communication.—ED.]

(a) I see that actually *without making a promise or puff*, you have published these lectures in the *Pharmaceutical Times*, very gentlemanly, no doubt, but not the way to catch the public now-a-days.

THE NATIONAL INSTITUTE.

The first annual general meeting of the members and Council of the National Institute of Medicine, Surgery, and Midwifery, was held, on Wednesday evening, at the Hanover-square Rooms. N. Clifton, Esq., was elected to the chair, and called on the secretary to read the report:—

At the termination of the first year since the establishment of the National Institute, the Council have much satisfaction in reporting the success which has hitherto attended their efforts to consolidate the organization of the general practitioners. Notwithstanding the indifference and torpor into which the profession had fallen in consequence of the withdrawal of the Government bills, when the enterprise of founding a permanent institution was first undertaken, and notwithstanding the variety of opinions which existed as to the most desirable policy for the General Practitioners to pursue, the principles adopted by the Council have received general support, and the National Institute is at this moment the most numerous and important, and, indeed, the only body representing the interests of this class in the profession.

The necessity of such a permanent association as the National Institute has been strikingly demonstrated by the recent proceedings in Parliament in reference to Medical Reform. The introduction of the Medical Registration Bill, and the appointment of a special committee of the House of Commons to inquire into its provisions, and to investigate the laws relating to the practice of medicine, required that there should be some efficient and authoritative Council ready to examine into the provisions of that measure, to watch the progress of affairs, and to represent and to impress upon the Minister the wishes and the objects of the general practitioners. Unless such an executive body, thoroughly familiar with this difficult question, be maintained in constant efficiency, it is manifest that a measure, no matter how detrimental it may be to the interests of the general practitioners, might be

adroitly and unexpectedly passed through the Legislature to the great dissatisfaction and injury of this body. The subject of medical reform has now arrived at such a critical juncture, and so imperatively demands an early settlement, that no lengthened period can possibly elapse before another medical bill will be presented to the Legislature, when the vigilance and deliberation of a duly-authorized body on the part of the general practitioners will be again required. Thus the experience of the past, and the imminent anticipations of the future, alike declare the necessity of maintaining, strengthening, and extending our present organization.

The most important subject that has engaged the attention of the Council during the past year has been the bill, already referred to, for the "*Registration of Qualified Medical Practitioners, and for amending the Laws relating to the Practice of Medicine in Great Britain and Ireland*," which the Council, after the most deliberate examination of its various provisions, and with a due reference to the fundamental principles which the Institute is established to carry out, thought it advisable to oppose. The Council have repeatedly stated by public advertisement their objections to this bill, so that the members have had ample opportunity to judge of their validity and importance; it may not, however, be unnecessary, on this occasion, to state one or two of the main arguments which influenced the Council in coming to their decision upon the measure. It may be said generally that the Registration Bill, whilst attempting to unsettle the existing relations of the profession, and to abrogate many useful laws, did not seek to establish any one of the *more important* principles for which the general practitioners have been so long contending, and which the formation of the National Institute was intended to realize.

The Committee of the National Association, and the Council of the National Institute, have alike asserted, from the very commencement of their labours, that the education and the examination of the general practitioners ought to be under the control of members of their own class, as the *only certain* means of securing that high standard of attainment which the importance and variety of their duties so unquestionably demand. The evidences of the truth of this position are too numerous to record, and some of the most remarkable must be so familiar to the minds of the members of the Institute that further reference to them is unnecessary. It is manifest that the general practitioners can exercise no efficient control over their own *curriculum* of study and standard of examination unless they are placed under a proper corporate organization, with a suitable code of laws, and an elective governing body. The National Institute seeks to obtain such an incorporation, and thus desires to give embodiment and permanency to the most essential principle relating to medical reform. The Registration Bill contained *no* provisions for such an incorporation; but, on the contrary, placed the control over the education of the general practitioners in the dictum of the Secretary of State.

The bill further expressly provided that, from the time of its becoming law, any young man *thenceforward* receiving his license and becoming a member should be entitled to practise all the branches of the profession upon a SINGLE qualification, so that it would be competent for a l future members of the profession to practise e ther medicine, surgery, or midwifery, or to dispense medicines, without having been instructed in these branches, or having had their qualifications tested by any kind of examination; and thus, an anomaly that originated in the laxity and imperfection of medical discipline, whose existence at this time is the source of our dissensions, and of our weakness as a class, and which all enlightened men deeply deplore, would have been *confirmed* and *perpetuated* by legal enactment. The National Institute is founded upon the principle of admitting ALL qualified gentlemen now in actual practice as general practitioners to equal rights and privileges; but the Council cannot too emphatically condemn a measure that would render education and examination in any one branch of the profession, more especially as respects the great body who must necessarily belong to the class of general practitioners, *totally unnecessary* to a title to practise, and that would thereby lower the attainments and destroy the status and respectability of the whole profession. In this respect the bill in question was far more objectionable than the measures brought forward by Sir James Graham; and the Council of the Institute were bound in duty to their constituents and in consistency with their principles to offer their distinct opposition to the scheme.

The twenty-eighth clause of the bill, which especially exempted chemists and druggists from the operation of the measure, appeared to the Council to be fraught with peril to the interests of the general practitioners, inasmuch as it provided that "all persons using or exercising the said trade or business, or who shall or may hereafter use or exercise the same, shall and may use, exercise, and carry on the same trade or business in such manner and as fully and amply, to all intents and purposes, as the same trade or business was used, exercised, or carried on by chemists and druggists before the passing of this act."

The point upon which the decision of a judge in a new trial would turn, supposing even that there should be no defect in the wording and construction of the bill itself, would, of course, be the nature of the business of a chemist and druggist *prior to the passing of this bill;* and knowing, as we do, that the large majority of chemists and druggists, in pursuance of their business, actually practise as general practitioners, and knowing also how loosely medical and surgical practice is defined by the law, the Council feared that the druggists might be able, under an untried act, to establish their claims to practise medicine, and, consequently, that the protection the profession now enjoy would be seriously impaired and perhaps virtually destroyed. It was only after repeated trials that the Society of Apothecaries were enabled to obtain a judgment, under their act, to prohibit the chemists and druggists from practising as apothecaries, upon the ground that, *before the year* 1815, the business of the chemists and druggists did *not* embrace the practice of medicine; and the Council felt that an advantage that had been obtained with so much difficulty, and which, even now, can scarcely be said to be securely established, ought not be placed in jeopardy by a hasty and inconsiderate abolition of the act through which it was acquired.

There can be no doubt that new trials would take place under a new act, and the difficulty of obtaining a judgment in favour of the duly qualified medical practitioner would be much greater now than heretofore; inasmuch as the unqualified practice of chemists and druggists has become much more frequent and general, and the point to prove would be, not what was the business of a chemist and druggist before 1815, but what it was prior to the passing of this bill.

The provisions of the bill for the REGISTRATION of the profession, and the advantages which, in association with other clauses, they are assumed to confer, did not appear to the Council to be of sufficient weight to induce them to forego their acknowledged principles for the sake of assisting to carry into effect a partial and very questionable scheme, especially with the probability before them of the legal recognition of those principles. The Council are fully convinced of the expediency of registering the duly qualified practitioners of medicine, and also of admitting them to the enjoyment of equal rights and immunities; but they maintain now, as they have always maintained, that an equality of qualification should be the basis of an equality of privilege. Any bill that neglects to provide for an equality of qualification, or provides for it in the insufficient and objectionable manner proposed by this measure, and seeks nevertheless to establish an equality of privilege for all future practitioners, will, most certainly, give great dissatisfaction, and would, if it should become law, be found injurious to the peace and welfare of the profession.

In the discussions that have taken place, particularly of late, on the subject of this Registration Bill, it seems to have been forgotten that it is the *new* members of the profession who would become obedient to the regulations of admission under a new system, and that both common sense and the general welfare require that a new system should be uniform, just, and comprehensive. The Apothecaries' Act was an act of indemnity for those in practice in the year 1815, when it became law; the terms of the charter, as agreed upon by Sir James Graham and the joint deputation representing the general practitioners, in the year 1845, provided for similar immunities: an indemnity of the same nature is also recognised as a principle upon which the National Institute is founded; but in neither instance has it ever been contemplated that the qualification for the future general practitioners should be diminished; on the contrary, it has always been desired and expected that a measure of medical reform should render the education required of every individual—to be licensed in future to practise generally in medicine, surgery, and midwifery—complete in all these branches; and that while the education was thus rendered complete, in reference to the nature and extent of the duties of the general practitioners, the standard of qualification should also be augmented, in reference to the advancement of medical and surgical knowledge.

The assumed advantages of registration under this bill, laying aside from immediate consideration the clauses restraining unqualified practice, are—the right of every practitioner, licensed under the act, to practise in every part of her Majesty's dominions, and to claim for advice, attendance, and medicines, in a court of law; together with the prohibition of any person giving medical evidence, or signing a medical certificate, unless he be duly registered. To the first subject of equality of rights, without equality of qualification, the Council have already objected, because they feel that whichever branch of the profession should conceive that its qualification was the most honourable or meritorious would entertain jealousy at the position occupied by the members of the other branches—a spirit that unhappily prevails too much at the present time, and which is now referred to with great regret, as being the cause of preventing a cordial and permanent co-operation for the general good; but which, under the circumstances proposed to be established by the bill, would be greatly and, perhaps, irremediably aggravated. The effect of the bill in this respect would also be to depress the standard of qualification to its lowest possible limit, so that there would soon be little difference between the general practitioners and the chemists and druggists, who are rapidly elevating their standard of scientific attainment. These two classes would be in a short time indiscriminately mingled, and a severe blow would thus be struck at the present high character and status of the general practitioners.

The eleventh clause, which provides that a licensed practitioner shall be allowed to charge for advice and medicines, is founded upon a just principle, but is not of sufficient practical utility to claim precedence over other essential measures which the bill fails to embrace. Not only has custom sanctioned the charging for visits and attendance by qualified medical men, but the courts of law have already decided in favour of such claims; as a matter of expediency, however, it may be safely stated that this particular clause would be very seldom acted upon, for medical men could never, under any circumstances, find it their interest to engage in frequent prosecutions; so that the bill in this respect would do little for the profession. The advantage comprised in the right to give medical evidence in a court of law is again merely affirmative of ex

isting custom, and is of comparatively little practical importance, inasmuch as the evidence of an impostor could not now be received in a judicial court as the evidence of a medical man; and, on the other hand, every qualified man is at present admitted as a witness when medical testimony is required. The public would never permit any magistrate, judge, or coroner, to suppress or to refuse to receive valuable medical evidence.

In reference to those clauses of the bill protecting the exclusive right to practise of the regularly licensed practitioner, and rendering it penal under a summary process for any individual (chemists and druggists acting as medical practitioners excepted) to practise without a license, the Council entertained great doubts whether such clauses could pass the Legislature in their prescribed form, and at the late period of the session when the bill was introduced; and they believed also that those provisions might be so altered in committee as to be far less stringent and useful than the existing Apothecaries' Act. The Council, indeed, had *no confidence* that these clauses would pass through the committee of the House, and they were unwilling to relinquish the Apothecaries' Act, which, by the new construction put upon its provisions, has now become of increased value, in order to obtain a measure which would not, in all probability, realize even the advantages it seemed to promise. All that is valuable in the proposed Registration Bill might have been obtained without the abrogation of the penal clauses of the Apothecaries' Act; and the interpretation put upon those clauses, making illegal practice a misdemeanour punishable by a summary process, is so recent, that it is more politic to wait until the new interpretation be fully established in the courts of law before we give our consent to any measure that shall supersede this act. The Registration Bill, therefore, was brought forward at a very inopportune period. The two cases that have been tried have confirmed the new interpretation, and the Council trust, now that the Registration Bill is withdrawn, that the Apothecaries' Society will see the necessity of protecting the interests of their licentiates. For these various considerations the Council did not feel themselves justified in lending their support to the bill; and from the situation in which they were placed in reference to it, and also from the limited time that was allowed for its progress through the House, they saw no chance of having a fair opportunity of remedying its numerous defects, and of making it conformable to what they believe to be the views and interests of the general practitioners.

The Council have published in their last number of "Transactions" a report of their interview with the Right Hon. Sir George Grey in relation to this bill, and the general question of medical reform, and they beg to refer the members to those "Transactions" for a detailed account of their proceedings. They have much pleasure, however, in repeating that Sir George Grey promised that no measure of medical reform should be undertaken to which they were not admitted concurrent parties; so that it may be hoped that the claims of the general practitioners will be fully heard and respected. The special committee appointed by the House of Commons to inquire into the subject of medical reform have not yet completed their labours, and the dissolution of Parliament prevented their making a report or publishing the evidence. The representatives of the Colleges of Physicians and Surgeons were alone examined, but the Council of the Institute took the necessary measures to express their views before the special committee when their turn for examination should arrive. Should the committee be renewed at the next session of Parliament, an opportunity will be afforded for the Council fully to state their views.

With the view of promoting professional concord, and of uniting in a common interest the provincial and metropolitan practitioners, the Council advert with pleasure to the *conversazione*, held on the 13th of April last, at which a considerable number of the provincial members attended, and expressed the highest satisfaction at the proceedings of the evening, and of the opportunity for social intercourse which the meeting afforded. The Council hope to be able to *repeat* such reunions, for which the central situation of the metropolis, and the various professional and social connections which most of the provincial members have necessarily formed in it, render it peculiarly advantageous.

The Council, after careful deliberation, have framed a code of by-laws for the government of the Institute, which have been circulated among the members, and will be submitted this evening for adoption. In consideration of the various opinions and different modes of practice among the members of the Institute, the Council have prepared such rules as they think will be most acceptable to the large majority of the members, and most conducive to the honour and stability of the Institute; and they beg to observe, that in a work so complicated and difficult, the most careful deliberation was required to include the wishes and views of all classes of members without introducing conflicting regulations. They have been desirous that the bylaws should be considered a prototype for the government of a corporation which they are, and have been, endeavouring to obtain with anxious solicitude; and that they should be also in consonance with the terms of the charter agreed upon by the Right Hon. Sir J. Graham and the joint deputation. These laws have already been published, and it has afforded satisfaction to find that the objections offered have been few; and that, in several instances, the Council have been enabled to adopt the alterations that have been suggested.

The donations to the library of the Institute, from the members during the year, amount to upwards of 300 volumes, many of them very valuable works. The Council trust that the members will continue to take an especial interest in this department of the Institute, and exert themselves to promote its success, particularly as the facilities for circulation are so rapidly increasing all over the country, as to make it an object of the most extensive utility not only to the metropolitan but also to the provincial members.

In determining the vacancies in the Council for the present year, and the mode of nominating and electing new members, the Council have acted upon the rules relating to those duties set forth in the proposed by-laws; they have not thus anticipated the by-laws by acting upon them before they were adopted, because they cannot be considered laws until they have been confirmed by the members; but it being necessary to declare vacancies, and to elect new members, the Council have adopted in the first instance that mode which they believe to be the best, and which they are about to propose for adoption by the members, to regulate the business of future elections.

The following vacancies will take place in the Council this year:—

METROPOLITAN. — Mr. Pennington, elected president; Mr. Clifton and Mr. Fuller, vice-presidents; Mr. Clayton, Mr. Nussey, and Mr. J. Sim Smith, trustees; Mr. Dodd and Mr. Tegart, treasurers; Mr. Davis, Mr. Lavies, and Mr. Moore.

PROVINCIAL. — Mr. Martin, vice-president; Mr. Isaac Hurst, Bedford; Mr. Allison, East Retford; Mr. Bryan, Northampton; Mr. Coward, South Shields; Mr. Dickinson, Ulverstone; Mr. Hughes, Stafford; Mr. Hunt, Manchester; Mr. Lowe, Bristol; Mr. Sleight, Hull; Mr. Thompson, Nottingham; Mr. Rogerson, Liverpool; and Mr. Morley, Midhurst.

TREASURERS' REPORT.

In presenting the Treasurers' report, the Council beg to state that when the members of the National Association were first canvassed, 1300 gentlemen declared their willingness to join the National Institute, and were accordingly enrolled as members; of this number (including also other gentlemen who have since joined) 900 have paid their subscriptions for the past year. It is hoped that those members whose subscriptions are yet due will take an early opportunity of forwarding them to the treasurers, as otherwise it is proposed by the new by-laws to deprive those gentlemen of the exercise of the rights and privileges of a member of the Institute.

The Treasurers' Report of Expenditure from April, 1846, *to the* 31*st of July*, 1847 (*sixteen months*).

1846 and 1847.		
Amount of subscriptions received up to the 31st July, 1817..	£945	1
Donations	16	7
Balance on account of the National Association	67	17
	1029	6
Disbursements..	833	16
Bala ..	£195	9 11

Disbursements.			
Postages	£65	17	1
Advertisements..	110	11	0
Petty cash.. ..	63	15	5
Salaries	265	2	3
Miscellaneous ..	20	5	0
Printing	95	2	3
Rent	194	17	0
Stationery	10	12	2
Communicating with the members of the National Association	7	14	0
	£833	16	2

The Chairman observed, that a great part of the report had been occupied with a review of the proceedings in reference to the late proposed bill; and he would on that occasion merely observe that, whatever dissatisfaction had been in some quarters expressed at the conduct of the Council, in that respect he felt confident that the members would find that they had acted throughout strictly in accordance with the principles of the Institute, and for the welfare of the profession. He was sure that neither could be satisfied until a far more comprehensive measure should be placed before the Legislature than that of Mr. Wakley.

It was moved by J. Bowling, Esq., and seconded by G. I. Squibb, Esq., that the report now read be received, adopted, and entered on the minutes.

The Chairman said that the next business was to fill up the vacancies in the Council, as eleven of the metropolitan members go out, and thirteen of the members in the country. According to the regulations in the proposed by-laws, which had been circulated among the members, many members had nominated gentlemen as candidates for a seat in the Council; the list, however, was not sufficiently comprehensive, and it would be necessary to add to their number. Any gentleman would be at liberty to name another, whose name would, with the rest, be placed before the whole body for election. In case sufficient gentlemen were not named, a list had been prepared for the convenience of the meeting, which it would be in the discretion of the meeting to adopt or reject. Those names were not dictated to the meeting, they were suggested to expedite business, in supplying the deficiency of the nomination by the members.

A Gentleman suggested that the by-laws should first be passed.

The Chairman observed that in that case the elections would be brought under their operation; and thus the nomination of members for the Council could not be then proceeded with, and the list would be incomplete (chap. 2, clause 4). If the meeting were agreeable, they would proceed as at the first general meeting for the formation of the Institute.

The names of gentlemen proposed were then read.

Several gentlemen complained that lists of the members of the Institute had not reached them, and that thus they had not had an opportunity of choosing the most suitable council for the next year.

It was explained by the Chairman that the list had been published, and had been advertised as to be had on application. The printing and transmission of the list to so numerous a body as the members of the Institute would have been a formidable difficulty, if it had been attempted to send to each member a copy.

Mr. Charles Clarke would wish, at this stage of the proceedings, to make a few observations. It struck him that he was one of a large class

who had joined the National Institute at its formation, and who had been proud of the principles which were then announced; but he was sorry to say that those principles, in his opinion, had not been carried out as they ought to have been. The National Institute, instead of having been the vanguard of the medical profession, had been rather the instrument of the Apothecaries' Company, to whose principles and interests it had succumbed. He had no interest in making these derogatory remarks, nor had he any personal feeling in the matter—personally, he knew very few of the Council: he believed them to be honourable men, but he thought they had not remained true to the principle of the Institute in the matter of medical reform. Until the opposition to the recent Registration Bill, he had supported the Council, but so satisfied had he been that in opposing it they were placing the members in a false position, that he had strenuously set his face against them. He would frankly acknowledge himself the author of a letter which had appeared in the *Lancet*, signed "A Member of the Institute," in which he called the Council "the Judas Council of the Institute." He was anxious that the Institute should flourish, and that the general practitioners should have a head and home, as it had been expressed. As for the College of Surgeons, it could not, and never ought to, become their head. Let those who might wish to be *pure* surgeons or *pure* physicians go to the two colleges respectively: for his part, he was anxious to see the general practitioners have one of their own. Had the bill passed, it would at least have set the corporations at loggerheads, and out of that good might have been derived by this body. The resolution that he would propose, with the best wishes for the Institute, was to the effect that no person connected directly or indirectly with the management of the Apothecaries' Society should be eligible for election to a seat in the Council of the Institute. He would wish to see the Institute quite clear of all corporate bodies at present in existence; he would wish to see the battle of the general practitioners fought by the Institute singly and alone; he felt confident that the work would then be done better, for the meeting might depend upon it that the corporate bodies would seek their own interests, and not those of the body.

Mr. G. Bird would second the motion with great pleasure.

Mr. Ancell said it afforded to him and to every one who, like him, had from the first taken a lively interest and an active part in the affairs of the Institute, pleasure to hear the comments of a meeting like that upon those subjects which had occupied the minds of the executive body. So far from looking at it as a matter of congratulation, that Mr. Clarke had not extended his remarks further, he wished that he had done so; he wished that those numerous calumnious statements which had gone forth could only be brought out at such a meeting as that, where they might be met and answered satisfactorily, as he was sure those advanced by Mr. Clarke might be now. He appealed to those who had watched the conduct of the Institute, whether or not in every step the Council had not most scrupulously determined carefully to observe a strict distinction between their own body and the Apothecaries' Society, or any other body? Whether from the commencement of their labours they had not taken every precaution to avoid mixing themselves up with the Apothecaries' Society? It was true that at times they had found it expedient, and he believed the judgment of that meeting would justify their opinion, to have the co-operation of the Apothecaries' Society, without whose assistance they must have come to a stand-still. It was well known that in 1844, when Sir James Graham's bill was under consideration, the Apothecaries' Company had published a document, and had obtained a large amount of support from the general practitioners throughout the country. That document proved to the minds of the profession throughout the country that the Society had been acting on the broadest possible basis for the public good. They said they were prepared to give up their power to another body so soon as it should be shown that the general practitioners should not be the sufferers by such a step. After such conduct, he thought the Council would have been wrong if they had thrown any obstacle in the way of the support of the Apothecaries' Society. The Council had had to appear before the Government of the country, and what had the Government said? "We cannot get rid of charters; you are dissatisfied with the Apothecaries' Society; we will supersede that body with their own consent, but we cannot do it without." As one of the members of that deputation, he would say that, throughout the whole of the proceedings, the Apothecaries' Society had acted in good faith. The moment a measure could be proposed to the Minister, to put the general practitioners in a better position, they were ready to execute a deed to get rid of all the powers they possessed. They had, therefore, acted with good faith, and doubtless they would continue to do the same. He was one who thought the Apothecaries' Society behind the spirit of the age: it was not the society for the present day; he would not then enter into the considerations which had more and more fastened the conviction of this truth upon their minds, but the belief had grown upon them. Under these circumstances, the Apothecaries' Company could and were willing to do much to assist them in bringing their position and views before the Minister of the day; it ought not, therefore, to be said, that the Institute had been subservient to the Apothecaries' Company.

He would say one word with respect to the Medical Registration Bill. Mr. Clarke, in his remarks, seemed to infer that if, by any means, the profession had been plunged in chaos and confusion, the general practitioners would have been the better. Now, he thought that in such a chaos the Minister of the day would be left to the advice of the corporations, he could not see that such a chaotic confusion could be of service to the body; but he apprehended that very grave evils would be likely to spring out of it. The Apothecaries' Bill had served the purpose of the profession up to a certain point, and the privileges enjoyed under it should not be lightly given up until something were propounded more positively beneficial. The resolution of Mr. Clarke appeared to him to tend to exclude, by its operation, a gentleman who was a general practitioner, practising on the principle that medicine and surgery are one science—such a man, for instance, as Mr. Bacot. With respect to their worthy president, he could state that the Council of the College of Surgeons had elected him the Senior Fellow of the College—an honour which might be expected to operate as an inducement to lead him to desert the Institute, should such men be refused. He thought that to do so would be to act most unwisely. He would not further detain the meeting.

Mr. G. Bird said he was very glad that he had seconded Mr. Clarke's resolution, as it had drawn from Mr. Ancell what to him appeared to be a most complete exculpation, and had relieved his mind of the undue influence which he had no doubt had been felt by many others, of the considerations to which Mr. Ancell had alluded. With the permission of the meeting he would retire from his position as the seconder of the resolution.

Mr. James Bird wished every one to understand that from the first it had been stated in the most unequivocal terms, that no new Apothecaries' Society should be formed with the concurrence of that Institution. He knew very well that every possible means had been made use of to delude and mislead the profession into a belief that this was nothing more than an apothecaries' movement. It was no such thing. He was sorry that with many these attempts had been successful, and that in listening to the delusion they had been led into error and misconception. It had been stated that it was not as apothecaries, not as surgeons, but as general practitioners they wished to organize the body, otherwise they would not have sought a new incorporation. The Apothecaries' Society distinctly stated, that to another Society of Apothecaries' they would not surrender their privileges. This had been their language to a deputation from Manchester, that unless a charter were granted to examine not only in medicine, midwifery, and pharmacy, but in surgery also, they would not surrender their powers. That was, he thought, an answer to the insinuation that this was an apothecaries' movement. He would assert that it was for the examination in surgical as well as medical knowledge, making together the qualification of the general practitioner, that they had formed the National Institute.

Mr. Clarke had paid attention to Mr. Ancell's speech, and was of opinion that he had thought more of the Apothecaries' Society than of this. He considered that it would look better in the the public eye if the two bodies acted separately.

Mr. Ancell said, that the temporary junction was dictated by expediency; the joint deputation was at an end: they had no present connection with the society.

The resolution of Mr. Clarke, not being seconded, fell to the ground.

The Chairman would be happy to receive from the meeting the names of any gentlemen as candidates for seats in the Council.

It was then moved by H. P. Fuller, Esq., seconded by J. Colthurst, Esq., of Clifton, and carried, that John Nussey, Esq., J. Sim Smith, Esq., Isaac Hurst, Esq. (of Bedford), and James Clayton, Esq., be elected trustees of the Institute.

It was also moved by J. Nicolson, Esq., seconded by J. Propert, Esq., and carried, that John Dodd, Esq., and Edward Tegart, Esq., be appointed treasurers.

It was resolved, on the motion of F. D. Bennett, Esq., seconded by R. E. Davis, Esq., that Silas Stedman, F. D. Bennett, and F. A. B. Bonney, Esqrs., be auditors.

It was moved by R. Tanner, Esq., seconded by R. Wallace, Esq., and carried, that W. Mayor and N. Grant, Esqrs., be appointed scrutineers.

The Chairman then said, they had come now to the most important business of the evening—the by-laws. The secretary would first read them over, and afterwards the chapters would be put, one after another, from the chair.

On putting the fifth clause of the second chapter—

"No member interested in the sale of any nostrum or specific remedy, or keeping a shop for the retail of drugs, shall be eligible as a member of the Council"—

Mr. Southee, of Cambridge, begged to offer an objection to the clause, as it divided the members of the Institute into two bodies. He should have thought that the experience of what the College of Surgeons had done, in making some of the members eligible to seats in the Council and others not, would have deterred the Council, on the present occasion, from putting forth such a proposition. In his opinion, that conduct had been the proximate cause of the formation of this Institute, and he thought it savoured very much of vanity in the Council to propose this measure. Why should they be exempt from sitting in company with gentlemen who kept shops? He strongly objected to anything that would tend to lead the Council to look down upon any portion of the Institute. He moved that the clause be expunged.

Mr. Clarke said, if no one else would second the proposition of Mr. Southey, he would, but only to keep it before the meeting. He must condemn any opposition to the clause: for although he had before freely condemned the Council, while he thought they were wrong, he must, in this matter, give them great credit for having made this clause a part of the by-laws. As he kept an open surgery himself, it might be thought that he would oppose the insertion of the clause; but he thought that if he, for his own interest or convenience, thought proper to do so, he ought not to wish to sit in the Council.

His remark had reference to the latter part, for as to any member of the Institute selling empirical nostrums, he hoped no one would think of such a thing.

Mr. Bowling, of Hammersmith, said he thought that the members of the Institute ought to set an example to the chemists and druggists, and show them that they would not tread in their shoes, by meddling with matters that did not belong to them. He had a strong feeling upon the subject, and would be sorry to see the clause expunged.

Mr. Southee would agree to the clause, if it were extended so as to apply to a membership of the Institute as well as of the Council; but if it stood in its present shape, two classes would be made, and many would secede. If it were proposed to declare that, from the granting of the charter, every member of this Institute keeping an open shop should give it up, he would support such a proposition. Let not the Council make two classes in the Institute; he would rather exclude the keepers of open surgeries altogether.

The Chairman: That is impossible.

Mr. Fuller, of Piccadilly, said, this Institution was formed on the principle of admitting all who had the legal qualification and were in general practice, nothing was said about shops; and they could not, therefore, turn round upon those who kept such, and say, "You shall not be members." But the by-laws are now to be formed, and the important question now came—What shall be the nature and composition of the Council? They were hoping that, by-and-by, things would get into that state when it would not be necessary for men of liberal education to sell drugs like chemists and druggists; but, unless something could be done to prevent those tradesmen acting as general practitioners, it would be almost impracticable, in many places, for the young man to establish himself unless he kept what was recognised by poor people as a *doctor's shop*. He thought that many of them must have known instances of gentlemen beginning their career by shutting up their house, who, after spending all their capital, were obliged to open a shop. They could, therefore, do nothing directly to promote the extinction of this practice without an act of Parliament, and their efforts must, at present, be directed to those measures which would elevate their class of the profession. The clause proposed in the by-laws was an indication of what it was wished the Institute should become. Practically it would work itself out, for such persons would be little known—("No, no")—they would be principally the young members, and would not be balloted in.

The Chairman said it was very important that the members should be of one mind on the subject of the by-laws, as such agreement might bear very materially on their future operation, and he thought it would not much matter if this clause were left out altogether. The members of the Council would always be chosen or rejected by the body of the Institute, and there would be, he thought, no substantial reason for restricting their choice.

Mr. James Bird said he knew that a feeling was rife amongst many that no person should be eligible for membership of the Institute who kept an open shop, and from the minute subdivision of the profession in many rural districts he could well understand it. He hoped it would be borne in mind that these by-laws were the type of what the Institute was wished to become under a future charter; they had endeavoured to draw up such a code as should require very little alteration for the government of the body when incorporated, and, as had been necessary in 1815, the existing body must first be provided for, and then regard must be had to the future. They could not shut out any who had a legal title to practise, whether they kept a shop or not; but the Council had thought it desirable, as far as it was possible to indicate in some manner the judgment of the Institute upon the practice, and in order to show their ultimate intention, to disconnect themselves from anything that would tend to identify them with a spirit of trade; they thought it was a proper course to mark that distinction by rendering them ineligible for a seat in the Council. It was for the meeting, and not for the Council, to say whether the course should be adopted or not.

Mr. Southee did not think either of the gentlemen who had spoken had shown any reason why the clause should pass; it was not a *post facto* law, and none would suffer if it were rejected. If it were necessary to make the distinction spoken of, then let it apply to future admissions to the Institute; but, at least, let those who now formed the body be allowed to judge who out of their own number were fit to sit in the Council, otherwise a feeling of degradation would be inevitable.

Mr. Burnett, of Alton, considered that the main reason why the Institute had been so much opposed by the Colleges of Physicians and of Surgeons was, that the members of those bodies had no cause of fear in those who kept open shops. When the Pharmaceutical Society were trying to obtain their charter, no serious opposition was raised, and it was granted at once. He thought that, if it were understood that the general practitioners were to keep open shops, they had little hope of being able to raise the standing of their profession in the eyes of the public or of the profession, and the colleges would be glad to find that they had so acted. If the younger members of the profession in London felt the necessity of keeping open shop, what must be said of those in the country? Yet he, for nineteen years, had practised in the provinces, and had never yielded to such supposed necessity. He determined from the first to assert his position as a gentleman, and the son of a gentleman; and, treating it as a question of principle, he resolved to do nothing not reconcileable with his standing. He thought that, if it was desirable to raise the position of the profession, it was necessary to enforce some such law as the present, in the framing of which he thought the Council had fairly exercised their judgment.

The clause was then put to the meeting and maintained, four hands only being held up against it.

On clause 5, chap. 3, being put—"No proprietor nor vender of any empirical nostrum can be admitted as a member of the Institute"—

Mr. Southee proposed to add, "nor any one keeping an open shop for the sale of drugs."

The Chairman stated, that such a question was already settled in the constitution of the Institute.

Mr. Southee contended that such a change might most properly be made to apply to all future admissions.

Mr. Claphan strongly opposed the proposition.

The amendment, not being seconded, fell to the ground.

On chap. 4 being submitted,

Mr. G. Bird moved to insert a clause, "That in the event of any medical bill being brought before Parliament, or in the event of any negotiation between the Council and the Government, a general meeting should be called to ascertain the opinion of the members thereupon." He wished he could believe what had been asserted in an earlier part of the meeting, that the conduct of the Council had given great satisfaction; for his own part, he feared that anything but satisfaction was the feeling of the body of the Institute at their conduct in respect to the Registration Bill. Whether that feeling was well or ill grounded was no part of the question then; but he could not help saying, in reference to that bill, and he said it without offence, that the conduct of the Council had been characterized more by ingenuity and antagonism than by fair dealing; and he thought that evidence of such dissatisfaction would be given when the time came round for paying the subscriptions; he thought that the protest already received was but the first of other indications of that dissatisfaction. He would not press the resolution, but would ask the Council to speak one word that might give the members the assurance that, when such times as he had spoken of might come round, they would be called together to be enlightened and consulted. All he wanted was some guarantee that no important steps should be taken by the Council on behalf of the Institute with the Government without a public meeting.

The Chairman reminded the speaker of the eighth clause, viz.—"A special general meeting shall be convened on a written requisition to the Council, signed by twenty-one members, specifying the business to be brought forward. Such meeting shall take place within one month from the delivery of such requisition."

Mr. Bird was aware of that clause, but he would have the evil specifically provided for; he thought that, if the Council had acted in the spirit of the motion at first, great dissatisfaction would have been avoided.

The Chairman said, they were now engaged in making by-laws which he hoped would conduce to the welfare of the members of the Institute, long after such matters as Mr. Bird had mentioned were forgotten; and although he wished every gentleman to have the fullest opportunity of expressing his opinion, and providing for its adoption by the meeting, he thought that no expedient, however important, for supplying a temporary want should have place among the permanent laws of the body. If any gentleman would propose any special instruction to the Council, they would be happy to receive it. He thought that every person must see that, by the publicity of a public meeting, many negotiations with the Government would be rendered abortive. The Council had not shrunk, nor did they shrink, from deliberation, but they had been most anxious to avoid anything that might damnify the cause that all had at heart. Their course had been most difficult, because, in addition to the ordinary obstacles in their path, they had been assailed by the most violent and gross calumnies. The character of the source from whence those calumnies came had led the Institute to take no notice of them, although some of the members might have been deluded. He thought that when the members saw the difficulties which the Council had had to encounter, and remembering that they had not all the elements of a correct judgment before them, they would feel it only just to pause before passing judgment on the Council.

Mr. Ancell said it had been from the first distinctly stated that, from whatever quarter a good bill might come, it should be entertained; but he thought that the gentleman who had wished the Council to give a pledge to take no step without a public meeting was not aware that the Government had summoned the Council at a notice of only two days. Up to that time the Council had no reason but to be proud of the conduct of the profession towards them; but, if confidence was to be voted in the Council one day to be withdrawn the next, what could be done? He only asked them to continue that confidence in the Council which they had already honoured it with, and he firmly believed that before many months their charter would be obtained. He only asked them to abstain from a hasty judgement, and to wait for the time when all the circumstances which had guided their conduct might be exposed without risk to those high interests which all had at heart. As to the assertion, that they had acted in a spirit of antagonism, so far from that, the most gross abuse that had been showered upon them had not drawn from them anything to justify the expression. He hoped the Council would continue to act as they had done, and he was sure every general practitioner would have cause to be thankful. He would add, that when Sir James Graham brought in his last bill, the Government told the representatives of the general practitioners that, if they came before it as surgeons, the Government could only recognise the College of Surgeons; but now that they were united as practising medicine, surgery, and midwifery, the Government gave them access, and promised that no step should be taken in which they were not concurrent parties.

Mr. G. Bird stated that he had no idea, in

making his motion, of impugning the motives of the Council: quite the reverse; he had only introduced it in order to assure the members that they would be consulted.

Mr. Bird's resolution was then submitted, when two hands were held up for it, and the rest against: thus it was lost.

The remaining by-laws were then passed without opposition. In chap. 10, clause 10, the time for keeping a set of books was extended from seven to fourteen days, and the time allowed to provincial members (clause 8) was extended to twenty-eight days.

The Chairman then stated that the business of the meeting had been transacted, and congratulated the meeting on the little diversity of opinion which had occurred.

A vote of thanks to the Chairman concluded the proceedings.

NOTE FROM MR. HEALEY.

[To the Editor of the Medical Times.]

Sir,—I have been honoured by a very formal attack in one of your contemporaries, in relation to my electoral contest at Stoke-upon-Trent. My only object in noticing the writer is to apprize you that to a person who habitually substitutes fiction for fact, and the language of St. Giles's for gentlemanly comment, there can be no becoming response but silence, and the quality such circumstances naturally connect with it.

I have the honour to be, Sir,
Your obedient servant,
T. Piers Healey.
Connaught-square, Aug. 19, 1847.

THE LATE DR. J. R. LYNCH.

[To the Editor of the Medical Times.]

Sir,—I have this morning received a circular requesting me to attend a public meeting tomorrow, to take into consideration the destitute condition to which the widow and orphans of the late Dr. J. R. Lynch are reduced by his premature death. This meeting I am, from age and its corresponding infirmities, unable to attend; but the letter that I have received may be turned to some useful account if you think the following observations are to the purpose, and will give them insertion in your hebdomadal.

In the year 1788 a society was set on foot for the especial purpose of affording relief to the widows and orphans of medical men in London and its vicinity, who, from the various accidents and contingencies to which the medical profession is liable, are left in poverty or destitution.

The subscription to this society is only £1. 1s. half-yearly, and this for a limited time only.

Had Dr. Lynch become, three or four years ago, a member of this society, his widow would at once receive £30 a year for herself, and £12 a year for each of her three helpless children, making together £66 a year; and, as a committee is appointed to take into consideration the safety and propriety of increasing the amount of each grant, there is a strong probability that next year the amount will be greater.

More than £36,000 has been distributed among persons eligible to receive assistance; and at present thirty-three widows and seventeen orphans are receiving grants half-yearly.

The circular which I have received contains the names of ten or more members of the medical profession, strongly advocating the claims of this unfortunate lady and her children, and among them are many of well-known philanthropy and liberality; and without liberal assistance the Widows and Orphans Society could not support itself; but only *one* of these is a member of the Society for the Relief of Widows and Orphans! When it is considered that to those medical men whose circumstances are unpromising, two guineas a year will secure to their widows and orphans from three to five guineas or more every month, it seems wonderful that they should not avail themselves of this advantage; and it is equally wonderful that those to whom two guineas a year is of comparatively trifling value should not contribute that sum annually for the widows and orphans of their more afflicted brethren.

The funded property of the society amounts to £47,000. The Princess Sophia and the Duchess of Gloucester have been for many years annual benefactors, and a few of the nobility and gentry have shown their good feeling to the medical profession by giving contributions; but generally the widows and orphans of medical men are cared for only by their brethren of the profession.

I remain, Sir, yours,
An Ancient Member.

MIDLAND CIRCUIT.—Warwick, Aug. 6.

MOUSLEY *v.* KIRBY.

(Before Lord Denman and a Special Jury.)

This was an action upon the case for libel.

Mr. Whitehurst, Q.C., Mr. Humfrey, Q.C., and Mr. Mellor, were for the plaintiff; Mr. Waddington, Mr. Heyes, and Mr. Macauley, appeared for the defendant.

The litigant parties are both medical men, residing in Atherstone, the former being the surgeon for the Atherstone district of the Atherstone Union. On the 19th of last December a poor woman, of the name of Williams, was run over, and sustained a very bad fracture of one of her legs. Mr. Mousley and his partner, Mr. Hardford, attended the poor woman, as it was admitted, with skill and humanity; their object was to prevent amputation if possible, and after some time the patient seemed to be recovering and going on well; but owing, as was supposed, to a too premature use of the injured limb, she went back, and the defendant was called in, who though fit to represent the case to the board of guardians as one in which proper medical skill had not been displayed. The board of guardians immediately put the matter in train for inquiry, and the result was a unanimous vote in favour of the treatment Mr. Mousley had adopted in the case in question. We may mention, the patient subsequently died. The present action was brought against Dr. Kirby for the words he had uttered when complaining to the board of guardians. The object Mr. Mousley had in view was stated to be merely to have a public retraction, and not to put damages, or even costs, into his pocket.

Mr. Waddington stated that, if such was the plaintiff's only object, he had no objection on the part of Dr. Kirby to state that the plaintiff's humanity had never been called in question, and he now had no hesitation in admitting his skill; but, at the time the complaint was made, he (Dr. Kirby) was not aware of the nature of the accident.

Lord Denman said, as a general rule, it would be as well for medical men not to call in question the skill of their brethren unless they had informed themselves of all the circumstances necessary to their forming a proper and correct estimate.

A verdict was then taken by consent for the plaintiff. Damages 40s.

GOSSIP OF THE WEEK.

War-office, Aug. 13.—88th Foot: Assistant-Surg. John Shaw Willes, M.D., from 17th Foot, to be Assist.-Surg., vice Dods, promoted in 3rd West India Regiment.—3rd West India Regiment: Assist.-Surg. George Douglas Dods, M.D., from 88th Foot, to be Surg., vice Thomas Rhys.

Naval Appointments.—Acting Deputy Medical Inspector A. Allen, to Plymouth Hospital.—Surgeons: J. Moody, to the Cambrian; E. H. Cree, to the Fury; W. R. Dalton, J. G. Risk, and A. Brown, to the Crocodile; J. Andrews (*a*), to the Marion convict ship.—Assistant-Surgeons: W. G. M'Clure and J. Fayrer, to the Victory; C. G. Campbell, to the Avenger; C. S. Hugo, to the Trincomalee; H. C. S. Wilson, to the Fury; J. L. Johnston, to the Cambrian.

Royal College of Surgeons.—The following gentlemen, having previously undergone the necessary examinations for the "Fellowship", before the Court of Examiners, were admitted by the Council "Fellows" of the college, in pursuance of the charter recently granted to that institution, viz.:—Messrs. Robert Woollaston, Conduit-street West, Hyde-park; William Henry Smith, Fonthill-place, Clapham-road; James Williams, Dalston-terrace, Dalston; Bernard Wight Holt, Abingdon-street, Westminster, assistant-surgeon to Westminster Hospital; Alfred Poland, Cloak-lane, City; William Fisher, Kendal; and Athol Archibald Wood Johnson, Suffolk-place, Pall-mall East.—On the 13th inst., viz.:—A. Godfray, J. Rose, R. Muriel, G. T. Yelloly, and A. Williams.

Apothecaries' Hall.—Gentlemen admitted members August 12: Benj. Fielding Mathew, Joseph Meldon Dempsey, and Thomas Green.

University of Edinburgh.—The annual graduation of Doctors in Medicine took place on Monday, in the graduation-hall of the college, when fifty-eight gentlemen had the honour of receiving that degree.

Munificent Legacy.—The funds of King's College Hospital have just received an addition of £1000, by a legacy under the will of the late Miss Colyer, of Farningham, Kent. Such bequests are of infinite importance to an institution which, like this hospital, has not as yet acquired any permanent sources of income not liable to fluctuation from year to year.

Fever at Marlborough-street Police Court.—On Mr. Bingham taking his seat on Friday morning he was surprised at being informed that a malignant fever was raging in the court, and that the messenger and his family, consisting of six persons, who live on the premises, were lying dangerously ill of fever of a most infectious nature. The infection is supposed to have originated in consequence of the immense number of poor Irish who have latterly been brought to this court, some of them in a very unhealthy state. Mr. Bingham has ordered the necessary precautions to be taken to prevent the further spread of the fever.

Health of Liverpool.—The *Liverpool Albion* appends to the quarterly return of mortality with regard to Liverpool, issued by the Registrar-General, the following gratifying statement:—"Since the above return was made there has been a very considerable alteration in the aspect of affairs in this town, and we are happy to state that the change is for the better. The evils above enumerated have considerably or altogether abated. There is no longer an excessive influx of Irish paupers; the parochial authorities can accommodate the few sick who remain on our hands with ease; and but few cases of fever are reported in the several districts of the town. The committees of the vestry are no longer beset with difficulties, but find themselves in a condition to give up some of their temporary hospitals, and to return the Government their hulk, the Lancaster, which was sent to the Mersey as an hospital ship. The nuisance arising from the privies still continues. Thousands of cesspools send up their pestiferous exhalations into the atmosphere; and it is not too much to say, that, till these contaminating nuisances with which the town is dotted in all directions are done away with, Liverpool will never be either healthy or sweet. At present, Edinburgh itself is not so celebrated for fetid odours."

Houses of refuge, similar to those in London and Paris, are about to be established at Constantinople and on the Bosphorus. It is very urgently proposed to have establishments in the principal provinces of the empire for regular gratuitous advice and distribution of medicine, upon the same plan as the one at Galata-Sérail, where more than 20,000 invalids secure relief annually.

Death in a Lunatic Asylum.—Yesterday an adjourned inquest was held before Mr. Baker and a jury, at the Five Bells, Bow, on the body

of John Mills, who died in Grove-house Asylum. The proceedings were commenced by reading the deposition of Thomas Lynch, a keeper employed in the [illegible] who was examined on Thursday, which was to the effect that the deceased was forty-two years of age; that he came from the parish of [illegible], Poplar; that he had been in Grove-[illegible] Asylum since Oc[illegible] [illegible] he had com[illegible] [illegible] he was seen [illegible] was very much [illegible], and was [illegible] at night with flannel [illegible] his hands free for [illegible] He went to bed on Sunday night, in a violent state, in a crib boarded at the sides and ends. In the night he contrived to get his legs and part of his arms over the crib, and bruised his legs, but not seriously. That he was in a ward with fourteen other lunatics, in the infirmary; that the witness sat up till twelve o'clock, and slept in the ward; that the deceased was quiet during the night; that at four o'clock in the morning he was found sitting up, quite dead; his head was on the side of the crib, and his legs were over the side, his feet upon the floor, his face was downwards. Restraints were not used without the authority of the medical gentleman.—Mr. Baker, the surgeon, was then examined, and stated that he found the deceased plump and in good condition; the body exhibited nothing remarkable externally, except a slight bruise on the breast; on moving the integuments six ribs on the right and five on the left side were found fractured. The lungs were not punctured; they were largely adherent, marking old inflammation. The heart and liver were healthy, the small intestines inflamed, and the mucous membrane destroyed in places. The brain was particularly soft, and in some places destroyed, and from the state of it the patient could not have lived for any length of time. He imagined death to have been caused by the injury to the chest, which would act more readily on a man whose brain was in such a condition. The fracture of the ribs might have been caused by pressure on the side of the crib: they were fractured outside; the discoloration of the chest was indicative of the fracture.—The jury having expressed a strong opinion that, in such an establishment, there ought to be a man sitting up all night with his eye on the patients, proceeded to examine the bandages, and stated that they considered the deceased had been more tightly bound than was represented by the keeper. The room was then cleared, and the following verdict returned, after a deliberation of nearly an hour:—"That the deceased was labouring under a defective condition of the brain, which predisposed him to death without any violence. That he was found dead enclosed in a crib, and that his ribs were fractured apparently by violent pressure of the chest from his own action, being at the time under restraint from flannel bandages round his wrists, but how or by what means the said fractures were caused, which were of very recent date, no satisfactory evidence had been given to the jurors; and the jurors aforesaid recommend for the future that a constant vigilance should be exercised with lunatics in the establishment, in order to prevent a recurrence of a future accident." The coroner expressed his full concurrence with the verdict. This was the second case of death from fractured ribs in Grove-house Asylum. Where there was any want of caution it would be his duty to instruct the jury to return a verdict of manslaughter, and it was the duty of any one placed in the position of Mr. Byas, the keeper of the asylum, to provide every means and care for the sustentation of human life.

Pauper Lunatics.—A return was ordered on the motion of Viscount Seymour, M.P., in the late Parliament, which shows that the total number of lunatics and idiots (paupers), chargeable to parishes and townships in the several unions of England and Wales, on the 1st of January, 1847, amounted to 18,065, viz., 10,429 lunatics, and 7636 idiots: 5142 of these unfortunate persons were maintained in county lunatic asylums and hospitals; 3761 in licensed houses, and 4631 in union workhouses; 4418 were maintained by their friends or elsewhere: 4 of these lunatics and idiots were under five years of age; 51 from five to ten years of age; 916 from ten to twenty; 3504 from twenty to thirty; 4087 from thirty to forty; 3927 from forty to fifty; 2903 from fifty to sixty; 1781 from sixty to seventy, and 776 upwards of seventy; 4773 were dangerous to themselves or to others, and 2830 were of most filthy habits.

The "Professional Life Assurance Company" offers so many points of interest to the readers of the *Medical Times*, that we have received with no surprise many inquiries as to its position and claims with respect to the medical body. We are pleased to take the opportunity of testifying that it has gone creditably through that probation which a proper caution exacts of every public body; that it offers substantial advantages in the guarantee of a good direction; and that it presents, in addition, one feature which commends it to our united support—its invariable practice of remunerating medical men for their reports—a course that must ultimately obtain for the medical man the concession of this act of justice from every assurance-office in the country.

The Medical Faculty in Paris, Montpellier, and Strasburg have, in reply to the Minister of Public Instruction, pronounced in favour of the nomination of professors by *concours*.

In the session of Thursday, August 6, at the conclusion of a very animated discussion, and a majority of twelve out of eighteen members present, the Medical Faculty pronounced against the maintenance of two orders of practitioners. Those who voted against the two orders as follows, viz.:—MM. Andral, Berard, Blandin, Bouillaud, Denonvilliers, Fougier, Gavarret, Marjolin, Orfila, Piorry, Richard, and Rostan. Those who have shown themselves favourable as follows:—MM. Odillon, Dumeril, Gerdy, Moreau, Roux, and Velpeau.

M. Jules Roux, professor to the Naval School of Toulon, has just been appointed surgeon-in-chief to the navy at Cherbourg.

The cholera always exercises great ravages in the Russian army at Georgia. It has carried away the major-general of the army, and the colonel, Prince Orbelieu. The malady has increased in some detachments and decreased in others. They say that the cholera has declared itself in the mountainous countries not under the Russian dominion. Following the official reports of Tiflis, it appears that, since the cholera first appeared in that village, six persons a day have died. From the 14th to the 24th of June, sixty-seven individuals have died. Tiflis has about 60,000 inhabitants.

Fossil Remains.—The *Constitutionnel* contains the following letter, dated Dijon, 11th inst., announcing an interesting discovery:—"In the course of raising gravel from the bed of the Saone, the engineer employed discovered a fossil phenomenon, of which the gigantic proportions correspond with the antediluvian animals remarked by Cuvier. Those fossils consist of the tooth and the tusk of an elephant. The latter, which is only a fragment, is forty-two feet long, and three feet ten inches in diameter. The municipal council of Dijon has claimed those objects for its cabinet of natural history, but it is still probable they may be forwarded to the Museum of Natural History in Paris."

We heard, not long since, of a somnambulist who was able to discover lost children; there is one now at Marseilles who undertakes to discover treasures. A doctor at Marseilles, well known for his great faith in mesmerism, received an important commission. A somnambulist mesmerized by him revealed to him that a considerable treasure was concealed in the vaults under an ancient building now used as a soap manufactory, joining the church of La Major. Two other renowned somnambulists, pointing out the precise spot, confirmed the existence of a rich treasure. They began to work. Those workmen who were in the secret were to receive daily wages, besides a remuneration proportionate to the success. One of our best locksmiths furnished necessary implements for the search. Months passed away, and the doctor discovered, not the treasure, but another somnambulist, to whom he related the marvellous communication: he was conducted to the vaults at night, and he equally confirmed the existence of the treasure, establishing in many points the statements of the others, but declared the treasure was in the vaults under the church adjoining, instead of under the soap factory. The doctor then found he could only succeed by confiding in the priest. We are assured that the confidence was well received, and, under high direction, great search was made for several weeks, with great secrecy, in the vaults of La Major; but whether from the indiscretion of the workmen, or some other person, the secret became public. This publicity enlightened the mystification of the first workmen, and produced great irritation, especially in the locksmith, who had not yet received a penny (and he had advanced a large sum), who was the first to demand an explanation before a justice, and the payment of his bill. This fantastical trial will come on very shortly.

Oil from Stone.—A communication was made, some short time ago, to the French Institute about what was called *huile aux pierres*. The oil is perfectly clear and transparent, does not soil, and yields a flame of great intensity and clearness. A company, formed for the manufacturing of this mineral oil, possesses in the vicinity of Autun inexhaustible strata of rock, from which not only oil, but other valuable substances, as a sort of grease (*graisses*), tar, ammoniacal water, paraffine—substances of which some are valuable as manures—are extracted.—*The Builder*.

Obituary.—At Kishnagur, near Calcutta, 13th May, William Scott, Esq., M.D.—On the 14th July, at Frankfort-on-the-Maine, deeply regretted by his family and friends, Sir John Hamet, M.D., R.N.

MORTALITY TABLE.

For the Week ending Saturday, August 14, 1847.

Causes of Death.	Total.	Average of 5 Summers.
All Causes	1108	940
Specified Causes	1106	935
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	392	6
Sporadic Diseases.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	130	103
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	155	157
Diseases of the Lungs, and of the other Organs of Respiration	205	226
Diseases of the Heart and Blood-vessels	26	25
Diseases of the Stomach, Liver, and other organs of Digestion	99	94
Diseases of the Kidneys, &c.	6	8
Childbirth, Diseases of the Uterus, &c.	11	10
Rheumatism, Diseases of the Bones, Joints, &c.	8	7
Diseases of the Skin, Cellular Tissue, &c.	5	2
Old Age	37	50
Violence, Privation, Cold, and Intemperance	32	28

No. 418. SUMMARY. Aug. 28.

SUGGESTIONS

FOR A MORE SIMPLE ARRANGEMENT OF THE

MATERIA MEDICA,

BASED ON ITS PHARMACEUTICAL AND THERAPEUTICAL RELATIONS.

By GEORGE LEITH ROUPELL, M.D.

Cantab., F.R.S., Fellow of the Royal College of Physicians, Physician to St. Bartholomew's Hospital, Lecturer on Materia Medica at the College of St. Bartholomew' Hospital.

(Continued from page 504.)

LECTURE VII.

My second order of medicinal substances belonging to the organic kingdom is composed of "drugs the active properties of which depend chiefly upon a neutral bitter principle." The drugs of which I have hitherto treated owed their activity to alkaloids possessing marked chemical properties, capable of distinct separation, and employed either in their pure form or in that of salts artificially prepared. They claimed our attention from their importance, and, as it were, their superior composition. The drugs which we have now to consider deserve the next place, from their general utility and their numbers. There is another reason, besides, why I am anxious to enter at once upon this class, namely, the difficulty which I have experienced in arranging it. All the others were comparatively easy; but this, from various causes, was perplexing. The imperfection of analysis, the question as to which of several principles was the efficient one, the doubt as to the nature of the bitter principle itself, were all points for reflection, and called for thought and method. It will be remembered that the alkaloids possess the property of bitterness, and that to the most intense degree. We may consider it in them as subsidiary, possibly as a safeguard against incautious administration. We are now, however, to consider the bitter principle itself. This is neutral, chemically speaking; contains oxygen, hydrogen, and carbon; appears sometimes in the crystalline and at others in the amorphous form, and has that peculiarity of taste which has become proverbial from the natural repugnance which almost every one experiences with regard to it. Still, medically speaking, bitters are an important class of medicaments. Cullen, indeed, tells us that they only are real tonics; but, without admitting the truth of this assertion in its fullest extent, we shall not hesitate to allow great efficiency to numerous remedies possessed of this property. Nay, we see vomiting readily produced, and narcotic effects occasioned, by bitters given in considerable doses to man; and all are aware of their poisonous effects upon the lower tribes of animal beings. That bitters should be looked upon as medicinal, and that they should be resorted to as remedies, we might think likely, by reasoning *à priori*, when we recollect that certain secretions essential to digestion are copiously poured out, possessing this characteristic in a marked degree. Regarding bitterness, then, as an index of injurious qualities, or of such substances as it was intended should be avoided in health, yet, as a principle, essential, as indispensable to our systems, and requiring to be appropriately supplied in certain states of health, I proceed to enumerate their chief effects upon the frame. Bitters give tone to the stomach, increase the appetite, and promote digestion; they are, besides, essentially anthelmintical, many having long enjoyed a reputation as specifics; and, in truth, in the class we have now to enter upon we shall find some of the most useful expedients for the expulsion when generated, and the prevention afterwards, of the internal parasitical worms. Most of the bitters have been used as remedies in intermittent fevers, and, doubtless, in many instances with good effect. They have been supposed to be emmenagogue also, though they are so probably only secondarily, from the general improvement which they are qualified to effect in the whole state of health.

The arrangement which appears to me to be the best of this class will be that founded on the appearance of the principle when pure, viz., crystalline, amorphous, or in the form of extract:—

I. Bitter Principle—Crystalline.

17.	Quassine,	obtained from	picræna excelsa simaruba amara.
18.	Gentianine	"	gentiana lutea.
19.	Calumbine	"	cocculus palmatus.
20.	Cusparine	"	galipea cusparia.
21.	Salseparine	"	smilax officinalis.
22.	Elaterine	"	momordica elaterium
23.	Rhein?	"	rheum palmatum, compactum, emodi.
24.	Scillitine	"	squilla maritima.

II. Bitter Principle—Amorphous.

25.	Absinthine,	obtained from	artemisia absinthium.
26.	Cetrarine	"	cetraria islandica.
27.	Lupuline	"	humulus lupulus.
28.	Lactucine	"	lactuca satira.
29.	Pareirine	"	pareira brava.
30.	Cathartine	"	cassia lanceolata, obovata, elongata.

III. Bitter Principle—In the Form of Extract.

31.	Aloesin,	obtained from	aloes socotrina, barbadensis, hepatica.
32.	Colocynthine	"	cucumis colocynthis.
33.	Rhamnine	"	rhamnus catharticus.
34.	Taraxacine	"	leontodon taraxacum.
35.	Diosmine	"	diosma crenata.
36.	Ergotine	"	secale cornutum.
37.	Serpentarine	"	aristolochia serpentaria.
38.	Cascarilline	"	croton eleutheria.

17. Quassine, the active principle of the quassia and simaruba, was discovered by Wiggers; is described as freely soluble in alcohol, less so in ether, soluble in 200 parts of water, and as appearing in the form of small white prisms. Its formula is $C^{10} H^{6} O^{3}$.

Quassia yields a pure bitter, being neither astringent nor aromatic. Its effects are tonic and anthelmintic; for ascarides it may be employed as an enema. It is a good vehicle for chalybeates. The only officinal preparation is the infusion.

18. Gentianine is neutral, intensely bitter, appearing in yellow crystals, slightly soluble in water, freely so in alcohol and ether; but it is a question whether or no this be a pure substance, or a compound of an acid with the bitter principle.

Gentian is tonic and anthelmintic. It is useful in dyspepsia, especially of the atonic form. Its preparations are the compound infusion, the compound tincture, the extract, and the compound mixture.

19. Calumbine, the undoubted active principle of the calumba, is intensely bitter, insoluble in water, soluble in alcohol, ether, and in diluted acids. It crystallizes in the form of rhombic prisms.

Calumba is a pure bitter, being perfectly free from astringency. It is a very valuable tonic, imparting tone and allaying irritability; thus it is often of service in the sickness during pregnancy, in the debility after parturition, and in the chronic form of dysentery and diarrhœa.

Calumbine, the citric principle of calumba, is spoken of as a decided narcotic.

The preparations of calumba are the infusion and the tincture.

20. Cusparine, the bitter and the supposed most important principle of the cusparia or Angustura bark, exists in it in the proportion of one and a half per cent., is crystalline, somewhat acrid, is moderately soluble in water, freely so in alcohol.

Cusparia is a valuable tonic, and is one of

those of great use in the advanced periods of such fevers as implicate the mucous membranes, in dysentery, and chronic diarrhœa, such as we see in this as well as in warmer climates.

The only officinal prepartion is the infusion.

21. I have placed salseparine in this order and division on the authority of M. Thubœuf. He describes this as the active principle of sarsaparilla; when pure, white, crystalline, radiated, little soluble in cold, but perfectly so in boiling, water; and he maintains that this is identical with the smilacine of M. Folchi, and the pariglina of M. Palotta.

M. Cullerier states that he has found decided antisyphilitic properties in this principle, salseparine. Palotta says it produces nausea, vomiting, sweating, depression of the pulse; and Dr. Hancock claims for sarsaparilla, when good and properly prepared, similar properties. I entertain no doubt of the utility of sarsaparilla in cases of shattered health, especially when occasioned by the injurious effects of mineral or animal poisons upon the system. The improvement in the appearance of flabby ulcers, and in the aspect of patients when thus treated, cannot be mistaken, though a doubt may fairly be raised whether such amendment be due to any one isolated principle.

The most esteemed variety is the red Jamaica, and its preparations are a simple and compound decoction, a syrup, and an extract.

22. Elaterine.—There can be no question of elaterium possessing active properties, nor that those properties are due to a distinct principle. This is colourless, appearing in the form of satiny prisms with a rhombic base; without odour, but of an intensely bitter and somewhat acrid taste.

Elaterium, in the form of extract prepared as directed by the Pharmacopœia, is, through the means of its active principle, a powerful irritant, producing violent effects both as a cathartic and an emetic. The evacuations which result are watery; hence this proves a valuable remedy when judiciously ordered and appropriately given in certain forms of dropsy. It will act as a purgative when administered either in the form of an enema or as a suppository.

23. Rhein?—Great doubts are entertained respecting the active principle of rhubarb. By Brandes it is referred to an acid, which he terms rhabarberin. By Hornemann it is thought to be a substance altogether different, and which he calls rheumine. Peretti maintains that the active principle is a resin, which purges strongly in doses of ten or twelve grains without griping. Again, the rhaberbarine of Nani, of Caventou, of Pfaff, and of Brandes, appear all to differ from each other. For the present, then, we must consider the point as undecided, and simply regard the obvious qualities of this substance as a bitter and stomachic, an aperient, and an astringent - a combination of qualities implying, as is the case, an assemblage of antagonistic principles. Rhubarb is tonic, stomachic, and, exhibited in small doses, in combination with a mild mercurial, an excellent alterative in cases of dyspepsia. It is an admirable medicine in disturbed states of digestion, when the tongue continues furred after the exhibition of active remedies.

It is aperient, and is thought especially to excite the action of the liver, and to stimulate the small intestines. To keep up its purgative effect, however, the combination of aloes is usually necessary, when it forms a very serviceable corrective of habitual constipation. The combination of astringency with aperient qualities would point out the use of rhubarb in cases where mild action upon the bowels was desirable in the first place, and a sedative afterwards. This is so generally known that this constitutes a popular remedy for sudden attacks in the bowels, which in very many cases it effectually cures.

The preparations of rhubarb are the powder, the infusion, the extract, and the compound tincture.

24. Scillitine is a crystalline, bitter substance, found in the squill by Landerer, and considered by him to be its chief component. Squill is highly irritant when externally applied, or taken internally. In small doses, when used (two or three grains), it will produce not unfrequently vomiting and purging, and in smaller ones diuresis and increased secretion from the mucous membrane of the lungs.

It is a valuable emetic when the bronchial tubes are loaded, and it is one of the best of diuretics in dropsy, and of expectorants in bronchitis. It is rarely used as a means of evacuating fluids, when effused into internal cavities; yet, after active means have been employed, it is often valuable, and especially so when, in children, it is probable water has been secreted into the ventricles of the brain.

The preparations of squill are the dried root, the acetate, the oxymel, and the tincture.

The amorphous bitter principles will next engage our attention.

A COURSE

OF

LECTURES ON SURGERY,

BY

SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London; Consulting Surgeon to London University Hospital, &c.

Lecture XIV.

Gentlemen,—I was treating, at the close of my last lecture, of hospital gangrene, which is sometimes called phagedæna, or hospital sore: one of the worst forms of mortification, and one which is perhaps the most formidable and fatal. It is chiefly met with in army hospitals, though sometimes it occurs in civil hospitals, particularly where the wards are very much crowded with wounded patients, or patients having ulcers. In the Hôtel Dieu at Paris there has been often very great mortality from this cause. There is a dark crimson line along the integuments while it is spreading; deep purple redness is visible. I stated that it spares no textures, not even the bones; it attacks the cellular tissue, and leaves the blood-vessels exposed. If a ligature be put on these vessels to prevent hemorrhage, it cuts through; and if a tourniquet be applied, it may stop the hemorrhage, but it will increase the gangrene. We now come to speak of the causes of hospital gangrene. It is peculiar, I have observed to you, in being contagious, but you cannot explain its cause always on the principle of infection; there must be some other cause for the beginning of the complaint; and you now look for this in the state of the atmosphere and constitution. Where wounded persons are crowded very much together, and many under the same roof are affected with ulcers, it generally originates. I told you the question is rife, whether the phagedænic ulceration may not be the same disease as hospital gangrene; it is believed that there is a poisonous principle generated in the atmosphere which produces hospital gangrene, leading the wounds or ulcers to take this form of gangrene; therefore, we can explain the rapid extension of the disease in some hospitals, without supposing that the infection has been conveyed from one patient to another by using the same sponges or dressings: it is from the noxious character of the atmosphere in which the patients lie. Before I speak of the manner of treating this disorder, I must say that the constitutional symptoms are not always so severe as you might be led to expect. There is in some cases a white tongue, rapid pulse, and some other febrile symptoms; and in some there is a great deal of vomiting, and a typhoid state comes on early. When there is much constitutional disturbance there is very slight chance of recovery. With respect to the prognosis of this disease, we must recollect that its treatment is better understood now than it was formerly. In many diseases greater benefit arises from internal treatment than from external, as in the case of persons who lie much in bed, and especially in bad compound fractures, injuries of the spine, and fevers; in these cases internal treatment is more efficacious than external; in hospital gangrene it is quite the reverse: here you will make use chiefly of external applications. Bark is found to be totally unavailing in hospital gangrene; emetics have been tried, but the reports that have been made of their effects have been very ambiguous. Purgatives in the early stages of disease are more useful—mild purgatives, the citric acid, when the bowels are able to bear it, is also very useful. Opium, too, must not be forgotten, as from the swelling there is often a great deal of pain. Venesection, also, has been tried, and various opinions are entertained of the good effects, as, from the malignity of this disease, gangrene will often attack the puncture itself. In the treatment of hospital gangrene, you must, whenever it is possible, remove the exciting cause; sometimes this is most likely to be accomplished by removing the patient into another ward. It has been observed that hospital gangrene is most likely to occur in crowded buildings, and in those buildings which stand on a low marshy soil, especially in hot weather. This should not be forgotten in the treatment you employ, as from the want of attention in these matters the best medicinal treatment may be rendered unavailing. Then, the external treatment, which I said was most efficious, consists in the employment of strong escharotics. The French surgeons formerly applied the actual cautery, but have since tried a solution of chloride of lime, and speak very highly of it—more so than English surgeons think it deserves. Lisfranc thought that by the use of this remedy the complaint might be considered as conquered. "Now," said he, "hospital gangrene will be a mere trifle, now we have it in our power." The same success, however, has not attended its use in our country, and hospital gangrene is still a formidable disease. We find, however, that very strong escharotics do tend very much to stop the progress of this mortification. The liquor arsenicalis, diluted with an equal quantity of water, is a very valuable remedy. Blackader tried it, and with considerable success. He used to wash the parts with sesquicarbonate of potash, and, after removing as much of the pulpy substance as he could, he dipped lint in the solution and put it on the part, changing the lint every half-hour. You might, perhaps, suppose that by applyidg arsenic to the wound there would be a danger of poisoning the part, but it is found that gangrene produces in the flesh an insusceptibility of injury from poison applied in this manner. An application which is now preferred universally, is that of strong nitric acid. If the sloughs are thick they must be incised before the acid is used: here we see a deviation from the general rule, of leaving sloughs to the operation of nature; but the surgeon is obliged to divide the slough, as the nitric acid would not act from the surface. When the sloughs are removed the skin must be covered with a thick coating of some substance to prevent injury from contact with the nitric acid, which is then applied till the slough becomes of an ash colour, dry, and insensible. At this time opium must be administered, as the patient will often suffer much pain. After the sloughs are removed, granulation begins over the part, which is sometimes attacked again, when you must repeat the treatment with nitric acid. Under the frequent return of these attacks patients will, however, often sink.

We have also mortifications arising from deleterious substances introduced into the system, as by bad food. This kind of the disorder is endemic, occurring chiefly in certain parts of the Continent where rye is an article of general consumption. It is a very remarkable form of gangrene, but, as it is very rarely met with, I shall have very little to say concerning it. It begins with no previous inflammation; the patient suffers a great deal from drowsiness and numbness; there is much febrile disturbance; the limbs swell (it usually attacks the lower extremities); but no other remarkable symptoms occur. Often

the part attacked [illegible] cold. We find that in this [illegible] begins in the centre of the limb, and [illegible] commonly happens that, after [illegible] to the knee, the leg will drop off without hæmorrhage.

In another variety of [illegible] the patient, when about to be attacked, becomes [illegible] and passes into the typhoid state. The treatment is obvious: the originating cause must be removed; where it arises from bad food, the food must be improved and generous diet added—wine, ammonia, &c.

I make these remarks rather as matters of curiosity than for practical use, as the disease seldom occurs in this country, although I remember about three years ago meeting with a case in one of the medical journals of the day of this disease attacking a child.

I must now direct your attention to some points to be observed in mortification. With respect, first, to amputation, all practical men agree that, in cases of bad mechanical injuries, this is best done early, before mortification begins, or even inflammation comes on. The usefulness of this practice must be obvious: for, if you defer amputation till mortification comes on, you take the patient just when his system is least able to bear the operation; whereas, by prompt action you may anticipate these effects, and give the patient the best chance of recovery.

Another rule is to attend to the line of demarcation. Where mortification arises from internal causes, you would never be justified in amputating until this line is clearly marked, because by the absence of this line the system is shown to be still in that unfavourable state which induced disease in the limb, and, should you operate under these circumstances, you would have the stump attacked; it is therefore a rule in surgery, that where mortification arises from internal causes, you must never amputate till this line is formed. When the line exists you can see that the parts are dead on one side, and that the other exhibits a bright red colour, as if from the presence of arterial blood. You will then endeavour to strengthen the patient with nutritious diet; he will go through the operation better, and the results will be more likely to be favourable. At the same time you should distinctly understand that this rule of inciting for the appearance of the line of demarcation is intended to apply only to mortification from *internal* causes; if we were to act on it in cases of mortification from external injuries, as gunshot wounds, for instance, the patient would either die before mortification had ceased, or sink into a low state, in which amputation would not be practicable—a state which very rapidly follows these injuries. Now and then the gangrene will go down to the bone, and no operation will be required at all. I remember a case under Mr. Liston: an old woman was brought in, with what was thought to be gangrena senilis; the arm was attacked up to the shoulder, and nothing but the saw was used; the stump healed readily, and she went out very soon. As a general rule, it is better that the separation of the slough should be the work of nature; but, like all other general rules, this is not without exceptions; they may be summed up under two heads: the first, when one part of the slough is perfectly loose, and the other is attached, in which case the cutting away of the loose portion will diminish the effluvia and hasten the healing process; the second, when the whole portion of a limb is mortified; although in this last, as in the case above related, nature would have in time accomplished the work. Much judgment is required in determining upon the course to be pursued with respect to some cases, and promptness is often the means of saving life.

This form of mortification will often bring on coma and delirium; the intellectual functions are more readily disturbed; and this is again an exception to the rule of waiting for the line of demarcation.

In cases where the constitution is bad, slight [illegible] and contusions of the hand will be very likely to be followed by mortification of the whole limb. It has been said that you are not to break through the rule, even when you have a bad constitution to deal with; but, whatever course you may take, the chances are very bad, and, if you leave the patient to the chances of the mortification stopping, you leave him in a very hopeless condition. Of course an operation would not go on so well as in health, but you must take that course which at the time seems best; the same may be said of mortification from injuries of the femoral artery, or where it follows popliteal aneurism, or from pressure of the bandage.

These are some of the leading rules of amputation in gangrene.

We next come to consider some other kinds of inflammation, which may be considered as specific or peculiar; and, first, of boils. The chief difficulty of boils arises from their always containing a quantity of dead cellular tissue called the *core*, and situated in the centre of the inflamed part. It is a prominent, hard, very red, and painful circumscribed swelling of various dimensions, though, perhaps, never exceeding a pigeon's egg in size; it projects above the surrounding skin, which it raises, and below it there is dead cellular tissue, which is accompanied by an ichorous matter which is often tinged with blood; it is a very painful kind of inflammation, though not extensive; and, when you remember that it projects above the skin, you cannot be surprised at the patient's complaints of the sore. Its figure is that of a cone, having its base considerably below the surface. If it is left to nature it will turn white in the centre, and about the sixth day will burst, and, if the core is extruded, will heal; but if it is retained recovery will be impeded. One particular in which it differs from carbuncle is, that very often there are two or three, or perhaps more, existing simultaneously on the body. We meet with it very much in drunkards, and in persons whose stomachs are very much abused; also after acute fevers, after scarlet fevers, and severe attacks of erysipelas. The treatment of boils is various: a few believe that they are best dispersed—some blacken them—some apply tepid water. A surer plan is to poultice the part, and make an early opening, so that the cellular tissue may have an opportunity to escape; the part will then generally granulate, and heal without much trouble. In some cases they occur for a very long time, and in these we find that the stomach is in a very bad condition. I attended a young lady, about eighteen years of age, who had four or five of these boils in different parts of the body, which were of long continuance, and gave her great uneasiness.

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.

By Professor MATTEUCCI, of Pisa.

Part XIII.

NERVOUS FORCE.

The animal organism is provided with a set of organs through which the animal receives impressions from without, and is enabled to direct the motions of the voluntary muscles. These organs constitute the cerebro-spinal nervous system, which is composed principally of an infinite number of ramifications disseminated through the whole body of the animal, and, finally, united in a central mass, constituted by the brain and spinal marrow. If one of these ramifications be cut or tied in the living animal, and the portion remaining in connection with the cerebro-spinal mass be then touched with a red-hot iron, or with a piece of caustic potass, or wounded with a needle, or pulled with pincers, the animal will give evident signs of pain; upon irritating the portion below the section or ligature in the same manner, no signs of pain will be manifested, but the muscles in which the excited nerve spreads its ramifications will be observed to contract. If these excitations be practised upon the *intact* nerve, the contractions and signs of pain will be exhibited simultaneously. Finally, if the nerve be tied at two points at some distance from one another, and the portion intervening between the two ligatures be then excited, neither contractions nor signs of pain will be elicited. The nerves belonging to the cerebro-spinal system have accordingly no other office than to transmit or propagate the action of the stimuli applied to them. This action is twofold, viz., transmission of a sensation to the brain, and excitation of contractions in the muscles.

Bell, Magendie, Müller, Panizza, and other physiologists have discovered that there are in the organism certain nerves which, when excited, induce solely muscular contractions, and others which, submitted to the same irritation, induce solely pain. This is the case with the anterior and posterior roots of the spinal nerves, and with some other nervous branches. Flourens, Longet, and other physiologists have distinguished in the nervous centres likewise portions presiding solely over the sensations, and others presiding solely over the muscular movements.

A bundle of nerves consists of a great number of filaments, every one of which possesses, individually and separately, the faculty to transmit the dictates of the will, or the excitation of any stimulus, independent of the other filaments.

Besides the cerebro spinal system, there exists another system of nerves in the organism, viz., the ganglionary system. This latter is composed of ramifications distributed principally to the apparatus to which the organic vital functions are intrusted; these ramifications reunite gradually, intermix with each other, and present in their interstices a globular substance, which seems likewise to exist in the central masses. The ganglionary system, although having numerous connections with the cerebro-spinal system, induces neither movements nor sensations when excited. The excitation of nerves belonging to this system is propagated slowly, and persists some time after the withdrawal of the stimulus. A muscle, severed for a certain time from its communication with the centres (ganglia) of this system, loses the faculty of contracting under the influence of the excitation of its cerebro-spinal nerves.

These few general remarks on the nervous system will suffice to show the importance of the results arrived at in our investigations of the physiological action of the electric current (*vide* Part XII.).

The following are the principal differences discovered to exist between the effects of electric irritation upon the nerves, and those produced upon these organs by other exciting agents, such as heat, mechanical and chemical action, &c.:—

1. Electricity is the only stimulus capable to excite at one time sensation, at another contraction, according to the different direction in which it passes through the nerve.

2. The electric current, when sent transversely into a nerve, fails to produce any of the phenomena usually resulting from excitation of the latter.

3. After protracted action upon a nerve, the electric current ceases to produce any effect upon the latter.

4. The electric current alone possesses the faculty to modify the excitability of a nerve, even to the point of speedily annihilating it when circulating in a certain direction, and of preventing or augmenting it, on the contrary, when circulating in the reverse direction.

5. Finally, the electric current alone has the power to revive the excitability of a nerve when this excitability is extinct, or nearly so, with respect to all other stimulating agents.

The nature of the action of the electric current upon the nerves leads us to infer that there exists a certain analogy between this current and the nervous force. But are we to conclude from this that the nervous force and the electric current are identical? Certainly not; and yet we find this identity between the two forces but too often

admitted as one of the most clearly demonstrated experimental truths.

Let us ask, in the first place, "Do we discover, with our present means of experimentation, the existence of the electric current in the nerves of a living animal? Can this current exist in these organs?—and, this existence proved or admitted, is it placed in conditions adapted to invest it with the characteristics of the nervous force?"

The *muscular* electric current, of which we have treated in a preceding part, owes its origin to certain chemical actions occurring in the muscles. We saw that the nerves have no direct influence upon the production of this current; and we found, in our experiments upon this subject, that their office seems limited to that of a body of low conducting power, communicating with certain parts of the muscles.

It would occupy too much time to report the numerous experiments that have been made with a view to establish or to disprove the existence of the electric current in the nerves. May it suffice to state, that the most conscientious and best established conclusion seems to be this:—*In the actual state of science, and with the means of experimentation at present at our command, we are unable to discover the slightest sign or trace of the existence of an electric current in the nerves of living animals.*

It has been asserted that, when steel needles are implanted in the muscles of a living animal, perpendicularly to the direction of the muscular fibrils, the needles become magnetic, more particularly at the moment that the muscles contract. This has led some physiologists to the conclusion that there actually exists an electric current in the nerves, and that the circle is established as in an electro-dynamic spiral or cylinder The author has repeated the experiments, upon the supposed results of which this conclusion is based: he introduced steel or iron needles into the muscles of living animals, perpendicularly to the direction of the muscular fibrils, and in every other possible direction; he used for these experiments needles of a highly perfect astatic system, and even those of Lebaillif's sideroscope. The results proved invariably negative—no magnetization of the needles was observed.

The author placed the thigh and leg of a recently prepared frog into the axis of a spiral, made of varnished copper wire; the extremities of the spiral were in communication with those of another, smaller spiral, which had a soft iron wire placed in its axis. The author excited the nerve of the frog to see whether a current of induction would pass through the spiral and magnetize the iron wire: the results proved invariably negative. A great many other experiments, made by the author and also by Longet, gave the same results. These physiologists did not in one single instance obtain evident and constant signs of an electric current circulating in the nerves.

Besides, if we consult our present knowledge of the properties of electricity and of the laws of its propagation, we find it altogether impossible to conceive the existence of an electric current circulating in the nerves. To enable us to conceive the passage of an electric current from one extremity of the nervous system to the other, the nerve should admit of comparison to a metallic wire covered with varnish, or some other insulating substance; which is by no means the case. A current starting from the brain under the influence of the will, and passing through the nerves to arrive finally at the muscles, could not be interrupted by the ligature of the nerve; but the propagation of the nervous force *is* interrupted by this means. The circulation of the electric current in the nerves would require, moreover, that the nervous system should form a closed circle; and the labours of the anatomists have not yet by any means demonstrated the existence of a similar disposition of the nerves, more particularly in their last ramifications in the muscular masses, where this disposition would be more especially necessary.

The author has frequently attempted an experiment which, had it given a positive result, would have proved indirectly that the nervous system forms a complete chain for the electric current. He laid bare one of the nerves of a living animal in two points at a distance from its passage—in the upper part of the thigh, and lower extremity of the leg. He introduced the leg into the axis of a spiral, made of varnished copper wire, and communicating by its extremities with another, smaller spiral, with a soft iron wire placed in its axis. He then discharged an electric current across the nerve so prepared; but he never observed constant signs of a current of induction in the spiral, as would certainly have been the case if the current had circulated in the species of spiral supposed to be formed by the nervous ramifications distributed in the muscles.

We are accordingly led to the conclusion that the electric current does not naturally exist in the nerves of a living animal. The laws of its propagation require certain conditions, for which we look in vain in the nervous system; the propagation of the nervous force is interrupted by causes which fail to produce the same effect upon the electric current.

The identity of the nervous force with the force of electricity being thus disproved, we are led to inquire: what is the relation existing between the nervous force and electricity or the electric current?

There exists between electricity and the nervous force an analogy which, though less evident, is yet of the same kind with that existing between the former and light and heat. In the course of our observations on the phenomena presented by electric fishes, we saw that the electric faculty possessed by these animals is subject to the nervous system.

A crystal of tourmalin evolves electricity when heated: this fact leads us to assume the existence of a more or less intimate relation between electricity and heat. The phenomena observed in electric fishes prove the existence of a similar relation between electricity and the nervous force. In the case of the tourmalin, electricity is derived from caloric, in consequence of the form of the constituent molecules of the tourmalin. In the electric fishes, the nervous force is transformed into electricity under the influence of the particular structure of the organs of these animals. Let us now examine how electricity can excite nervous phenomena. We know that heat and chemical or mechanical actions possess the same faculty to excite the nerves, and to induce sensation and muscular motions, as electricity. Are we to conclude from this that mechanical, chemical, and calorific actions are transformed into electric currents? We know of no fact or circumstance tending to support a similar hypothesis; if, however, we were, notwithstanding this, to suppose a transformation of the kind to take place, this might be done with some appearance of probability with respect to the chemical actions, but surely not with respect to mechanical actions and to the actions of heat. The mere section of a body never produces an electric current; and it is impossible to establish any comparison between a muscle and a body capable of thermo electricity. Mechanic and calorific actions can only be looked upon as divers causes of a molecular movement.

It may, however, be asked, does the cause of the nervous phenomena reside in these molecular movements of the substance of the nerves, or is it attributable to a disturbance in the equilibrium of the *ether* diffused through the nerves? And is this disturbance the consequence of a particular movement of the ether supposed to constitute what we call the *nervous fluid?*

We can give no satisfactory reply to these important questions: the facts requisite to solve them are, as yet, wanting.

The author thinks, however, that it is impossible to explain and interpret the nervous phenomena by the sole movement of the ponderable molecules of the nerves.

We will now proceed to the examination of a phenomenon, discovered some years ago by the author, and to which the English philosophers have given the name *contraction* by *induction*.

If the nerve of a galvanoscopic frog be placed upon one or both thighs of a frog disposed in the ordinary way, and the poles of a pile be then applied upon the lumbar plexus of the latter, the contractions of the thigh muscles of the frog will be attended with simultaneous contractions of the muscles of the galvanoscopic leg. The author observed the same phenomenon in another experiment, where he had placed the nerve of the galvanoscopic frog upon the thigh muscle of a rabbit, which he caused to contract by subjecting the nerve spreading its ramifications in that muscle to the action of an electric current. He observed the same phenomenon when substituting for the electric current any other stimulus applied to the spinal marrow or lumbar plexus. He repeated the same experiments, but with this difference, that he placed very fine layers of various substances between the nerve of the galvanoscopic frog and the muscular surface where the induced contraction is developed; the interposition of a gold leaf or of a very thin layer of mica or of glazed paper prevents the manifestation of the phenomenon; but the interposition of a sheet of fine paper imbibed with water does not interfere with the induced contractions of the galvanoscopic leg.

From these facts we may draw the following conclusions:—

1. The induced contractions of the galvanoscopic frog are not attributable to the electric current.

2. We are led to assume, on the contrary, that an electric discharge occurs during the contraction of a muscle; in other words, that the contraction of a muscle is attended with development of electricity.

The author has made a great many and most varied experiments with a view to test the correctness of these conclusions. It would lead us too far to give these experiments in detail; may it suffice here to state that the general result tended to disprove the second conclusion, viz., that the development of electricity occurs during muscular contraction.

In the course of his statements on this subject, the author mentions that the results of his latest experiments have convinced him that the muscular current is more energetic than the current proper.

The author then proceeds to give a detailed exposition of the numerous studies which he has recently made on the phenomenon of induced contraction. From the results of his experiments on this subject, he draws the conclusion that induced contractions are excited only by muscles in a state of contraction.

He endeavoured, moreover, to excite induced contractions by means of induced contractions; in other words, to call forth induced contractions of the second order, third order, &c. &c. For this purpose he placed the nerve of a galvanoscopic frog's leg upon the thighs of a frog disposed in the usual manner; upon the muscles of the galvanoscopic leg he placed the nerve of another galvanoscopic leg, and so forth. He then placed the whole apparatus upon turpentine. Upon exciting, subsequently, contractions in the frog by applying the electric current to the lumbar plexus, he saw invariably two, and frequently even three, of the galvanoscopic frogs contract simultaneously, and nearly with the same force; but the fourth never exhibited the slightest signs of contraction. We may accordingly assume the existence of induced contractions of the first, second, and third order.

It has already been stated that the interposition of a gold leaf (such as is used for gilding), between the nerve of the galvanoscopic frog and the muscular surface, where the *inducing* contraction is developed, prevents the manifestation of the *induced* contraction—that is, if the muscular surface is *completely* covered with the gold leaf—which is no longer the case after one or two contractions, by which the metallic leaf is rent. It has likewise been stated that the interposition of a sheet of glazed paper has the same effect,

whilst that of bibulous paper imbibed with water or a serous fluid, which moistens the surface of the muscle, does not prevent induced contractions in the galvanoscopic frog. Our knowledge regarding the influence of this interposition of foreign substances was confined till lately to the observation of these three facts. The author has, however, recently tried the interposition of a number of liquids, such as pure water, slightly acidulated water, weak saline solutions, serum, olive-oil, diluted alcohol, various varnishes, and essence of turpentine. He found that the interposition of these liquids does not interfere with the manifestation of induced contractions.

Considering the low conducting power of some of these fluids (oil, essence of turpentine, varnish), we have reason to infer from this result that induced contractions are not destroyed by the interposition of insulating substances.

The author convinced himself that neither the current proper, nor the muscular current, is transmitted across even a very thin layer of these liquids. When a galvanoscopic frog is seized with the hand, and placed in contact with a moistened paper in communication with the ground, contractions are produced. The same phenomenon is observed when the muscles of a frog or other animal, placed in communication with the ground, are touched with the nerve of the galvanoscopic frog. In these cases it is invariably the current proper that circulates through the experimentalist, the ground, the body touched, and the frog; but if the nerve of the latter be previously immersed in oil, essence of turpentine, or varnish, the slight layer of these liquids which continues to adhere to it will suffice to interrupt the circulation of the current proper.

There is, accordingly, no doubt that, as the induced contraction is propagated across an interposed layer of liquids of low conducting power, this contraction cannot be attributed to an electric current which, originating in the muscle in contraction, might be supposed to spread through the nerve of the galvanoscopic frog.

To obtain a positive conviction regarding the propagation of the induced contraction across interposed substances of low conducting power, the author tried the interposition of a still worse conductor than any of the above-enumerated fluids, viz., nearly solid Venetian turpentine, rendered more or less liquid by the adjunction of a small quantity of essence of turpentine. He varnished the thighs of a frog with this mixture, and endued with it also the nerve of a galvanoscopic frog. He found that *the induced contractions persist to manifest themselves, notwithstanding the interposition of this non-conductor.*

That the mixture used may really be looked upon as a non-conductor, the author has demonstrated experimentally:—He applied one of the poles of a pile to the insulating layer (taking care, of course, not to penetrate to the muscular surface), and touched with the other pole the leg of the galvanoscopic frog: no contractions were observed. These experiments prove, evidently, that induced contraction is propagated through an insulating layer, capable to interrupt not only the current proper and muscular current, but also the current of the pile which excites the inducing contraction.

If the insulating mixture exceeds certain limits of solidity, or, in other words, does not possess the requisite degree of fluidity, its interposition prevents the manifestation of induced contractions. It is impossible, however, to fix the proper limits of solidity.

The interposition of solid substances, of whatever nature or thickness, between the nerve of the galvanoscopic frog and the muscular surface, prevents invariably the manifestation of induced contractions.

One of the most curious facts is, that induced contractions are propagated through the skin investing the inducing muscles of the frog. This fact is observed invariably, no matter whether the inducing contraction be excited by means of the electric current, or by any other stimulus applied to the lumbar plexus of the inducing frog.

(The conclusion of this part we must defer till next week.)

DUMAS ON ORGANIC CHEMISTRY.
No. XXVIII.

(Continued from page 491.)

ON THE NATURE OF THE EGG—(*continued*).

We concluded our last lecture with a description of the general composition of the egg. Prout has made some experiments with the view of determining the relative weight of the different parts which constitute it; he has proved that this weight is liable to change; still, according to a mean calculation made upon ten eggs, he thinks we may admit the following conclusions:—If the entire egg weigh 100 parts, the weight of the shell and of its membrane will range about 10, that of the white at 60, and, lastly, that of the yolk at about 30.

If eggs be kept in the open air they lose daily, according to Prout, from three to four *centigrammes* in weight, and, after the lapse of about two years, all the parts which they contained will be found dried up into a solid mass which occupies the small end of the egg. If, while in this state, they be plunged into water, they will absorb a large quantity of it, and, up to a certain point, they will reacquire the properties of fresh eggs; at least they will no longer disengage an odour of sulphuretted hydrogen.

When a fresh egg is boiled in water it loses from two to three per cent. in weight, by yielding to this liquid some of the salts contained in the shell, or even in its interior parts. On evaporating the liquor, it throws down a deposit of carbonate, with a little phosphate, of lime, and retains in solution the soda, as well as the sulphates, chlorides, and phosphates of that base, with some traces of animal matter.

The changes which occur in the egg during incubation have been most attentively studied, as well in relation to the successive evolution of the organs of the embryo, as in regard to the chemical phenomena which accompany them. It has been long known that the weight of the egg, during this process, daily diminishes. According to the experiments of Prout, the egg would thus lose, during the three weeks that incubation lasts, about a sixth of its weight, that is to say, eight times as much as it would lose, during the same space of time, under ordinary circumstances. This diminution is due in part to the water which evaporates through the pores of the shell, and partly, also, to a true respiration, of which the effect is to transform into water and carbonic acid a portion of the organic elements of the egg. This respiration of the egg, long since known and clearly pointed out by ancient observers, has been well established by the experiments of MM. Baudrimont and Martin Saint-Ange. These observers caused some eggs to be hatched in a hermetically closed space, of which they raised the temperature by artificial means. A particular arrangement of apparatus, similar to that employed for ascertaining the proportion of gases in the blood, further allowed of their constantly renewing the atmosphere which surrounded the eggs. The internal air, being slowly aspired, yielded to the condensing apparatus all the water and the carbonic acid with which it was charged by its contact with the eggs, and it thus became replaced by pure air, deprived of watery vapour and carbonic acid. But, comparing the loss experienced by the eggs with the augmentation in weight of the condensing apparatus, MM. Baudrimont and Martin Saint-Ange have remarked that these two quantities were far from corresponding, and that the weight of the condensed products sensibly exceeded that which expressed the loss experienced by the eggs. This excess they attributed, with reason, to the oxygen absorbed during the course of incubation. Annexed are the calculations which they made on this point, from an experiment of three days' duration:—

Water condensed	5·1950
Carbonic acid formed	0·7840
	5·9790
Loss in weight experienced by the eggs.	4·9450
Excess of products collected over the loss	1·0340

We may then regard the phenomenon of respiration in the egg as a well-established fact. It is indeed a necessary function, inasmuch as *hæmatosis* or sanguification is accomplished in the young bird in a direct manner, whilst in the fœtus of the mammiferæ it takes place through the medium of the maternal blood.

The changes which supervene in the composition of the constituent parts of the egg, during the course of incubation, and which are probably in some measure dependent on that absorption of oxygen of which we have been speaking, are manifest and very important: but, unfortunately, it is a matter of difficulty to trace these alterations, and more especially to explain them. All that we know upon this point may be summed up in the data, drawn from the analyses of Prout, although these themselves may now be regarded as of somewhat ancient date.

At the end of the first week, the egg has lost five per cent. in weight; the white has become more liquid, and coagulates, like sour milk, in clots, which contain a yellowish oil, soluble in alcohol. Prout considers this white as a modification of ordinary albumen. As to the yolk, it has become specifically lighter than the white; consequently, it will be found against the upper part of the shell, imbibing, so to speak, from this source the oxygen necessary to the development of the germ. There is further established, between the white and the yolk, an exchange of principles. The salts of the white pass into the yolk, whilst the latter, still preserving the phosphorus necessary to the development of the osseous system of the young bird, loses a part of its oil. The composition of the gas, which fills the internal chamber of the egg, has moreover changed; it now holds but about 15 per cent. of oxygen in the place of 21.

An egg, after a week's incubation, contains, in 1000 parts:—

Albumen, unaltered	236·8
Albumen, modified	179·8
Amniotic liquid, membranes, and vessels	97·0
Embryo	22·0
Yolk	301·3
Shell and loss	171·1

The yolk yields, by incineration, 0·6 of chlorine, and 6·8 of an alkaline residue.

At the end of the second week, the loss in weight of the egg is raised to 13 per cent.; the embryo has already acquired a considerable size, and appears to be developed at the expense of the white, which has diminished in an equal proportion; the albumen is more concentrated, and becomes harder by boiling; the yolk, on the contrary, has regained its original density and volume, but it has already lost a great part of its phosphorus, which has been consumed in the formation of the bones of the young bird. The egg now contains:—

Albumen, unaltered	175·5
Amniotic liquid, membranes, &c. ..	273·5
Embryo	70·0
Yolk	250·7
Shell and loss	230·3

On the seventeenth day, the incinerated yolk and amniotic liquid yielded—

	Yolk.	Amniotic liquid.
Sulphuric acid	0·10	0·34
Phosphoric acid	2·50	1·70
Chlorine	0·50	0·68
Potass and soda (partly in the state of carbonates) ..	0·56	2·40
Lime and magnesia	0·75	1·10

The incubation is terminated at the end of the third week; the egg has now lost 16 per cent. of its weight; the white has almost entirely disap-

peared, and the yolk, being greatly diminished, is enclosed in the abdomen of the young bird. The egg then presents the following composition:

Albumen and membranes	29·5
Embryo	555·1
Yolk	167·7
Shell and loss	247·7

The following table gives the result of the incineration of two fully-hatched eggs, the weight of each being set down at 1000:—

Parts of the Egg.	FIRST EGG.			...a, the ...bo-	Lime and magnesia, partly in the state of carbonates.	SECOND EGG.			...otass and soda, partly in the state of carbo-...	Lime and magnesia, partly in the state of carbonates.
Remainder of white and membrane	0·04	0·12	0·09	0·23	0·12	0·03	0·13	0·09	0·25	0·12
The animal	0·44	3·02	0·55	2·26	2·58	0·21	2·71	0·68	2·12	2·60
The yolk	0·04	1·06	0·03	0·06	1·20	0·02	1·23	0·06	0·03	1·10
Total	0·52	4·20	0·67	2·55	3·96	0·26	4·07	0·83	2·40	3·82
Total of the same substances in the fresh egg.. ..	0·50	4·01	1·33	3·42	0·98	0·37	4·48	1·31	3·23	0·99

We may readily see, from an inspection of the foregoing table, that the chlorides and the free alkali have diminished during incubation, whilst, on the other hand, the alkaline salts have augmented in a large proportion. It is, moreover, evident that the shell itself furnishes the earthy materials which enter into the egg, for it becomes thinner and more fragile after incubation.

SEMINAL LIQUOR.

The spermatic fluid of animals is a whitish or rather yellowish-looking liquid, which is composed of a species of serum, of spermatic animalcula, and of granules or globules. The animalcula, which form its chief characteristic, are furnished by the testicle. The spermatic animalcula, which were discovered by Hartzeuker, and described for the first time by Leeuwenhoek, vary in their form and size, among the different animals of a given class or genus, and even in one species as distinguished from another.

If the spermatic fluid of man be examined by the microscope, we find it to be constituted of a transparent liquid in which these animalcula, which in their form are not unlike the tadpole of the frog, are seen to move about with very great rapidity. These little beings have a vitality altogether independent of the animal to which they belong; at least, they preserve their spontaneous movements long after the seminal liquor has been excreted. They may, however, be killed by several methods: the electric spark destroys them; but they resist the action of the pile. Strychnine, prussic acid, the alkalis, and the acids speedily kill them. When introduced into the different fluids of the economy, as the blood, the milk, the liquors of the uterus, &c., they continue to live. They also exist for a considerable length of time in the urine of the animal which has secreted them, but they speedily perish in that of any other. They may live in water.

In their isolated state, they offer the physical characters of fibrine, and obviously present the same chemical properties.

Besides the animalcula, the semen contain some slight granular globules, and particles of epithelium; these globules have been regarded as imperfect, or non-developed, animalcula. The experiments hitherto performed would tend to prove, that it is in the animalcula alone that the fecundating power of the sperm resides. At least, in the experiments on artificial fecundation of the spawn of the frog, this remarkable result has been deduced: that it is the insoluble portion of the semen which fecundates. In fact, the spermatic liquor, when diluted with water, is partially dissolved: and on straining this liquid through double filters, we may convince ourselves that the liquor which passes through cannot impregnate, whilst that part which remains on the paper possesses a fecundating influence.

The spermatic liquor is a viscous, alkaline, and semi-transparent fluid, sometimes presenting a yellowish colour; it possesses a peculiar odour, very similar to that of the pollen of certain plants. It partially loses its viscosity and odour, if collected after several ejaculations; its colour in this case is always white. The odour of the spermatic liquor disappears by desiccation; but it is manifested anew on rendering it moist. According to M. Orfila, it may be recognised by this character, even after an interval of six months; thus, linen which has been stained with seminal fluid, on being moistened with a little water and distilled in a water-bath, disengages a liquor which possesses a spermatic odour.

If, after emission, it be allowed to rest, it loses its viscosity, becomes limpid, and is capable of admixture with water; but, if projected into this liquid at the moment of emission, it sinks to the bottom, and is divided by agitation into filaments.

It would appear, from the foregoing, that, at the moment of emission, the organic matter of the seminal fluid is in a distended state, but not dissolved, and that it becomes liquid and soluble only after a certain lapse of time. The solution which is thus formed is not coagulated by heat. The animalcula appear to be independent of this modification of the spermatic fluid—a modification which is most probably necessary, in the first place, for favouring its sojourn or transportation into the female organs, and, subsequently, for facilitating its absorption by the ovules which it is destined to fecundate.

If the seminal liquor be evaporated, it becomes covered with an organic pellicle, in which we find small grains composed, according to Vauquelin, of phosphate of lime. It leaves, on desiccation, a yellowish, transparent residue, amounting to as much as ten per cent in proportion to the weight of the liquor employed. This residue, according to Vauquelin, is composed of:—

Animal matter	6
Phosphate of lime	3
Soda	1
	—
	10

All the acids dissolve the seminal liquor, and the alkalis precipitate these solutions; caustic potass in like manner dissolves it, but the acids do not precipitate it. Chlorine forms with it a coagulum insoluble in water and in the acids.

According to John, the seminal liquor should contain a peculiar mucous matter, some traces of modified albumen, a small quantity of matter soluble in ether, soda, phosphate of lime, some chlorides, sulphur, and an odorous volatile body.

If, at the moment of emission, the spermatic fluid be allowed to fall into alcohol at a specific gravity of 0·833, and provided it be left for a few instants in contact with this liquid, it becomes opaline, and forms a kind of ball or pellet, appearing as if it had escaped in this state from the vasa deferentia. It by this means loses the property of again becoming liquid. If it be dried, it remains, as before, fibrous, opaque, and of a snowy-white colour. Water gradually softens it, but dissolves only a very minute quantity even by prolonged ebullition. The portion dissolved by water, on being evaporated to dryness, is partly taken up again by this liquid when cold, and partly by the aid of heat; the infusion of gall-nuts precipitates these solutions. The insoluble portion is not dissolved by weak alkaline lees.

Concentrated sulphuric acid dissolves the coagulum formed in alcohol; water precipitates its solution. This precipitate is not dissolved again by hot water.

Cold nitric acid colours it yellow without dissolving it. When hot, it effects its solution; this liquor, also, is precipitated by water.

Acetic acid renders it gelatinous and transparent, and the acidulated mass is dissolved by boiling in water. The solution is not perfectly limpid; it is precipitated by the yellow cyanuret of potassium and iron, but not by carbonate of ammonia or by the sublimate of mercury; the infusion of gall-nuts produces a precipitate, which is thrown down very slowly.

Lastly, this coagulum, formed by alcohol, is dissolved by the aid of heat in a tolerably concentrated liquor of potass; acetic acid does not precipitate this solution.

If the spermatic fluid be projected into water, it sinks to the bottom of the liquid and there coagulates into a fibrous mass; by agitation, this mass is divided into filaments, which, when withdrawn from the water, may be dissolved by acetic acid; this solution is precipitated by the yellow cyanuret. If these filaments be left for some time in the water, they undergo a partial modification—that is to say, they become in part dissolved, leaving, however, a residue of very divided flakes which are slowly deposited. This residue is almost insoluble in acetic acid.

If the aqueous solution be evaporated in a water-bath, it disengages a seminal odour, becomes eventually opaline, and leaves an almost invisible varnish on the glass; this varnish, when moistened with water, becomes opaque, swells up, and detaches itself from the vessel; water dissolves but a very small portion of it. The evaporated solution yields to pure alcohol a small quantity of extractive matter which strongly reddens litmus-paper. Alcohol at 0·833 dissolves another portion of it. Both these solutions give up a substance possessing the properties of animal matter.

The soluble part of the semen, when dried and acted on by alcohol, yields to boiling water a certain quantity of an extractive matter, which colours the solution, and which remains, after evaporation, under the form of a yellowish, transparent, perforated mass, soluble in water. This solution forms, with the neutral acetate of lead, protochloride of tin, nitrate of silver, and infusion of gall-nuts, copious mucous precipitates.

The portion, insoluble in water, is not dissolved by acetic acid, and only partially so by cold dilute liquor of potass.

The potass solution, when neutralized by acetic acid, throws down a precipitate with infusion of gall-nuts; if evaporated, and then acted on by water, it leaves the organic matter behind under the form of a mucilaginous mass.

NAVAL APPOINTMENTS.—Assistant-Surgeons: Edward Adams, to the Victory; R. J. Squire and W. J. Hamilton, to the Caledonia.

APOTHECARIES' HALL.—Gentlemen admitted members August 19: Thomas Hunter, Martin Folkes Bush, Samuel Griffith, and John Simmonds Nedham.

THE BRITISH MUSEUM.—On Tuesday the trustees obtained possession of all the houses required in Great Russell-street for the erection of the east wing of the Museum, including the extensive buildings belonging to the Clerical, Medical, and General Life Assurance Company, clearing the ground entirely to Montague-street, Russell-square.

ORIGINAL CONTRIBUTIONS.

CASE OF DEATH FROM ARSENIC, MEDICINALLY ADMINISTERED IN SMALL, BUT LONG-CONTINUED, DOSES; IN OTHER WORDS, CASE OF SLOW POISONING BY ARSENIC.

By GEORGE S. HOOPER, M.D., Jersey.

2. CASE OF CONGENITAL IMPERFORATION OF THE VAGINA.

My attendance was one day required for a young girl who was labouring under intense pain across the hypogastric region and in the loins, accompanied with irresistible and almost constant desire to relieve the urinary bladder. On my arrival I found her enjoying an interval of comparative ease, sitting listlessly on a sofa, with the heavy florid countenance of a plethoric and hysterical girl. She was seventeen, robust, and bore all the external signs of puberty; but, as the catamenia had not as yet made their first appearance, the present indisposition seemed naturally referrible to an approaching change. The severity of the symptoms, however, indicating greater disturbance than commonly attends that important revolution in the female system, some saline medicine was ordered, with a view to reduce the plethora. On the following day I received a very urgent summons to attend immediately, as something most extraordinary had taken place in the condition of my patient.

It would be difficult to describe the air of consternation with which the mother received me; she was actually breathless with agitation, at the same time that a sort of mysterious look showed that she was prepared to hear some dreadful piece of information from me. As to the daughter, she lay on her back apparently exhausted with pain, and quite as heedless of exposure as if she had been in the last stage of a tedious and difficult labour. At intervals she groaned and strained as if in the act of parturition. On examination I found in the vulva a livid, fluctuating tumour, the size of a goose's egg. The nymphæ were so effaced, the orifice of the urethra so perfectly closed, and the clitoris so completely out of view, that the pudenda seemed to possess no part of their natural conformation, save the mons veneris and labia. It was impossible not to feel a little startled by phenomena so novel, particularly as the history of the patient's previous symptoms had been only imperfectly made known to me, she being of a shy and taciturn disposition. Having soon ascertained that the case was one of retention of menses from imperforation of the vagina, I opened the tumour by a transverse incision, through which slowly escaped a thick inodorous liquid, resembling port-wine lees in colour and consistency. This immediate discharge amounted to above a quart, and it is hardly necessary to add that the relief which the sufferer experienced was very great, and the astonishment of the bystanders no less so. That this menstrual fluid had for a considerable time been submitted to the action of the absorbents was evident from the degree of density which it had acquired. Its large quantity likewise showed that it was the accumulation of several effusions, probably periodical, and attended with the usual general phenomena of menstruation: for the latter function established itself with perfect regularity from the moment the mechanical obstacle to its external manifestation was removed. On the day following the operation I examined the vagina with the index finger. It was collapsed, flacid, with numerous large loose folds, representing an empty sac rather than a canal; its rugæ felt harder, and its structure altogether tougher, than natural. The neck and orifice of the uterus had undergone no perceptible change, feeling precisely the same as they do before any impregnation has taken place; consequently, the vagina had been the sole recipient of the accumulated fluid, and the degree of distention it had suffered was proportioned to its large quantity. A stout tent of lint was passed through the new opening, on the withdrawing of which, for three days there escaped the same sort of liquid. Later, this carried along with it masses of thick mucus, till, becoming gradually thinner and less coloured, it ceased to flow at the expiration of the eighth day from the operation. There only remained to render the artificial opening permanent, and this was effected by means of a skein of thread drawn from old linen, large enough to be tightly fixed in the wound. At each dressing, which was soon intrusted to the patient's mother, two or three threads more were added, until the wound being healed the orifice had acquired the ordinary size. The menses have since returned periodically, and without any particular inconvenience.

REMARKS.

The foregoing case has been deemed worthy of being laid before the medical public, not because similar ones are few in the annals of our science, but on account of their being relatively uncommon, and not coming under the observation of most practitioners. It cannot, I believe, be altogether useless to refresh the memories of medical men respecting diseases which are of rare occurrence in practice. Not thinking of the real cause of retention of the menses in a case of this nature, and principally struck by the stout, healthy appearance of the patient, a medical man might, by an unguarded expression, place an innocent girl in the most painful of situations. Retention of menses from this cause has sometimes been mistaken for pregnancy, from the distention of the womb which followed a considerable accumulation of the fluid in its cavity; and the tumour, which I have described as presenting at the vulva when the expulsive efforts commenced, has been taken for the membranes of the ovum. Smellie himself once fell into the latter error, as he candidly acknowledged. Such mistakes, though soon rectified, may not, however, always be harmless or unimportant. On the contrary, examples are related by authors, of girls having, under similar circumstances, been ignominiously treated as if pregnant and attempting to conceal their shame, when they were only indignantly repelling a false accusation. Is it enough that the event should afterwards wipe off the aspersion? No!—for it too often happens, unfortunately, that when the fair fame of woman has been exposed to the pestilential breath of slander, the explanation which proves her innocence is received by ignorance and malice only as a specious story invented for the purpose of re-establishing her in the good opinion of the world. It is, then, of great importance that such mistakes should not be committed, and that the profession at large should be put on their guard against them whenever an opportunity presents itself. In this manner the experience of each practitioner spreads through the whole body of the profession, medical men become more generally enlightened, and the benefits accruing to mankind from our noble art may be indefinitely extended. Now-a-days a medical man, however remote his sphere of action may be from the great fountain-heads of knowledge, need never be below its latest level; nor can his youthful competitors, as formerly, pretend to superiority over him on the score of more modern education, and the great advances of science since his time.

The quantity of menstrual fluid retained in similar cases, related by different authors, is stated to have been far more considerable, being partly contained in the uterus, which rose above the pubis, and formed a tumour as in pregnancy. How that organ, in the virgin state, could suffer that degree of expansion from that cause is somewhat difficult to understand, when we reflect that here the dilatation would be purely passive, and not the result of modified vital action, as in the gravid state. Would not one expect rather that the vagina would continue to yield to the pressure of the fluid, and, in the progress of its expansion, would throw the uterus aside to occupy its place above the brim of the pelvis? At all events, in the present case, the quantity of accumulated liquid was already considerable, and yet the uterus had undergone no change. In fact, if we view menstruation as a secretion, we will hardly be able to conceive how that secretion should continue to repeat itself naturally if the organ of it was undergoing any such mechanical change. As to the sort of discharge which came off after the operation, it clearly was not pure blood, "*sicut à victima*," as Hippocrates, and many after him, have held the menstrual fluid to be. Blood effused in a cavity, or in the cellular membrane, and there retained for a certain time, exposed to the action of the absorbents, becomes changed into dark coagula, and loses more or less of its its fluidity, unless altered by the admixture of some other liquid. Here, on the contrary, the liquid was only thickened, and its colour, though darker from that cause, was by no means approaching to black, as we find real blood under the same circumstances. These considerations, I believe, tend to support the views of those physiologists who look upon menstruation not as a mere exudation of blood, but rather as a secretion approaching to blood in its sensible qualities, but never identical with it in the healthy state of the function.

FOREIGN PRACTICE.

Reported for the MEDICAL TIMES by ALFRED MARKWICK, Esq., Surgeon to the Western German Dispensary, and formerly Externe to the Venereal Hospital, Paris, &c.

A NEW TREATMENT OF ABSCESS BY CONGESTION.—PRACTICAL REMARKS BY M. ROBERT.

A case of this nature occurred some time ago in the practice of M. Robert. The patient was a female, and the abscess was situated on the lower part of the back. It had been opened about eighteen months previously, by a practitioner in town, but a fresh formation of matter had taken place. In lecturing on this case, M. Robert mooted a very important question, viz.—how these abscesses—considered separately and without any reference to the cause by which they are produced and entertained, and which, in the majority of cases, is an organic alteration of the osseous tissue—ought to be treated.

It is well known, said he, that if left to them selves they eventually burst. The external air penetrates through the opening thus formed into the cavity of the abscess, and alters the nature of the pus, thereby giving rise to very severe symptoms, which endanger the life of the patient; thus diarrhœa, hectic fever, and frequently phenomena of a truly typhoid character, and of purulent absorption, make their appearance, and carry off the patient. So true is this that surgeons have at all times endeavoured to prevent these sad results, by giving issue to the suppuration in various ways.

Some have adopted the plan of opening these abscesses by means of a narrow-bladed bistoury, and allowing a portion of the matter to escape; then closing the opening, and subsequently, when fresh matter has formed, resorting to the same proceeding again. Boyer and Dupuytren pursued this kind of treatment. This plan was ineffectual, for sooner or later the cyst became inflamed, the pus vitiated in its character, and it was necessary to open the tumour largely; and yet, notwithstanding this, the patients generally died. In fact, so universally was this the case, that Dupuytren, towards the latter part of his life, allowed these abscesses to take their course. Lisfranc attributed the accidents above-mentioned to inflammation of the cyst; therefore, in order to prevent them, he opened it at once largely, emptied it of its purulent contents, and then covered it with leeches. This method was followed by some success, and I have myself employed it with advantage; but I have also seen very fatal results to arise from it; and, as the patients in whom this kind of abscess is met with are generally of a lymphatic habit, and bear the loss of blood badly, I have abandoned it.

Recamier proposed to empty them by a [illegible]l opening, and to protect them from the [illegible]tact of air by keeping them constantly filled with an emollient liquid, which was introduced into their cavity through a gum-elastic canula. I have only once had recourse to this method;

still the pus became putrid, and the patient sank from the abundance of the discharge, and from purulent absorption. Lastly, M. Guerin recommends the pus to be evacuated by means of subcutaneous punctures, which are repeated as soon as the cavity of the abscess has become filled with matter. There can be no doubt that this mode of operating prevents the fetidity of the pus and its consequences better than all the others, yet I have known unfavourable results to follow after one or more punctures, in cases where the opening made by the trocar had not healed by the first intention; besides, like the other proceedings we have mentioned, it is, properly speaking, but a palliative treatment.

If we study the progress of nature in these instances, we find that in fortunate cases (independent of those very rare ones in which, from the flow of pus becoming arrested, the abscess remains stationary for an indefinite period, becomes partially absorbed, and at length becomes reduced to a compact mass like adipocere); the abscess bursts by a small opening which becomes alternately closed and opened, and eventually converted into a fistula, which continues until the diseased state of the bone, by which the suppuration is occasioned, is cured. This opening gives passage to the pus, and the particles of bone it carries with it. The fistulæ are, as may be imagined, of very long and often of indefinite duration.

It must be acknoweldged, that when art has not been able to stop the progress of these abscesses, nor prevent their bursting, this mode of termination is the only one the surgeon can desire.

The treatment, therefore, may be said to consist in establishing a fistula, and preventing the dangers consequent on the opening of the cyst.

In reflecting on this question it appeared to me that we ought—

1. To penetrate into the cavity of the abscess by a narrow opening made in an oblique direction, and through which the atmospheric air—the cause of the inflammation of the cyst—cannot possibly enter.

2. To prevent the closing of the wound by keeping in it a foreign body that is but little susceptible of exciting irritation, and merely occasion the development of plastic inflammation.

Metallic bodies, we know, do not give rise to suppuration in the tissues through which they pass; indeed, we find pins, needles, bullets, and other similar bodies remain there for an indefinite period, by becoming surrounded at first with an albuminous pellicle, and afterwards with a fibrous one by which they are encysted.

On these grounds, therefore, I have adopted the following proceeding:—

I introduce a very fine curved trocar into the abscess on one side, and when it has reached its cavity (which we can readily detect) I draw the trocar back into its canula, and then push this towards the opposite side of the abscess; when there I press upon the trocar, so that it penetrates the parietes of the cyst from within outwards, carrying with it the canula, which is thus made to pass twice through the walls of the abscess.

This canula enables me to introduce a leaden wire, which alone remains in the cavity of the abscess, its escape being prevented by twisting its ends together.

It will be seen that by this method—

1. That the external air cannot come in contact with the interior of the cyst, owing to the opening being occupied and closed by the metallic wire.

2. That the pus can only escape slowly and, as it were, by a sort of filtration between the foreign body and the wound.

3. That the foreign body itself, being but little irritating, tends to excite in the soft parts a very circumscribed and not suppurating inflammation.

The patient upon whom I have practised this plan had a rather large dorsal abscess, due in all probability to some alteration of the posterior surface of the third rib near its vertebral articulation. This abscess was opened on the 17th of June, 1847, according to the method above described. The patient complained of some pain occasioned by the presence of the metallic wire, but up to to-day, the 28th—that is, eleven days after the operation—no febrile symptoms have become developed. A small quantity of pus makes its escape every day round the wires, and is at present perfectly inodorous. The walls of the abscess are soft and indolent; there is merely a small red areola round the wires. If, as we hope, no fresh symptoms make their appearance, we shall allow the metallic wire *in sitû* until the punctures appear sufficiently indurated to become converted into fistulæ.—*Gaz. des Hôpitaux.*

19, Langham-place.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of Aug. 16; M. Brongniart in the Chair.

Composition of the Blood in Scurvy.—M. Marshal de Calvi, in an essay upon this subject, acknowledged the truth of Professor Andral's observation, that the quantity of fibrin might not be diminished in the blood of scorbutic patients, but accounted for the fact by the inflammatory condition generated in the circulating fluid by the efforts necessary for the resorption of extravasated blood. The singular coincidence of the diminution of albumen and of globulin, with the absence of dropsical effusion or of murmurs in the heart and arteries, M. Marshal explained by the difference which must xist between diminution of the power of creating albumen in the blood, and genuine decrease or destruction of this component principle.

Treatment of Cancer.—M. Rivaillé read a paper on the use of caustics for the treatment of cancer. In a general manner Dr. Rivaillé stated that caustics were preferable to the removal of these tumours with the knife. Concentrated nitric acid had yielded him in his practice most advantageous results. Poured over a pledget of lint, it constituted with the latter a semi-solid cake, which moulded itself to the shape of subjacent parts, and effectually prevented hemorrhage. It was particularly in fungous tumours disposed to this accident that M. Rivaillé had found nitric acid useful as a local application. M. Rivaillé also in many instances employed alum for the purpose of arresting the progress of hospital gangrene.

Spontaneous Dislocation of the Knee.—M. Palasciano forwarded a communication, in which he endeavoured to establish—first, that the muscle known as "tensor vaginæ femoris" did not deserve that name, but, being inserted by long tendinous fibres to the external condyle of the tibia, its use was to rotate the leg outwards, and to abduct the knee when it is bent. Starting from these anatomical data, M. Palasciano observed that the spontaneous dislocation of the knee was a complicated affection constituted by the flexion, rotation, and abduction of the knee; displacement of the tibia backwards, of the patella outwards, and often with more or less complete ankylosis. In order to cure this disease, which had hitherto been erroneously considered as irremediable, M. Palasciano proposed the section of the flexor tendons, of that of the rotator externus (tensor v. f.), of the rectus femoris, and vastus externus, also the division of the external lateral ligaments of the joint: preliminary operations which would permit the rupture of the ankylosis and the surgical reduction of the limb to its natural direction.

ACADEMY OF MEDICINE.

Meeting of Aug. 17; M. Begin in the Chair.

Dislocation of the Bones of the Pelvis.

M. Bégin reported favourably on a paper by Dr. Murville, military surgeon at Lille, and from this communication we extract the following details of two interesting cases of dislocation of the Pelvis:—

1. An officer, aged thirty-eight, fell from the third story of a house; the thighs were bent and brought towards the abdomen, and the weight of the body bore chiefly upon the tuberosities of the ischia; the result was the forcible separation of the sachrum from each ischium; the sacrum was forced downwards, and protruded considerably under the skin, the ilia being at the same time pushed upwards so as to come into contact with the false ribs; the coccyx was separated into several fragments; excessive pain was felt in the sacro-iliac symphysis; the lower extremities, the bladder, and rectum, were paralysed; the pulse was exceedingly small, &c. Stimulants brought on a speedy reaction, when antiphlogistic measures were adopted, and the pelvis was kept in a state of perfect immobility. No attempts were made at reduction. Not only was life preserved, but at the present day, ten years after the accident, the bladder and rectum are voided at will, and the patient can walk, although with some difficulty. Considerable deformity persists.

2. Col. C., aged fifth-six, during a review, on the 19th of October, 1845, riding an unmanageable horse, pressed him violently between his legs, at the same time that he rose in his stirrups. The animal continuing restive, the rider was thrown upwards, and fell vertically into the saddle in the position we have described. The left side of the soft pelvis was lacerated, the skin not being wounded. A second effort of the horse increased the injury, whish extended as high up as the symphysis pubis. This articulation was opened, the internal pillar of the inguinal ring torn, and the patient had the distinct consciousness of these successive divisions of the fibrous tissues. On examination a considerable hernia was found to have taken place in the left inguinal region; in the perineum, which was the seat of intense pain, was also detected a round soft tumour, which yielded to pressure, and which could be reduced with very slight effort. The symphysis pubis was open, and by pressing back the skin with the hand, the distance between the pubis was found to equal two inches in extent. The fibro-cartilage had been torn away from the left ramus, and remained adherent to the right side. The hernia was reduced and the pubes kept united with a tight bandage. The patient got perfectly well, and three months and a half after the occurrence of the accident no trace whatever of its existence could be detected.

Lithotrity. — Adjourned Debate. — M. Civiale read the second part of a paper, the commencement of which we forwarded to the readers of the *Medical Times* in our Parisian correspondence of July 17. M. Civiale stated that Souberbielle had obtained 28 cures out of 39 cases of lithotomy; of 100 patients operated at the Hotel Dieu, 56 only were cured; out of 65 operated at La Charité, 35 died; and of 73 patients on whom lithotomy was performed, from 1836 to 1842, in the hospitals, 25 patients died and 47 were cured: statistical results from which it followed, that the proportion of deaths from lithotomy amounted to more than the third part of the persons operated upon. M. Civiale concluded:—1st. That lithotrity, when properly performed, saved 96 or 98 per cent. of the patients. 2nd. That, when lithotomy was exclusively employed, the mortality was equal to 30 per cent. When applied to children alone, cystotomy was successful in nine cases out of ten; but when applied to adults or to the aged, 50 to 75 per cent. only were benefited.

Meeting adjourned at five o'clock.

Diarrhœa of Children.— The diarrhœa which accompanies or follows the period of weaning is often fatal; it is not only observable in children who are suddenly deprived of the breast, but also in those who are nursed for too long a period. Dr. Weisse, physician to the Children's Hospital in St. Petersburg, advises the exhibition of raw meat in such cases, and asserts that he has from this practice often derived the most signal advantages. The meat should be shashed, or reduced into a pulp, and two table-spoonfuls may be at first given in four

meals.—*Annales de la Société Méd. Chir. de Bruges.*

HOPITAL SAINT LOUIS.

CLINICAL LECTURE BY M. CAZENAVE.—ACNE.

Acne is the result of the more or less complete alteration of that oily substance known under the name of sebaceous matter, and secreted by follicles deeply seated in the texture of the dermis. The eruption of acne is characterized by the appearance of small isolated pustules, more or less hardened at their bases, and occupying the cheeks, nose, forehead, and often the neck and back. According to Galen, acne was due to a thickening of the blood; Cullen looked upon it as a phlegmonous inflammation; Willan and Bateman classed it with tubercles; but Biett and French pathologists consider it to be a pustular affection. It is easy to discover that the pustules are the first, the primary alteration of the skin, and that the tubercular hardness of their bases is consecutive to their chronic induration. Several varieties of acne may be admitted. Thus in acne simplex, or acne punctata, the disease consists in the accumulation of sebaceous matter in the follicular duct, or in the dilatation of the latter. Acne sebacea is characterized by the increase of follicular secretion, which dries up, becomes hard, forms a crust, and obliterates the orifice of the follicle. If inflammation occupies the sebaceous ducts, or invades the follicles themselves, the two more severe varieties are produced, viz., acne rosacea, or acne indurata.

In acne simplex, small red spots are first observed, which become rapidly pustular and are surrounded by a red areola; no general symptoms accompany the eruption. This form is frequent in young persons verging upon puberty, at the first appearance of the menstrual discharge, and, although not connected with any abdominal complication, it still is very obstinate.

Acne punctata is caused by the accumulation of sebaceous matter in the distended duct: black specks corresponding to the orifice may be seen in the centre of the pustules. This variety of acne seldom exists alone, and is generally complicated by the former.

Acne sebacea occupies almost always the face, and more particularly the nose and the free edge of the eyelids; the sebaceous secretion hardens and forms crusts, which the perspiration separates from the skin, leaving a surface rendered rough by the presence of sebaceous matter distending the ducts. The skin is shining, covered with an abundant oily deposit, and is the seat of slight pruritus. This malady is more commonly observed in the adult than in youth or old age; it is often met with in women who paint their hair or eyebrows.

Acne rosacea is much more serious than other forms already enumerated, both on account of its remarkable obstinacy and of the violent grief which it produces in those who suffer from it. The disease generally begins by some red spots upon the nose, the chin, or cheeks, at first only transitory, and appearing after a heavy meal or even at regular intervals; they are often preceded by inconvenient flushing: the pustules unite, the skin becomes rough, its vascular system is gradually dilated, and the size of the feature often considerably increased. This disease, instead of attacking the entire extent of the nose, may be limited to one of alæ, and present great resemblance with "noli me tangere."

In acne indurata the inflammation produces often extensive hardening of the skin. It is sometimes met with in the face, and occasionally on the shoulders. When the disease is intense, the face is covered with tubercles of a livid hue, and presents a repulsive appearance.

The diagnosis of acne is not in general difficult to establish. In lichen the eruption is *papular*, and attended with considerable itching. The squamæ of icthyosis are dry, very adhesive, and deeply implanted in the dermis. The scales of pityriasis are furfuraceous. Ecthyma differs from acne by the greater size and by the seat of its pustules, which generally occupy the legs. The peculiar aspect of syphilitic eruptions, their crescentic shape, special colour, and the history of the cases, will prevent the possibility of mistaking them for acne: acne leaves after it small white scars like inverted commas, which always betray its former existence.

Acne does not threaten life, but constitutes, however, on account of its obstinacy to treatment, a serious affection.

The disease may be referred to the agency of three principal causes: inheritance, gastrohepatic disturbance, and menstrual irregularity.

Acne simplex may sometimes be cured by emollient lotions, but, in general, stimulating washes are necessary; we recommend the following prescription:—℞. Infusi salviæ, ℥xij.; liquoris ammoniæ gutt., x. to xl. If a plethoric condition or a derangement of the menstrual function be present, they must, of course, be treated in the most efficient manner possible. In acne punctata alkaline or vapour baths are often useful. Sudorifics and laxatives will be found beneficial in acne sebacea. In acne rosacea the condition of the womb should be carefully ascertained, and if the eruption has appeared to coincide with an arrest of the menstrual function, blood should be removed from the arm, and an issue placed in the thigh. No ointments or greasy substances should be locally applied. Gowland's lotion is often advantageous; the following is its composition:—℞. Hydrargyri bichloridi, gr. ij.; ammoniæ muriatis, gr. ij.; aquæ destill., ℥xij. M. Acne indurata is almost invariably attended with functional disorder: we, therefore, advise the exhibition of carbonate of soda and other alkaline drugs locally. We use several ointments: for instance, ℞. Potassii iodidi, ʒss.; ung. hydrarg. fortioris, ʒj.: axungiæ, ℥j. M. Shower-douches, with simple or alkaline water, are often very advantageous; when the disease is quite chronic the internal exhibition of sulphurous water may be resorted to. Sea-bathing should be recommended in *no* instance. Lastly, when no indication can be detected upon which to found a rational line of treatment, arsenical medicinas, sometimes successful, should also have a trial.

D. M'CARTHY, D.M.P.

On the Use of Ether in Surgical Operations.—Professor James Syme says that the results hitherto obtained have been not at all satisfactory to his mind. In some cases, with apparatus extemporaneously constructed, and afterwards with instruments made more perfectly, the desired insensibility was not produced; in others, prolonged nausea and vomiting; in others, violent convulsive movements were produced; while in several instances death occurred under circumstances that seemed to leave no doubt as to its having been produced by inhalation. Under these circumstances, before abandoning its entire use, Professor Syme resolved to make another series of trials with a very simple apparatus, said to have been very extensively used by the professor of midwifery without producing bad effects. This was merely a flask to hold the ether, poured upon some bibulous material, such as a piece of flannel, with a mouthpiece, and an aperture in the side to admit air. The wide openings, and absence of valves, rendered respiration by this apparatus perfectly free; while there is no risk of the ethereal vapour being allowed to enter the lungs without a safe admixture of atmospheric air. The consequence was that the patients, on the whole, inhaled a smaller quantity, and suffered in a proportionate degree less of the disagreeable effects.

On the Causes of Scorbutus.—Dr. Ritchie concludes, from the facts which have come under his notice, that the following are the causes of this disease:—A want of proportion between the elements in the food of the patients, and those demanded by their organism as omnivorous animals. An habitual and protracted diminution in the chyle of many, of nutritive constituents of every sort; the absence from that produced in many more, of the nitrogenous principles of fresh animal food, and the extinction in it, in all, of the albumen, acids, and salts supplied by succulent vegetables. The coetaneous influences—positive and negative—of other depressing causes, as great physical labour, severe exposure to the weather, previous debility, &c. And under such a disposition of the circumstances of the investigation, it would be improper to seek the causes of the epidemic in the unknown and impalpable obscurities of an aërial constitution. Errors in diet, and the want, in particular, of proper vegetable food, were the true exciting causes; while cold and other debilitating agents operated often as the predisposing causes of the disease.

Proximate Nature of Scurvy.—"The essential principle in the proximate nature of this malady," remarks Dr. Ritchie, "appeared to be diminished vital power; the immediate cause of which was probably the deterioration, as its earliest general effects were the irregular distribution and, also, the transudation of the blood, or of either its serum or its globules. The external phenomena, again, to which these gave rise were general tegumentary anæmia, œdema, sometimes anasarca, and local congestion; while the character of these latter varied according to different accidental circumstances. Thus, parts the vitality of which is relatively low—as the adjacency of old wounds, and the skin on the inferior extremities—or which are exposed from position or function to pressure, or other similar influence, as the soft parts of the extremities, the gums, the lungs, or bowels, were the first to manifest the disposition to hemorrhage, and also, on the exposure of the patient to cold, to assume a cachectic type of inflammation. This, again, though in its genuine nature unhealthy, exhibited various specialities, according to the tissues in which it was situated. Thus, when it affected serous and fibrous structures, a low kind of rheumatic inflammation was set up, fibrine and serum were effused, and, according to the locality involved, there was pleuritic effusion and synovitis, deep-seated neuralgic pains in the bones, or distended and impacted fascia of some of the limbs. When the superficial cellular texture, again, was its site, the inflammation assumed a low form of the suppurative, and gave rise to furunculi; while, when it laid hold on the mucous tissue, an unhealthy erysipelatous action was induced, by which sometimes the epithelium or cuticle might be seen elevated by bloody serum into blebs, or the pilous or mucous follicles be converted into papules, sometimes scarlet, at others purple coloured; and often, if on the cutis, passing into desquamation, or, when situated in the mouth, throat, or intestines, running into ulceration. Chemical and microscopical examinations of the blood showed a diminution of the red corpuscles and of the fibrine, with augmentation of the water, and often of the colouring matter of the serum."

New Muscle in the Eye.—Dr. Brüche states that he has discovered a new muscle in the human eye. It consists in the grey ring which is found in front of and in the neighbourhood of the iris, on the external surface of the choroid, and which has been usually known under the name of the ciliary circle. It is called by the discoverer the expansor muscle of the choroid, and appears to have the same power as that of the iris.

Alkaline Urine in Health.—Dr. Adolph Krukenberg, of Brunswick, quoted in the *Monthly Journal*, says that the fact, first promulgated by Wöhler, that the internal use of salts, of vegetable acids, and fruits containing them, causes the urine to be secreted alkaline, has been too much neglected by succeeding physiologists and pathologists. Dr. Krukenberg found that a much smaller quantity of fruit was necessary for the production of this phenomenon that has hitherto been supposed, namely, two to four ounces of apple pulp, or twelve plums weighing, without the stones, scarcely one ounce and a half, sufficed to make the urine alkaline and hazy from phosphates, or, if clear on secretion, heat caused their deposition; the addition of a little hydrochloric acid caused an effervescence like champagne. Too much liquid, a bladder already

filled with acid urine, or a disproportionate allowance of flesh, interfered with the success of the experiment. In the simple chronic nephritis of Rayer, the chief symptom is the alkalinity of the urine; and some of the cases recovered so quickly as to justify a doubt as to the correctness of the diagnosis; although he inculates careful dietetic treatment, it is evident that the semeiotic influence of fruit in small quantities was unknown to him. In several of his cases the alkalinity of the urine seemed to depend on purulent admixture, and consequent rapid putrefaction; and once it seemed to be kept up, if not produced, by the use of an alkaline saline water. The alkalinity of the urine has also been used by Prout as a diagnostic sign of certain spinal affections; these he divides into two great classes:—1. Those arising from depressing emotions and weakening influences; and in these he recommends the use of fruits, and fluids containing malic acid, as cider and perry; to these, and not to any disease, Dr. Krukenberg refers the alkalinity of the urine. 2. Injuries of the spine; neither Rayer nor Dr. Krukenberg, however, have ever been able to discover the urine alkaline from this accident, unless there were some existing or consecutive affection of the mucous membrane of the urinary passages, producing purulent admixture, hastening thereby the putrefactive changes in the urine. Prout also mentions that although alkaline urine, by copious secretion, be clear and bright, yet boiling causes it to deposit a phosphatic sediment, which falls without any such previous process if the secretion be more sparing; the phosphates separate before the boiling point, and from their great specific gravity fall rapidly, and may thereby, as well as by their solubility in acids, be distinguished from the albumen found in Bright's disease.

Cauterization of Vesico-Vaginal Fistula with Creasote.—Professor Emmert, of Bern, having a case of this disease subsequent to artificial labour, and which had been treated seventeen times with lapis infernalis unsuccessfully, proceeded to remove the gangrenous scab produced by the last cauterization, and then touched the fistular opening extensively with a pencil-brush immersed in creasote, which produced the most beneficial results. The new scab was so firm as to enable the patient to retain her urine the whole day, and to micturate without becoming moist. The detachment also occurred much later than after the application of other caustics, and, when effected, the urine flowed in far less quantity from the somewhat diminished fistula. A second application, six days afterwards, induced a perfect cure, and no urine has passed from the fistula during two months which has since elapsed. A fortnight after the last cauterization the fistula was found perfectly cicatrized, its previous existence being marked only by a bluish-red streak two lines in length. Creasote is considered, therefore, to be superior to either the nitrate of silver or the concentrated acids, the one being too feeble and the other too energetic in their action.

Nævus Maternus Lipomatodes.—Dr. Hollstein, of Furth, mentions the case of a boy, two years and a half old, whose back was covered with hairs an inch long, which, on the left side, reached to about the middle of the abdomen. More or less there was the same abnormal devolopment on the upper part of the left thigh, the lower and anterior surface of the right thigh, and the right acromion. The nates were covered with two darkish-brown sacks, which hung down over the femoral fold, and in the left inguinal region was an isolated fatty prominence five inches long. The skin covering the swellings was dense to the feel, smooth, with fissures here and there, and having on its surface several darkish-blue or brown nævi, some with and others without hair. From the growth on the nates there ran a tuft of close hairs over the spinous processes of the vertebræ up to the occiput. The child resembled an ape posteriorly. Three months prior to death a fluctuating blue-coloured growth appeared below the left shoulder, which increased to the size of a child's head, and yielded, on incision, a bloody, glutinous fluid. An encephaloid-like mass, covered with coagula of blood, occupied the base of the swelling, and the patient eventually died. At the autopsy the lipomatous growth on the nates, though diminished from its original size, weighed five pounds. It consisted of a fibro-serous sack, partially filled with isolated fat masses. Under the microscope, cellular filaments and free non-crystallized fat were everywhere seen. The coloured spots contained a quantity of granular pigment, both free and enclosed within cells, conjoined with numerous epithelial cells. The axillary growth exhibited, in addition, oblong and caudate cells, so as to justify the diagnosis of encephaloid.

Solid Bodies in Synovial Cavities.—Dr. Bidder opened a loug-standing swelling of the knee-joint, from which escaped a quantity of granular matter. The grains were of a uniform size, 1¼''' long, ¾''' broad, 8¼''' thick—regular, flat, oval, clumped together in masses of variable size by a glutinous transparent fluid, present in but a very small quantity; they were highly elastic, and presented no trace of a pedicle; their cut surface seemed homogeneous to the naked eye, and presented no trace of organization under the microscope; and a chemical examination showed them to be composed of albumen. The hypothesis offered in explanation of their mode of origin is, that in certain cases an increased flow of blood, and consequently secretion of synovia, may force off the epithelium cells; that these subsequently increase, partly by endosmosis, partly by precipitation on their external walls; the peculiar life of the cell-wall in certain cases altering the contents both with respect to colour and consistency, no membrane being perceptible under the microscope, may proceed from its stretched and thinned condition, from its being originally structureless, or from its homologation with its contents. The bodies examined consisted almost entirely of albumen, easily obtained from the synovia; their uniform size likewise presupposed their origin to have been from similar forms, endowed with similar capacities for life, conditions fulfilled by the epithelium cells.

Apoplexy of the Larynx.—A patient was admitted into the Zurich Hospital, labouring under general symptoms of the action of mercury, and produced by friction with mercurial ointment, with the intention of ridding himself of lice. The symptoms were partially relieved by gargles and the use of hydriodate of potass. Two days after admission, having left the room but lightly clothed, the patient was seized with a violent dry cough of a croupy sound; the voice became hoarse and almost extinct; breathing whistly, short, and anxious; eyes protruded; pulse frequent, oppressed; face livid and covered with a cold sweat. Auscultation showed nothing abnormal; water was swallowed easily; remedies proved useless, and in the evening he died. The autopsy showed on the internal surface of the larynx, beneath the right ventricle, a darkish-red bloody coagulum, extending downwards a quarter of an inch and 1 to 3''' deep, lying directly under the mucous membrane, which was somewhat thickened; immediately beneath the left ventricle existed a less extensive sugillation. The mucous membrane was also softened and thickened; that of the trachea and alimentary canal studded with ecchymotic spots. Here the proximate cause of the fatal effusion was undoubtedly the fluidity of the blood, caused by the absorption of an unknown quantity of mercury. The cough with which the patient was affected determined the seat of the effusion. Cases of sudden death during mercurial inunction have been generally ascribed to a carditis. Apoplexy of the larynx causing death has been rarely noticed.

Loss of Voice Cured on the Occurrence of Hæmoptysis.—A female, nineteen years of age, was frightened, while menstruating, by a horse running away, and at the same time caught cold, when she became affected with complete aphonia. There was no hoarseness, pain, or cough; the tongue was clean, though the patient complained of a putrid taste in her mouth. Sal ammoniac and tartrate of antimony were presented without success. On the fourth day the taste of the mouth became still more unpleasant, along with nausea and putrescent eructations. At last two pieces of coagulated blood of considerable size were expectorated, after which the voice was restored, and all the morbid symptoms subsided.

Cæsarean Section.—Mr. Balfour, surgeon, H.E.I.C.S., was called to a dwarf, four feet high, with distorted limbs and considerable curvature of the spine, who was said to have been in labour for ten days. The bladder was found much distended, and rising above the umbilicus; the uterus inclined towards the right side; the internal parts were very much swollen and livid; the vagina discharged a fetid sanies. The head of the child was discovered resting on the brim of the pelvis, and one hand was lying in the vagina, the antero-posterior diameter about one inch and a half. An injection and opiate were given, and in the afternoon an attempt was made to relieve the bladder, but in vain, in consequence of the urethra being doubled over the brim of the pelvis. The viscus was consequently punctured in the median line a little above the pubes, and and an immense quantity of urine evacuated. The Cæsarean operation was then performed in the usual manner, without loss of blood; the bowels were carefully returned, and the wound, six inches in length, brought together with the interrupted suture and cleaned with cold water, a catheter inserted in the bladder, and an opiate given. For two days the patient seemed to be doing pretty well, but on the third pain suddenly set in on the right side, which was followed by death in a few hours. Dissection showed a soft yellow liver, and considerable peritoneal inflammation; the wound in the uterus was dark-coloured, and almost sloughy; that in the bladder was closed, and showed no symptoms of inflammation, the external wound being pretty firmly united throughout its entire length. The antero-posterior diameter of the brim was, after the removal of the bladder and rectum, under 1⅝ of an inch. It was thought that, if the operation had been performed the first or second day after the commencement of labour, the patient might have been saved.

Imperforate Anus.—Dr. Keiller communicated to the Edinburgh Obstetric Society two interesting cases from Dr. Lyell, of Dundee. In the first the usual operation was performed, but was not followed by any permanent benefit, though done thrice during a period of six weeks, at the end of which time, some feculent matter was observed to pass with the urine by the urethra, and in a few days afterwards the fæces totally ceased to be emitted by the artificial anus, which soon became obliterated. For a year the child continued well, passing its fæces by the urethra, when a complete stoppage occurred of both fæces and urine from obstruction of the passage, and death supervened. Dissection showed that at each operation the cut had been made into the urinary bladder, into which a small and imperfect gut was found to terminate, there being no regular rectum sigmoid flexure or descending colon present. The obstruction was found to have taken place in the prostate portion of the urethra, which was completely filled with a substance resembling skins of raisins, coated over with brown calcareous deposit. It is remarkable that for the first six weeks the urine was passed without any admixture of feculent matter, and that this latter should escape without any admixture of urine through the artificial opening.—In the second case, the child lived twelve weeks, evacuating the fæces by the mouth. No operation was attempted, and the anatomical peculiarity was found to consist in the colon terminating in a large globular *cul de sac*, which floated loosely among the other intestines in the umbilical region.

Fibrous Tumours in the Unimpregnated Uterus.—Dr. Simpson called attention to the manner in which nature sometimes proceeds to stop the progress of these tumours, by gradually transforming them, first, into a cartilaginous, and then into an earthy and almost inorganic, mass, not

prone to enlarge or change its condition. This seemed to indicate the death, or at least the cessation of the reproductive action, of those cells which form the essential growing constituent of the tumour. The interesting experiments of Rayer were quoted, in which that pathologist induced the artificial transformation of normal fibrous tissue into cartilaginous and osseous substance by repeated irritation of it. Dr. Simpson thought from these circumstances* that the repeated transmission of a galvanic current through the tumour might possibly produce the required degree of irritation and its desired result.

Malignant Osteo-sarcoma at the Base of the Skull.—Dr. R. W. Smith presented to the Dublin Pathological Society a section of a skull, as a specimen of a disease of the bone. An old man, who made no complaint except of uneasiness in the head, deafness in the left ear, and an inability to respire freely through the nares, was admitted into the hospital of the South Dublin Union. After two months, without any variation in his symptoms, he died suddenly of hemorrhage from the mouth and nares. In the stomach was found, at the *post-mortem* examination, a quantity of blood which had been swallowed. At the base of the skull was a malignant osteo-sarcomatous formation, within which was a cavity still enclosing a clot. This malignant structure was a new growth, which had filled the sphenoid sinus and the superior cavities of the nares, and obstructed the Eustachian tube of the left side. The basilar process of the occipital bone was destroyed, as well as the body of the sphenoid, the lower portion of which remained in a softened state: part of the ethmoid bone was also destroyed. The roof of the mouth was softened, but its form was preserved, as frequently happens when the bony palate becomes affected by malignant disease.

Fulminating Mannite.—M. Sobrero has converted the peculiar kind of sugar obtained from manna into a highly-fulminating compound. The process is not known, though there is little doubt that the conversion is effected by the agency of sulphuric and nitric acids. It has been employed as a substitute for fulminating mercury in percussion-caps. He found that a small quantity of mannite crystallized from alcohol, and thus employed, discharged a gun as effectually as if fulminating mercury had been used.

REVIEWS.

Cholera, Dysentery, and Fever Pathologically and Practically Considered; on the Nature, Causes, Connection, and Treatment of these Diseases, in all their Forms. By Charles Searle, M.D., M.R.C.S.E., &c. London: John Churchill, 1847; pp. 128.

Cholera is a disease which has attracted greatly the attention of the medical profession within the last few years, as numerous works which have issued from the press abundantly testify. A great amount of talent has been brought to bear upon the subject, and no labour has been spared in order that some light may be shed upon the pathology and treatment of a disease confessedly the *opprobrium medicorum*. It is an encouraging fact, that, while men of high standing have differed greatly from each other in some most important points, much valuable knowledge has been attained; and the experience of the first thirty years from the apparent commencement of this disease will materially assist future investigators in attaining such an amount of information as shall bring more under the control of medical skill this frightful malady.

Dr. Searle is a gentleman who has had ample opportunities of studying this "scourge of India," having been a medical officer in the Honourable Company's service for many years, during which time he not only had the care of a very large number of patients afflicted with this disease, but was himself the subject of it. He is a veteran author on the subject, and has been induced to take pen in hand in consequence of the disease having prevailed with unusual fatality in our Eastern empire during the past year; and because the disease is also extending in the direction it took on the occasion of its visiting Europe as an epidemic in 1830—the profession being as much baffled as ever in its treatment.

As the work is intended for circulation in the Indies as well as in our own country, it is addressed to the public as well as the profession—numbers of persons, both civil and military, in the East, being very frequently out of the reach of medical assistance, and to whom, therefore, some knowledge of the disease must prove of value in the hour of need. There is something about the preface which we rather like, as it contains none of that namby-pamby trash so disgusting to intelligent readers. Some may be inclined to think the author a little egotistical in what he there says; we, however, are disposed to consider the tone of independence which is assumed as the product of a mind conscious of its own advantages, but ready to impart to others that valuable information it possesses.

The work is divided into four chapters and a supplement, in which we have the disease presented to us in all its bearings. First, as regards its nature; then its most frequent causes, and the operation of those causes in developing the symptoms; next, the indications of cure, as pointed out by nature; and, after this, the remedies which principle directs and experience has proved to be most successful in its treatment. This is followed by a detailed account of the practice which should be pursued, from the first moment of visitation and through the various stages of the disease, in all its forms, from simple diarrhœa to its severest species, including that, also, of dysentery; and, subsequently, the treatment of the inflammatory febrile affection, which so frequently succeeds to the attack of cholera, is also particularized. This is followed by the subject of fever, the phenomena it exhibits, and the methods of cure which should be adopted.

After stating the causes and symptoms of the disease, we come to the indications of treatment.

Taking nature for our guide," observes our author, "the indications of treatment are obviously to excite the secretive function of the liver, and to remove the congestive accumulation of blood from the vessels of the stomach and bowels. These are the chief indications, and speak at the same time to every man's common sense as to their propriety. Another indication presents itself to our notice, which is to supersede or neutralize the poisonous agent, or cause, with which the vital stream has been contaminated, by the introduction into the blood of some other agent of an opposite description or antagonist character. These are clearly the indications of treatment, and the whole of them, under ordinary circumstances. But under extraordinary circumstances, as in the epidemic visitation at Kurrachee, or in severe cases, I should add, and strongly advise, augmenting the amount of vital air in the system, by the inhalation of oxygen or the nitrous-oxide gas: inasmuch as the epidemic cause, in the instance alluded to, must directly and immediately have diminished the amount of oxygen inhaled, and arrested, also, the exhalation of carbonic acid gas; and in thus operating must have virtually poisoned the blood, and for which, in either case, oxygen would prove a direct remedy. Independent, however, of the above views, there are others which still more strongly point out to us the necessity and importance of this remedy in all severe cases of this disease: for whether the cause operate from without the system—in diminishing the supply of oxygen or the exhalation of carbonic acid, or from within it—in diminishing the power of the organs concerned in the absorption or reception into the system of the one, or the expulsion of the other, the effect is virtually the same in both cases; and as the disease progresses, the coldness and inertia of the system point out to us but too clearly that this, the respiratory function, the primary one of life, however affected, is seriously impaired; this remedy—the introduction of oxygen into the system—cannot, therefore, be too strongly and earnestly recommended to adoption, and it is as much the duty of the medical attendant to prescribe as any of ordinary and more frequent application. Of the ghastly and livid hue which characterizes the countenance, like that of a person suffocated, and often prevades the whole body of those affected at an advanced stage of the disease, the above view offers at once an explanation."

Much has been said and written about the inhalation of gases in the treatment of severe diseases, and yet, up to the present time, they are very little employed. This arises in a great measure, no doubt, from the trouble which is necessary to procure them. Oxygen and nitrous oxide cannot be kept in the dispensary like a drug or chemical, but must be made as they are wanted. The former may with comparative ease be produced, in the way the doctor mentions at the end of the book, by the admixture of chlorate of potass with an equal proportion of powdered black oxide of manganese, and applying the heat of a spirit lamp; but the nitrous oxide is not procured so readily in a fit state to be taken into the lungs, in the way mentioned, when the process is to be conducted by a person who has had but little experience in the matter. We have seen some very awkward and very unsuccessful attempts at gas-making by some very good surgeons, and who have, in consequence, been very little disposed to employ them frequently as agents in the cure of disease. Calomel, bleeding, saline clysters, emetics, nutritive and other injections, are remedies which are advocated by our author according to the circumstances of the case. He also recommends as a very efficient agent, and one always at hand, common salt:—"Its operation is twofold—that of a stimulant and evacuant; and is much, therefore, to be preferred to brandy, and this class of remedies, which have been too commonly employed. Half an ounce of salt, dissolved in half a pint of warm water, should be immediately swallowed, and the same dose repeated every ten minutes, till it operates effectually as an emetic. After which, the same quantity of salt, being dissolved in as much cold water, should be given in doses of two tablespoonfuls every half hour or so, assisting its operation on the bowels by a clyster every hour of half a pint of the same solution, of milk-warm temperature, and repeating both till feverish heat and excitement become developed, or cold water is urgently desired by the patient, when they may be continued at longer intervals, and a wineglass full of cold water given occasionally between the doses of the solution."

We have in general a very great dislike to books writen for the public and the profession, but the little treatise of Dr. Searle will, we have no doubt, prove useful to both. Residents in India who are unable to procure medical advice will find the information here given of great value to them, while the members of the medical profession will treat with respect the opinions of a gentleman whose experience on the subjects of which he treats has been very considerable.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.*

Mr. Edsalle.—*The omission shall be rectified.*

A Student, West End.—*The abuses of which our correspondent complains should be clearly stated*

and authenticated. The name, of course, will be given in confidence.

A Candidate.—*We cannot spare room for the insertion of the questions; they are left at the office, as requested, and may be obtained on application.*

An Army Surgeon.—*We are sorry there is no redress; the command is at present not to be altered, and our correspondent should make himself an adept in the important art by practice. We know of no persons who would willingly undergo the operation. The neighbourhood of St. Katharine's Docks and Tower-hill might furnish some who would submit for the consideration of a little "grog."*

Chemicus—*The "disinfecting fluid," we believe, is very efficient in removing the smell from foul drains, water-closets, and putrefying animal substances. Consult the Editor of the* Pharmaceutical Times.

Independent.—*The remarks on "The Putney Inquest" cannot be inserted without the name of our correspondent.*

Rusticus.—*The insurance could not be effected in a safe office for £1000 for much less than £80 per annum.*

Beta.—*Dr. Shirley Palmer's "Pentaglot Dictionary," published by Longman and Co.*

M. D.—*There is danger in commencing practice without the license, and while the Society might not prosecute there might be others who would.*

Juvenis.—*The surface of the diseased gland is generally mottled or speckled, with uneven projections; in some instances it is quite rough and scabious; the size and consistence of the organ are equally liable to vary. In the early periods of the disease it may be found larger than natural, and of softer consistence; in the advanced stages, contracted in bulk and hard. When cut into, it will be found that the outer portion of the organ is the chief seat of disorganization. It is granular, and generally of a pale yellow colour. The medullary structure is seldom much altered.*

Mr. Chance.—*There is no certificate required to engage in the business of a druggist. In country places very ignorant persons sell drugs and chemicals, and arsenic may be obtained with as much facility as a dose of Epsom salts.*

A Subscriber.—*We do not understand what examination is referred to. The Apothecaries' Company requires such a knowledge of Latin as will enable the candidate to read Celsus and Gregory grammatically. The College of Surgeons is satisfied with plain English, and if the examiners are in a good temper a very small quantity of the mother tongue will do.*

Scotus.—*The diploma is a proper qualification. A duly-qualified practitioner, possessing a single diploma is entitled to give evidence in courts of justice.*

Accoucheur.—*The question is not yet decided. There is no fixed number of days, and the most eminent practitioners have not been able to agree in their opinions.*

A Practising Apothecary.—*Druggists too frequently play the part of medical practitioners, and the Registration Bill would have perpetuated these privileges. The publication referred to has often urged the druggists to practise, in defiance of the Act of 1815, though it professedly advocates the rights of medical men.*

Mr. Francis Cuthbert's *case does not need the extended notice he requests, the subject, having of late been brought so frequently before the profession, has lost much of the interest which it originally excited.*

Amicus.—*Apply to Mr. Bailliere for a catalogue of French works; our correspondent will then be able to choose for himself.*

Alpha.—*The letter has been unfortunately mislaid, and we shall, in consequence, feel obliged for another copy.*

A Constant Reader *had better apply to Mr. Martin himself, who will, no doubt, give him all the information he seeks.*

A. W. Close, Esq., Grosvenor-street, Manchester.—*We shall be happy to hear from our respected correspondent. The communication was received last week, but, by an oversight, was not acknowledged.*

Censor, Hackney.—*Mr. Cooper's Lectures will be proceeded with till completed; the other suggestions will be attended to.*

Ambrose Pare *informs us that, "The first English medical man who noticed the smallpox in Great Britain was the celebrated Thomas Sydenham, and that he was the first who wrote of it as a distinct disease (from rubeola). Rhazes, an Arabian physician, was the first author who expressly treats of smallpox; but he confounded it with measles, and the two continued to be viewed as modifications of the same disease till the time of Sydenham.*

Z.—*We are sorry that our correspondent was not successful in passing an examination at Somerset-house. The degree is a respectable one, and a little attention to chemistry will overcome many difficulties. The examination at St. Andrew's is, no doubt, a practical one, and will, perhaps, better suit the case of a gentleman who has been many years in practice than the other.*

Dr. Wake, Southwold, Suffolk.—*The editor of the* Pharmaceutical Times *will be able to give our correspondent the information he seeks.*

M. D., Newport.—*An advertisement in the* Medical Times *would be the best means to adopt.*

J. R. K., Burslem, Potteries.—*"Quain's Anatomy" is a work which will just suit our correspondent. It is of the utmost importance that the student should have fresh information in a division of his studies, when from day to day new light is being introduced, more especially from the improving application of the microscope, and other means of observation and analysis. This valuable work will furnish all needful information.*

An Old Subscriber.—*With a country certificate, without paying the additional £1, a debt cannot be recovered.*

Several correspondents have asked us for the rules and regulations of the Medical Benevolent Institution; if the Secretary will send them to us they shall be forwarded.

If Mr. Farmer *will send us a full statement of his case, authenticated with his name, it shall be published. The same also must be said in reference to the communication from* A Medical Juror.

Letters and communications have been received from Mr. R. Brandon, Russell-street, Bloomsbury; A Practising Apothecary; Mr. Francis Cuthbert; Amicus; Alpha; A Constant Reader; A. W. Close, Esq., Grosvenor-street, Manchester; Censor, Hackney; Ambrose Pare; Z.; An Old Subscriber, Twickenham; Dr. Wake, Southwold, Suffolk; Mr. F. Page, Newmarket; M.D., Newport; Accoucheur; Scotus; A Subscriber; Mr. Chance; Juvenis; M. D.; Beta; Rusticus; Independent; Chemicus; An Army Surgeon; A Candidate; A Student, West-end; Mr. Edsale.

THE MEDICAL TIMES.

SATURDAY, AUGUST 28, 1847.

MEDICAL REMUNERATION.

"Multa dies variusque labor mutabilis ævi
Retulit in melius; multos alterna revisens
Lusit, et in solido rursus Fortuna locavit."
VIRG. Æneid., lib. 11.

At no time in the history of the profession has there ever been exhibited by its members such a lively sense of their real condition, or have such vigorous efforts been used by them to attain their legitimate position in society. A few years back the struggles for emancipation were but few and insignificant—the spasmodic indications of life and not the robust actions of consolidated energies, intelligently directed. This naturally resulted from the manner in which the profession was constituted: the "pure" physicians and surgeons possessing corporate privileges, and arrogating to themselves the learning and emoluments of the medical art; while the general practitioners were scattered throughout the length and breadth of the land, unknown in their collective capacity to Government or people. There has never yet existed a single medical corporation that has claimed affinity to them, or has exhibited any real concern for their welfare; on the contrary, the majority of these institutions have manifested a determined opposition to sound medical reform, from which alone can spring all that is honourable and advantageous to general practitioners.

While, however, the corporations are guilty of numerous acts of oppression, medical men have to blame themselves for much of that reproach which has been heaped upon them, as well as for that low scale of remuneration they receive for their important labours. Neither Government nor poor-law guardians would have dared to offer such low sums for medical attendance upon sick paupers if the attendants had only been true to themselves. There is not a parish throughout the kingdom, that we know of, that has ever been compelled to raise the salaries of medical officers, because none could be found to undertake the duties for sums which would not purchase the drugs required by the sick, much less remunerate the practitioner for his time and skill. Only a short time ago, when the Liverpool select vestry, with the rector as chairman, advertised for medical officers, the pile of diplomas and testimonials which were sent in from a host of candidates excited the ridicule of the parish worthies, who had just before grossly insulted the gentlemen who gratuitously attended the sick poor. Halifax exhibited a bold front when requested to give a little more than $3\frac{1}{2}$d. for a professional visit to a pauper; and, while drawing the purse-strings tight, laughed in the face of the remonstrants. The Lords of the Treasury, with their five shillings a day for physicians and surgeons attending Irish fever hospitals, very snappishly answered it was enough, when the protest of more than a thousand medical gentlemen was sent to them.

And how has this come to pass, that the services of medical men are considered of less value than those of the mechanic? Because—and we repeat it—there has not been that unity of purpose amongst them—that professional amenity towards each other—that proper estimation of their own skill which becomes individuals belonging to an enlightened and educated community. If they will depreciate their own worth, it is not to be expected the public will do otherwise. Under the old law, when parishes were let by tender, and those who would do the most work for the least money were elected medical officers, the most insignificant sums were often asked and received, either to balk a rival or to please some influential persons in the district. The young surgeon, when he first commences practice, considers himself doubly blessed if elected parish doctor, while those upon whose domain he intrudes think it no small triumph to frustrate his ambitious hopes. The eagerness which is manifested for offices of this kind leads guardians to suppose that they have a valuable living in their gift, and they bestow it upon their favourite with all the impudence of dogs in office. There is not a village club which pays the handsome sum of two shillings and sixpence a head per annum to the doctor for visits, medicine, and attendance upon sick members, that is not courted for its favours; while advice gratis to the public at large has become so common, both in London and the provinces, that a bill for medicine, &c., will eventually be considered quite a curiosity.

The charitable institutions, moreover, which

are said to be "the glory of our country," are the means of vastly depreciating the value of professional services. Many of these establishments are got up for no other purpose than that of promoting the worldly interests of a few physicians and surgeons, at the expense of a large number of general practitioners. The ostensible object of hospitals and dispensaries is to relieve the indigent sick, but numbers who are well able to pay a medical attendant are allowed to become patients—a ticket being easily procured by any one who chooses to ask for it. The extent to which this is carried on in the metropolis is, perhaps, not thoroughly known, and the injury which it inflicts upon the profession not clearly understood. Only a few years ago a hospital was founded in the western part of London, under royal patronage, which not only received patients into its wards, but the governors had such an enlarged benevolence as to sanction the visits of the medical officers to the houses of noblemen and gentlemen, who subscribed a certain sum to the funds of the institution. Fortunately for the members of the profession in the neighbourhood, the governors and medical officers waged war with each other till the hospital became a bankrupt concern, and at length ceased to exist. Every medical institution established for the relief of the sick poor, when it affords advice and medicine to those who can pay for it, is guilty of robbing the indigent, and of acting unjustly towards the profession.

We are aware that it is no easy task to expose and resist the abuses which live in these places—the welfare of the profession, however, requires it, and the members must take the lead in the great work. In defending their own interests they become the champions of the poor, who have no means of protecting themselves. Medical remuneration is low, because medical men are unjust to each other: the evil, however, may be remedied. It is only required of them to be united and persevering—to regard in a proper light the value of their own services—and they will then find a greater disposition in the public to act liberally towards them.

THE MODESTY AND MAGNANIMITY OF THE APOTHECARIES' SOCIETY.

"Opiferque per orbem dicor."—Ovid. Met.

The Apothecaries' Company, which two years ago was lauded by the profession for its efforts in favour of a liberal medical education and of substantial reform, has within the last few months become rather unpopular, from the apathy which it has manifested in prosecuting unlicensed practitioners. There is no doubt that these have greatly increased since the Medical Registration Bill was last introduced into the House of Commons, and they have more daringly exercised their iniquitous vocation because of the unsettled state of medical politics. Scarcely is there a town or village in the kingdom in which some charlatan is not found who exercises his profession at the expense of legitimate practitioners in medicine. We know of instances where some country surgeons have been permanently injured, and others entirely ruined, by the impudent artifices of designing quacks, who, devoid of principle, prey upon the public health in order that they may abundantly furnish their own pockets with gold.

We are aware that, in many instances, there are difficulties to be overcome which appear almost insurmountable, in order that these offenders may be effectually punished; yet obstacles ought not to deter those who are invested with authority from using it in such a manner as to afford all possible protection to medical men and the public.

It is established beyond doubt that an indictment would lie against any person who had practised as an apothecary without a legal qualification, and it is equally certain that this might be preferred at the instance of a private prosecutor. But if the law were left to be worked out by the efforts of individuals, there is no doubt that it would speedily become a dead letter, as few would like to subject themselves to the odium which proceedings of this kind would entail upon them, or to the loss of time, if not of money, which they must necessarily suffer. The Company ought, therefore, under present circumstances, to undertake the work when there is a fair prospect of success; and in every doubtful case, the officers should explicitly state their reasons for declining to prosecute. Many cases, it is probable, are brought before them with which they could not interfere, and it seems there are others which fall to the ground for the want of funds to prosecute. We really pity the Society, because, after it has been engaged for so many years in the business of drug-selling, and with a considerable revenue from the sale of its certificates, its coffers are now so low as not to permit it doing all it could in the way of punishing quacks. This cry of poverty comes with rather an ill grace just now, especially as there is an impression abroad that the Company is anything but poor. Surely the money which is received in the course of the year from those who are admitted licentiates is amply sufficient to protect them afterwards from illegal practice; if not, an appeal to the profession would be responded to in such a manner as would remove every difficulty in the working of the law for the want of funds.

In the notice recently issued from the Hall, we find it stated that "It is essential, also, that the inability of the Society of Apothecaries to institute prosecutions in every case of illegal practice in which their interference is called for, should be distinctly made known, in order that other parties may not be deterred from putting the law in force, under the impression that the Society of Apothecaries are able to take that duty upon themselves."

This is certainly a very odd paragraph, and one which we can scarcely understand. Does the Society mean to say that while it would be ashamed to institute proceedings against certain practitioners, not quacks, but who do not possess the certificate, it would be very glad to see others do the work, and that there is no necessity for the exhibition of modesty on the part of private individuals, though it is very proper on that of the Society? This is capital, certainly, and we hope speedily to be informed why, if a prosecution can be sustained, the Company in every instance should not undertake it.

In the paragraph which follows, there is a show of liberality, where it is written, "But although the Society cannot institute legal proceedings themselves in every case to which their attention is drawn, they are able, and will be found ready and willing, to afford to all parties who may be desirous of preferring an indictment against a person practising illegally, such advice as the Society's experience in the administration of the Apothecaries' Act may enable them to give; and their law-officer has received instructions, upon application from such parties, to render any assistance and information in his power as to the mode of proceeding against illegal practitioners, and as to the nature of the evidence by which a prosecution must be supported."

Now, this is very kind of the Society, to put forward their licentiates as puppets, while it stands behind pulling the strings and directing their movements. It is a sort of magnanimity which will be duly appreciated by the profession, and the "advice gratis" will confer upon the corporation of Water-lane a new kind of popularity which even the worthies of Lincoln's-inn-fields will not be disposed to seek after.

The licentiates having been informed of the high privilege which they possess, of taking the law in their own hands, are urged to do so without delay:—"The Society of Apothecaries, therefore, under a conviction that increased security to the public health will result from an efficient execution of the law which forbids the practice of medicine by those who have not given evidence of their possessing adequate skill, beg to urge upon the public authorities, upon medical associations, and upon individuals, the importance of putting the law in force against offenders in such fitting cases as may come under their immediate notice. The Society themselves have, in the meanwhile, instituted several additional prosecutions against illegal practitioners, which are now in progress."

Does the Company really imagine that their licentiates will be such noodles as to act upon the suggestions here made? We do not think so, for we are firmly persuaded they have too much regard for their own characters, to become informers against parties whom the Company would be ashamed to prosecute.

Every day brings to light facts which prove the necessity of granting a charter of incorporation to general practitioners, where they can elect their own officers, and enjoy such privileges as shall protect them from competition with illiterate quacks, without the necessity of undertaking personally the office of public prosecutor.

THE NAVY AND ITS APPOINTMENTS.

Every day offers cases of public importance to illustrate the influence which the medical profession has secured with Government after thirty years' agitation.

Our readers remember the celebrated expedition to the North Pole, under Sir Charles Clark Ross. Two surgeons and as many assistant-surgeons accompanied that eminent commander in his perilous voyage; and it was, of course, mainly to their scientific skill that the remarkable preservation of the large party (not one life being lost) was owing. Well. The whole of the executive, from the commander down to the humblest clerk, have received rewards and promotions (several very satisfactory). But *not* the medical staff. They hold precisely the same grades now as on setting out in the expedition seven or eight years since!

We need not say that in the navy there are several surgeons of long standing and of the highest claims to promotion by their connection with similar perilous scientific enterprises. A short time since there was vacant the appointment of deputy-inspector; and to this turned of course the ambition of many gentlemen in the position we have described. The gentleman who has secured it, though, no doubt, a very worthy and honourable officer (Mr. Drummond), had no claim (save *equal* standing) that we know of, except that for some time he had held the appoint-

ment of private surgeon to Lord Auckland. As if to show further that luck is better than merit. Mr. Drummond has comfortable *home* quarters in the Marine Hospital, Woolwich.

This usual, but not, therefore, satisfactory, instance of patronage has just been followed by another. If we are to believe the *Morning Herald* of the other day, Mr. James Wingate Johnston, a gentleman who has had the advantage of winning his services in the lucrative arena of convict transports, has just received another deputy-inspectorship of hospitals. To say nothing of others, as of M'Williams, Robertson, &c., Mr. Johnston is five years the junior of the gentleman who had the chief medical superintendence of the Arctic expedition under Ross!

We shall conclude with one more fact. In connection with naval services performed on the African coast, every officer engaged in the dangerous mission has been promoted, with the exception of the medical officers.

THE ROYAL FREE HOSPITAL.

The death of Benn, and the inquest, recorded in another page, illustrate with what ease in this country of abundant workhouses and superabundant hospitals, the victims of destitution can be hurried into the next world. It is a striking argument of the efficiency both of voluntary and statutory charity. A poor wretch, suffering alike from disease and inanition without a friend or an adviser, naturally singles out from all our charitable institutions the one that has been most trumpet-tongued in its professions of unlimited and unrestricted benevolence; and, crawling to the much-desired asylum, the advertised sanctuary of the wretched, supposes himself at last havened where exhausted nature may be recovered, and the mischiefs of a wrecked constitution repaired. He comes not only well, but well-timed; and he is at once ushered into the presence of the Founder and principal Surgeon of the charity. If ever there was a test of the professions of the Royal *Free* Hospital it was assuredly here. While a shilling was in its coffers there could be no more fitting recipient: the whole trusteeship of the institution was void, if there were no advantage in it for this poor wretch. But what happened?

Benn is examined by the surgeon; it is not pretended or insinuated that there was any mistake in the diagnosis; the Surgeon and Founder *knew* that, if his institution did not immediately succour him, twenty-four hours was the outside tenure of the poor man's existence. Yet there was no admission!—and the wretch who had crawled so far for what he thought sure help, has now to crawl further for that on which he can place only secondary reliance. He scarcely leaves the inhospitable door of that *free* institution, which had so raised and belied his hopes, before nature fails him, and he sinks to the earth all but dead—his only protest against the deplorable and murderous deception which has victimized him.

Why this refusal, this repulse? This is a question which demands not only an explanation, but one full and satisfactory. We have here involved, indeed, a matter of primary importance to the public as well as to the benefactors of the hospital. The existence of such an institution is a public fact, and if, instead of being a *free* hospital, it be, as in this case, a *free* and perilous *lure*, public humanity as well as justice requires its extinction.

Had there been no Royal Free Hospital it is extremely probable that this poor man would have found with less exertion and pain, a nearer asylum, where his life might have been, if not saved, at all events much protracted. We have looked through the details of the inquest in vain for any answer approaching to full or satisfactory. If the death lie at the door of the Royal Free Hospital, its managers have in no way relieved themselves from the responsibility. But before we investigate the sort of answer that has been given, let us not refrain from condemning in the strongest manner the magisterial course which denied a fuller exposition of the facts of the case. There were no nurses summoned from the hospital, nor any effort made to have their attendance enforced, yet they could have given important evidence as to what beds were full, and as to what were the means of the hospital to receive the patient. When questions were put to the porter, with a view to elicit information on these matters, the interrogators were silenced, and the questions not allowed to be put by the magistrate. The only party permitted to give any information on this subject was Dr. Marsden, who cannot tell us whether the number of patients actually in the hospital was thirty or forty, but speaks of them with the utmost vagueness. We have, therefore, no means of knowing to what extent the hospital is answerable for the death of Benn. What little evidence we have is from the party principally inculpated, and this evidence is vague and indefinite, and if it lead to any presumption it is to one against him. We must, indeed, form our conclusions rather from reasoning than from evidence, and where we have not sufficient information wait till we obtain a clearer light.

Dr. Marsden tells us that there are beds for 140 patients in the hospital, and says that there are two wards containing each fifty beds closed. Are there then forty beds in actual service? If so, and there were only from thirty to forty patients within the walls on the day of Benn's application, how happens it that that poor man was denied admission? The porter speaks of having power to receive accident cases; if so, how, again, happened it that Benn was refused because there was no vacant bed? Dr. Marsden swears that there was no bed unoccupied; how then could there have been instructions given to the porter to admit accidents? How, again, happens it that with forty beds there were only from thirty to forty patients? These are very important inquiries, and, if it be now late to put them, the more must be our regret that during the inquest information had not been sought on them by him on whom the law imposes the obligation, and to whom it intrusts the power.

We now, therefore, ask for what the coroner should have asked: a plain downright authenticated statement of the names of the—between thirty and forty—patients who, on Friday, August 6, tenanted the forty beds which, out of 140, were open to charitable use. There must be no concealment on this matter: it is the duty of the parties connected with the hospital to see that this suspicious, because inexplicable, circumstance should be investigated and properly submitted to the public.

The coroner must deeply regret that he allowed this deplorable obscurity to rest over the conduct of the hospital administration. No one should have felt more strongly than he the necessity of fully examining every person connected with the hospital, who could have given a scintilla of evidence on this deplorable transaction. He must feel that instead of preventing Dr. Worthington and the "Guardian" from inquiring into these matters, he should have lent them all the aid in his power for achieving the elucidations they sought. The public know that, while the institution is receiving from five to nine and ten thousand pounds per annum, he, that very coroner, is one of the managing committee that disposes of those funds; that his son, in consequence of negotiations with Dr. Marsden, the inculpated founder of that institution—the coroner's son—is one of the three surgeons to the hospital; that the coroner's own personal management of the institution and its funds was under trial at that inquest in connection with the death of a human creature; and, therefore, if on all coroners the necessity of a full and satisfactory investigation be imperious, it was much more so on him from the extraordinary position in which an ill fortune had placed him.

But what makes all these considerations far more pressing and overwhelming is the fact that this very coroner, a manager of the institution, and father of one of its surgeons, had, in his capacity of editor of a weekly journal, and previous to the adjustment of his personal differences with Dr. Marsden and to the appointment of his son, published insinuations and accusations directed against the character and government of the institution of the gravest hue. Professing to answer correspondents, he thus wrote of Dr. Marsden and his "charity":—

"Senex, a Lover of well-audited Accounts.—"The constitution and government of the hospital "(Royal Free) are, we acknowledge, proper sub-"jects for consideration and discussion. Ten "thousand pounds of public money were thrown "into the coffers of the Royal Free Hospital in "the last year."—*Lancet*, Nov. 9, 1844.

Subsequently he published the following mysterious threat:—

"Several further communications respecting the appropriation of two beds in the Royal Free Hospital, &c. * * * Some of the letters refer rather to *private* than public transactions, &c." * * *.—*Lancet*, Nov. 16, 1844.

And a little later he thus more clearly shadowed out his accusations:—

"'Observer' is desirous of learning what is the amount of salary or per centage received by *two* well-dressed persons whose business it is to beg for subscriptions for the Free Hospital in Gray's-inn-road? He adds 'that surely one such person would be quite sufficient to draw upon the funds of the hospital.' For ourselves, we may state that we cannot give a definite reply to the question. A general meeting is held annually in February, and it is likely that at the next meeting *many* interrogatories of the description here proposed will be submitted to the committee, and that the finances of the institution will be subjected to a thorough investigation. Nothing, in our opinion, is more detestable than to see any institution trumpeted forth as a 'public charity,' if it be used for PRIVATE purposes by individuals who boast of their philanthropic services. Several establishments of this description have lately been brought under our notice, and, we believe, that *two* of them will be found to contain the most curious accounts which have ever been pulished, relative to the FRAUDS which are committed in the metropolis under the much abused name of 'charity.'"

If such was the character of the management of this hospital before the coroner was elected to the committee, or his son appointed surgeon, what has happened to assure us of a change subsequent to those two events? Did the coroner

charge his present associates with what they were not guilty of? If he did, where is his public apology and retractation? If he did not, are his associates reformed, converted, regenerated. What is the *real* practice, what the real character of the hospital management? If this thing demanded an investigation when, with 140 beds open, a poor girl was denied admission, is it demanded less now when, with an income of many thousands, and with only from between thirty-six to forty inmates, it still turns out a poor man to die at its very portals? Certainly, there is something here on which we should have a far fuller investigation than was afforded us on the day of the inquest. *And we shall have it.*

NOTE FROM MR. PENNINGTON.

Sir,—Will you do me the favour to insert this note in your *Medical Times?*

From unavoidable circumstances I was prevented attending the meeting of the National Institute.

The editor of the *Lancet* has drawn an inference that I have deserted the cause.

It has now, and ever will have, my warmest interest; respecting the event, I never was more sanguine.—I am, Sir, yours, &c.,

R. R. Pennington.

Portman-square, Aug. 25.

LITERARY AND PARLIAMENTARY QUACKERY.

(Letter from Dr. Edye and Son.)

(Continued from p. 516.)

Sir,—I said that the "Müller" trick was clever, dashing, unique. The conjuror, if he did not exactly get *into* the quart pot, as he promised, got out of it as he could hardly have expected. The favour he conferred on his readers by the pledge of upwards of "twelve hundred highly finished engravings," and an expenditure of "many thousand pounds," was only equalled, as he logically showed, by the favour he did them in *withdrawing* from the benefaction. After playing with his subscribers' vanity for months by bubble promises of the most brilliant texture, he then, and with as much success as the polite Frenchman, gives a hearty kick to a certain locality of his subscribers' persons in so adroit a fashion that it was felt to be a delicate mode of administering a further compliment! But then, if he did not give "Müller and the thousands of pounds," he would give something else. Elliston, for one of his benefits, roused provincial curiosity and excitement to their *acmé*, by a similarly impossible pledge of a "brilliant display of fireworks from the stage of the theatre," the original cost of which was also "many thousand pounds." The theatre was crammed to suffocation—expectation at its highest pitch—enter Mr. Elliston. "Rejoiced at so crowded an auditory"—"had prepared a magnificent collection of pyrotechnics"—"unfortunately at the last moment the proprietor had put in his veto"—"unfortunate—very—but—but—to compensate them—the orchestra [three shabby-looking fiddlers] would play them 'God save the King'"—"Gentlemen, strike up!" *Exit* Mr. Elliston with a very pompous strut. Müller is our friend's "pyrotechnics"—and for 'God save the King" we have the great compensation—*Matteucci!* Wakley cannot give the course, costing thousands of pounds; but he can—ay, and *will*—give them in worse English, a bad French translation of a very ordinary Italian monograph!

Our friend's scientific translations are always odd illustrations of a species of quackery to which he claims an exclusive title. At one time he had a lust for presenting every prescription to the non-learned—his readers—he seems to know them—in the humble vernacular; and hence on one occasion we had pulvis Jacobi rendered "powder of Jacob." Matteucci is given with an accuracy as harmonious. It must be a work of great authority in medical science. Without troubling you with one word of admiring comment, I will give you a *few*, a very few specimens of translating accuracy, and leave the subject till some new illustrations demand from me and my esteemed son a new encomium.

MODERN SCIENTIFIC TRANSLATIONS.

Voici un tendon, une membrane, qui tels que je vous les montre, durcis et raccornis, parraissent n'avoir jamais fait partie d'un corps organisé; cependant, si nous les plongeons dans l'eau, vous les voyez, *à mesure qu'ils s'en imbibent*, redevenir mous, souples, élastiques, et prêts à remplir dans le corps vivant les fonctions qui leur sont réservées.	Look at a tendon, a membrane, which, as I show you, is hard and horny, appearing never to have formed a part of an organized body; yet, if we plunge it into water, you will perceive that, *according to its imbibing power*, it will become moist, supple, elastic, and enabled to perform in the living body the functions which belong to it.—(Page 579.)

The reader may suppose that such tendons and membranes may be *really* employed again in the living organism: Matteucci means that, by soaking in water, they will recover the *physical* properties which enabled them *originally* to perform the functions assigned to them in the living body—"à mesure qu'ils s'en imbibent" means *in proportion as they get soaked*, and not "according to its imbibing power." "Un liquide écumeux acide," and "un liquide alcalin," are respectively translated "a frothy liquid acid," and "a liquid alkali," instead of "a frothy acid liquid," and "an alkaline liquid."

Que ne pourrait on dire de l'ouïe et de la voix, qui sont simplement des effets de vibrations particulières de l'air, propagées par des solides, d'après les lois générales de l'acoustique?	Why can we not say that hearing and voice are simply the effects of particular vibrations of the air, propagated through solids, according to the general laws of acoustics? (!).
L'action chimique de la lumière qui décompose l'acide carbonique, porte le carbone sous forme de combinaisons nouvelles dans le sein des végétaux, en dégage l'oxygène et *produit ainsi ce qui les affinités chimiques les plus puissantes ne peuvent réaliser*, &c. &c.	The chemical action of light, which decomposes carbonic acid, carries the carbon under the form of new combination into the interior of vegetables, disengages the oxygen, and *produces such combinations as the most powerful chemical affinities are unable to effect*, &c. &c.
Elles sont de même nature que celles qu'exerce le noir de platine sur le mélange d'hydrogène et d'oxygène, l'argent divisé sur l'eau oxygénée.	They are of the same nature as those which the black platinum powder exerts upon a mixture of hydrogen and oxygen, and silver scattered on oxygenated water.
Mais aujourd'hui nous pouvons, à l'aide du seul phénomène de l'endosmose, *fait entièrement du domaine des forces physiques*, expliquer, &c. &c.	We can now explain, by the aid alone of the phenomenon of endosmose (*occasioned entirely by the dominion of the physical forces*), &c. &c.
Par ce changement de mot, on se fait une dangereuse illusion.	By this change of the word, we become conscious of a dangerous illusion.
Voici un tube de verre; son extremité inférieure, fermée par un morceau de vessie s'élargit en forme d'entonnoir.	Here is a glass tube, *having its inferior extremity closed by a piece of bladder extended in a rounded form* (!!).

L'acide sulfhydrique is converted by our friend into sulphuric acid.

Si l'extremité inférieure du tube a une largeur telle que la membrane ait 40 millimètres de diamètre; et que le tube ait 2 millimètres, &c. &c.	If a tube of 2 millimétres be closed at its lower extremity by a membrane 40 millimétres in diameter, &c. &c.
Elles finissent par y être *comprises* et presque confondues lorsque ce liquide est devenu plus ou moins dense.	They end by becoming *compressed and nearly blended together*, on the fluid becoming more or less dense.

Even the typographical errors of the French edition are carefully copied by the *Lancet*.

Thus, at page 638, we find certain tables, in which the first and third columns are intended to indicate the volumes of liquid in tenths of a cubic centimètre; both columns are, however, marked as if they represented *grammes*; the French edition gives the weight in the second column in one instance as 47·130 grammes instead of 17·130 grammes, evidently from an error and oversight in printing, which could not well have escaped the eye of a careful translator; but the *Lancet* faithfully gives the 47·130. In the same way we find all the miscalculations of the French editor faithfully copied: 1·05 grammes is there calculated equal to 20 grains (one gramme is between 15 and 16 grains, about 15½); 0·40 gr. is considered equal to eight grains; 0·45 gr. equal to nine grains.

Dutrochet a laissé une plante exposée à l'air jusqu'à ce qu'elle eût perdu par l'évaporation 0·15 de son poids.	Dutrochet left a plant exposed to air until it lost by evaporation about *one-fifteenth of its weight*.
Le Professeur Piria a toujours trouvé du manganèse dans les graines du *lupinus albus*.	Professor Piria *always found grains of manganese in the lupinus albus* (!!!).

Capital fun this, Sir, in the shape of learned translation in a *learned* work? How happy is Matteucci! What a knowledge of French, of physics, of chemistry in the translator! How blest the readers! But I have done. I am wearied with admiration, worn out with wonder. Till the great man try his hand at a second edition of the "Secret Friend," or some work of equal celebrity, he can never after the great deeds I have commemorated do anything requiring the humble testimony of—

Your obedient servants,

Jerome Edye and Son

MORE WORK FOR NO PAY.

[To the Editor of the Medical Times.]

Sir,—The laurels so long and so unjustly withheld from the unhappy profession of which chance to be a member are now about to be

called in a profusion as flattering as it is unexpected. After years of wearying and ill-requited toil in the faithless service of Apollo, Æsculapius, Hygeia, and, I might add, Lucina, we are suddenly called upon to enlist under the banners and rally round the standard of the goddess Cloacina, "chacun à son goût." By a recent act of Parliament, every practitioner of medicine, provided always he be legally qualified, shall be entitled to secure to himself the distinguished position of *honorary inspector of nuisances* in his peculiar district; and when such nuisances shall be found prejudicial to public health it shall be competent to magistrates in petty sessions to order the abatement of the same, on the joint certificate of *two* of the distinguished honoraries thus created. Permit me here, Sir, to congratulate you as a medical man on your newly-acquired privilege—that of dipping your nose into your neighbour's cesspool, and "all for the honour of the thing." Carefully have I perused the act in question, but not one word can I find about the remuneration to be awarded for such service; faith no! as usual, it is all to be done "pour l'amour de Dieu.

Not to waste your time and space with unanswerable argument and irrefragable proof of my assertion, I at once flatly affirm that, in any enterprise having for its *true* object the public weal, the medical profession of this country will ever be found to co-operate with a zeal and cordiality totally irrespective of personal interest; but that any moral obligation exists compelling them to discharge this loathsome duty *gratuitously*, I deny. What would a fair remuneration out of the public purse be in comparison to the advantages which the public would reap a thousand-fold? The duty is not an enviable one, neither is it a mere matter of form: it entails a certain amount of exposure to private pique and interested malice from those who shall be thus brought under control of the law, and no honest man will certify to that which he has not by *personal observation* ascertained to be correct. In a pecuniary point of view the medical profession have an interest in the continuance of such nuisances as are contemplated; but which of its members ever held up a hand in favour of their preservation? A principal feature in the new and summary process of abating them is a vast saving of expense to the public. Is not this in itself a boon? Why, then, demand the unrequited aid of a medical man into the bargain? That, to say the least, is avaricious. Such aid, though available, is not absolutely necessary, because I will venture to assert that any man who suffers from a nuisance will, if he consult a respectable solicitor, be sure to find that "for every wrong there is a remedy;" it might be an expensive one and slow in its effect.

There is more in this new act than meets the eye: where it will be plied once for the protection of public health, it will be plied twenty times in protecting and enhancing the value of private property. The usual functionaries to whose custody the safety of man's worldly possessions is confided—to wit, policemen, constables, beadles, &c. &c.—get *their* regular pay; but now, forsooth, the medical man is to mount guard over these *gratuitously*. If health is the sole object, what, let me ask, is more precious? It is beyond all price, and it is not to be had, preserved, protected, and kept in perfect repair *for nothing*. Liberal as are the draughts upon our time and talents in behalf of the public, if we, Sir, approach Parliament in the hope of getting *our* grievances redressed, we are thrust out of court without much ceremony: *our* wrongs are beyond the reach of remedy—in fact we are slaves to whom the blessings of emancipation have not yet been extended. Amongst the many unpaid services demanded of us I might mention attendance under the Poor-law Act for (strictly speaking) no remuneration; attendance upon hospitals, infirmaries, and dispensaries; then come insurance-offices, who always want something for nothing; then clubs, benefit and friendly societies: these, too, must not only have their members attended for a shadow, but their funds protected from invasion by certificates in favour of sick claimants.

The next and crowning novelty I presume will be an act to amend the Vagrant Act, with a clause compelling medical men to overhaul all trampers (a wise provision in these days of fever) and place them under quarantine, or furnish a clean bill of health—*also for nothing*.

My object in offering these remarks is to introduce to the notice of the profession the simple question, Whether they mean to submit to this new imposition? If they do, I do not; and the right hand which pens this shall never attach my signature to a nuisance-certificate till its "colleague on the left" has received a fair equivalent. I have not alluded to the gratuitous certificates of the "cause of death" which we supply, because, with few exceptions, we have granted them willingly and cheerfully, as being for a good purpose; but I must say I fear our alacrity in this has opened a door for further encroachment. To prove that he who stirs in a nuisance will get into bad odour, I might mention an instance where I refused the document required, but provided the applicant with a *local* act of Parliament which made it competent to *himself* to do the needful, he having "a cure of souls." From that day to this no steps have been taken, and the evil still exists—why? because a loss of popularity would have endangered a piece of preferment then pending, "if he had taken an active part." I could also tell a tale of a benefit society mulcted in the amount of £32 by trying to cheat a doctor of his fee; and an anecdote or two about insurances-offices might be added, illustrative of the maxim "that experience must be bought." I am an advocate for "Government education," and I would teach them, in the first place, *what is due to the medical profession*. As for the public, I would permit them awhile to pursue their present philosophical investigations till dear-bought *experience* convinces them that saving units by sacrificing tens is a financial fallacy, as exacting or expecting unpaid services from overwrought brains is a moral fallacy subversive of the creed that "the labourer is worthy of his hire." Hereafter I hope to adduce instances of the penny-wise-pound-foolish policy of such a system, and to observe on some other matters which beset with thorns our path. For the present, to such of the profession as mean to flounder gratis in public nuisances, I have only to say, gentlemen, "The more you stir the more you'll stink."

I am, Sir, your obedient servant,
QUID PRO QUO.

APOTHECARIES AND PHYSICIANS.

[To the Editor of the Medical Times.]

SIR,—O. L. V., at page 460, asks "Is not every one who practises physic without a license from the College of Physicians infringing their charter? and what clause in the Apothecaries' Act entitles an apothecary to practise physic?" Your correspondent seems not to know that the apothecaries were a recognised body, and incorporated into one company with the old and opulent *fraternity of the grocers* by King Edward the Third, in the year 1345; and that Edward's charter of incorporation was renewed and confirmed in 1429 by King Henry the Sixth, who, in 1447, granted to the joint company new powers and privileges, among which was that "of supervising, garbelling, searching, examining, and proving all sorts of merchandises, spices, and drugs in any wise belonging to medicines;" and that the corporation was required to appoint "sufficient officers skilled in the premises of this kind, to search, examine, and prove all the spices, drugs, and merchandises above specified and mentioned, whatsoever belongs to medicines, in whosoever hands they can find them."

No doubt seems to have been entertained of the right of the apothecary to visit and prescribe for persons in their sicknesses till long after the first charter of King Henry the Eighth was given to the College of Physicians. If, indeed, a physician was employed, the apothecary, as is the case now, was considered as a subordinate person; but, in the absence of the physician, the care of the patient fell to the apothecary: in fact, as old Chaucer very decidedly intimates, they played into each other's hands:—

"For eche of them made other for to win,
Their friendship was not nowe to begin."

After Henry the Eighth had granted to the physicians valuable privileges and immunities, and they had greatly increased in number, disputes between the physicians and the apothecaries about the attendance upon patients gradually grew up; and the very measure which was proposed and carried out by Sir Theodore Mayerne and Dr. Atkins, through their influence with James the First, to separate the apothecaries from the grocers, and to constitute a Society of Pharmacopolites, as the royal grantor chose to denominate them, tended greatly to increase and encourage these disputes; so that at length the College of Physicians determined to establish by the strong arm of the law their sole right to practise, and to prevent any interference with their prerogative by the apothecaries. A case, therefore, was fixed upon for trying this important question. Mr. William Rose, a member of the Society of Apothecaries, was proceeded against for having visited John Seale, a butcher, in his illness; for having taken upon himself to judge of the disease, and for having sent him medicines without the advice and prescription of a physician. The jury, as is often the case now when anything appertaining to medicine comes before them, were puzzled, and, therefore, brought in a special verdict, "stating the charter, the confirmatory statute, and the facts of the case, and submitted to the court whether the defendant, Rose, did practise as a physician within the intent of the letters patent and the act of Parliament."

This special verdict was three several times argued before the judges, who came to the following conclusion:—

"That practising physic within this statute consisted—1, in judging of the disease and its nature from the constitution of the patient, and many other circumstances; 2, in judging of the fittest and properest remedy for the disease; 3, in directing or ordering the application of the remedy to the disease: and that the proper business of the apothecary is to make and compound and prepare the prescriptions of the doctor pursuant to his directions."

The judges, therefore, being unanimously of opinion that the facts proved against Rose did amount to the practising physic within the meaning of the act of Parliament, gave judgment accordingly.

When it is considered that, at the time when the judges came to this decision, the claims of the physicians to exclusive practice were advocated by most of the wits and literati of the metropolis; that one of the most fashionable of the poets, and an eminent physician, Garth, had not long before published a poem, "The Dispensary," in which the physicians were held up to the highest commendation, and the apothecaries to ridicule and contempt; when it is considered, also, how little attention, generally, lawyers (a) have given to physic: it is perhaps not to be wondered at that the learned judges came to this conclusion.

The Society of Apothecaries, however, were not to be daunted: they knew their own value and their own rights; they could not but know that they were *not* the ignorant persons which the Act of Henry the Eighth contemplated; they were not "common artificers, smiths, weavers, and women," but they were "persons skilled in the premises of this kind" whose duty it was

(a) The very delightful and talented author of "Passages from the Diary of a Deceased Physician," throughout his volumes, confounds the physician and the surgeon in a most extraordinary manner, and his *naïveté* upon the subject is most amusing.

"to search, view, and see such apothecary wares, drugs, and stuffs" as were used in the cure of diseases, and to the examination of which the College of Physicians themselves could not, under the Act of Henry the Eighth, proceed, till they had called to their assistance the wardens of the Apothecaries' Company. The master, wardens, and court of assistants, therefore, appealed by writ of error to the House of Lords against the verdict of the Court of King's Bench; and the Lords, "after hearing counsel on the writ, ordered and adjudged that the judgment given in the King's Bench for the president and college or commonalty of the Faculty in London should be reversed:" and thus the apothecary was restored to his old and legal rights, *which have never since been called in question.*

Aug. 12. T. D. P.

CHARACTERISTICS OF FEMALE BEAUTY.

[To the Editor of the Medical Times.]

SIR,—Having observed, a short time ago in your meritorious periodical, "The Arabian Estimate of Female Beauty," I have thought the following lines from Franciscus Corniger, on the same subject, a curiosity which might please some of your readers.

I am, Sir, your obedient servant,

LECTOR.

DE TRIGINTA NOTIS ELEGANTIÆ MULIERUM.

Triginta hæc habeat, quæ vult formosa vocari
Fœmina: sic *Helenam* fama fuisse refert.
Alba tria: et totidem *nigra:* et tria *rubra* puella:
Tres habeat *longas* res: totidemque *breves:*
Tres *crassas:* totidem *graciles:* tria *stricta:* tot ampla:
Sint itidem huic formæ, sint quoq; *parva* tria
Alba *cutis* nivei *dentes*, albique *capilli*,
Nigri *oculi*, cunnus, nigra *supercilia*.
Labra, *genæ* atque *ungues* rubri: sit *corpora* longa,
Et longi *crines* sit quoque longa *manus*.
Sint que breves *dentes*, *auris*, *pes*, *pectora* lata.
Et *clunes*, distent ipsa *supercilia*
Cunnus et *os* strictum, stringunt ubi cingula stricta.
Sint *coxæ* et *culus*, vulvaq. turgidula.
Subtiles *digiti*, *crines* et *labra* puellis,
Parvus sit *nasus*, parva *mamilla*, *caput*.
Cum nulli aut raro sint hæc: formosa vocari
Nulla puella potest, rara puella potest.

MEDICAL REPRESENTATIVES.

[To the Editor of the Medical Times.]

SIR,—The condition of the medical practitioner will, I fear, be but little improved until he can be fully represented in Parliament by a certain number of his professional brethren. The present niggardly manner in which medical men are remunerated for their important services to the sick poor is altogether absurd, the money they receive for such dangerous and arduous duties being scarcely sufficient to pay for the medicines they have to supply. The contract system appears to be a most unjust one, and so long as it continues the general practitioner will be inadequately paid for his services, and the poor but sparingly attended.

From amongst the great number of medical men in the kingdom, surely a few of them might be selected to sit in Parliament to forward the interests of the whole body. Many talented individuals would willingly accept a trust of such great importance to the whole medical community, and by discernment and eloquence they would soon raise the condition of their numerous brethren. The medical practitioner would then be better remunerated for his services, and he would also soon attain that position which, by his education, experience, and industry, he is so fairly entitled to.

*** We agree with our correspondent.

THE ROYAL FREE HOSPITAL.

On Thursday, the 12th instant, an inquest was held at the workhouse of the Holborn Union, in Gray's-inn-road, on the body of William Benn, who had died there on Saturday, August 7th. From the evidence of Mr. Simpson, it appeared that he had on the afternoon of Friday, the 6th instant, made application for relief at the Royal Free Hospital, whence he was sent unassisted, and, according to the witness, with some asperity. He then proceeded to the workhouse of the Holborn Union, falling twice by the way; and, on his arrival, was taken in, complaining of want and feebleness. At eleven o'clock the next morning he died.

Owing to the absence of some evidence judged necessary, the inquest was adjourned till Thursday, the 19th. On the evening of that day the inquest was resumed.

Mary Dale having been sworn said: I am a superintendent in the sick ward; on Friday, the 6th of August, the deceased was sent into the sick ward, between four and five o'clock in the afternoon. He said that he was very ill. I gave him a little gruel; he said he did not feel hungry, he wanted something, but did not know what. The quantity of gruel was a few spoonfuls. The doctor told me to give gruel. I gave him also a little tea. It was Plummer who gave me the doctor's order. He seemed so ill that I thought he would like to sleep. He could not feed himself, he was so ill. He stated that he had not slept in a bed for six months, and had been without tasting food for six days. He did not seem sick at all in the ward. He kept calling for medicine; his words were—"Oh, dear me, I wish I had some medicine!" I wiped the perspiration off him, which was very heavy, and he went to sleep. The pain of which he complained he said was in his stomach, and exclaimed, "Oh dear!" Mine is the only sick ward for the men; when they get better they go into the infirm ward. There were ten patients in my ward at once; at the time of Benn's admission the patients were all on fever diet; there were none in the ward who were receiving cordials of any kind. I had nothing beyond tea under my control which I could have given him. I did not think he was nearly so bad as he was, and did not inform the matron how ill he was. The deceased had had a bath, and patients are generally very much exhausted, so I did not wonder at him. I did not want to worry him, so left him to sleep. The doctor saw him in the afternoon, but did not come into the ward; no one came in but Plummer. I left at eight o'clock; at this time the medicine had not arrived; a man named Chickleday brought it, and gave it to Plummer, the night nurse. Chickleday was in the habit of bringing medicines between eight and nine in the evening. I gave him tea twice each time, about half a teacup-full. I got to the ward in the morning a little after six o'clock; the poor man could not speak. I was told by the other patients that he had been making a bad noise all night. Plummer told me he thought he would not be here long. He said that he had administered medicine to deceased at about four in the morning, and that he had not spoken since.

It was here observed by a juror, that Plummer had stated that he had given some medicine to deceased at nine in the evening before, but none after that time.

Mary Dale's examination continued: I gave him more tea when I came in the morning; I poured it into his mouth, and it ran out at the corners; he could not speak, nor did he move his hands or make any sign. I did not immediately send for the doctor until Plummer thought he was dying; that was because I did not know the rule: there are no printed directions furnished to nurses, or placed in the ward; I depended on Plummer: he had been there all the night. The sisters of deceased have been here. They said that their brother was a dissipated, worthless fellow, and they would not attend the inquest. I went to his bedside every five minutes. About half-past ten Plummer turned him over on his side, and he expired soon afterwards. I did not see wine or brandy offered to him, nor was anything of the sort in the ward. Beef-tea was not ordered, nor put in the ward. He died at eleven o'clock on Saturday morning. I noticed before he died that he perspired very much. He looked better when dying than when he was first brought into the ward. The doctor did not see him on Saturday before he died; he was expected every minute. Mr. Gibson came when he was dead, but made no remark. His assistant had seen him the day before. I believe he stated on his admission that he had come from Norwich.

A guardian, wishing to put a question to witness through the court, was informed that the inquest was not held for his gratification, but to further the ends of public justice, and that the inquiry would be as complete as any one could desire.

Benjamin Eagle, a witness at the former sitting, was here called. Mr. Gibson, the medical officer of the union, stated that he was too ill to be present. At his former examination he was very unwell, and the excitement of mind which that event induced had brought on a relapse. The shock had been very mischievous to him in his then state of health.

Mary Dale recalled: Eagle is in my ward in bed. He is very weak and in a fever. He has been very ill since the last inquest. He is taking medicine prescribed for him by the doctor, and lives on fever diet: fever diet is bread and water. I have not seen him to-day. Mr. Gibson has seen him every day.

John Rowland Gibson examined: I am a member of the Royal College of Surgeons, and one of the surgeons of this establishment. We have three departments: one of us has charge of the men, another of women, and a third of children of both sexes up to a certain age. I have the men under my care. I did not see deceased during his lifetime. I left between two and three on the day he was admitted. I did not hear of his illness, nor know anything of the facts, till I was informed the next day that he was dead, and that Mr. Jones had seen him. That was about the middle of the day. I have since then examined the body. I examined it on Wednesday, four days after death. I have not certified as to the cause of death. Mr. Jones did not speak to me of the cause of death. I did not know when Mr. Jones certified. I found decomposition was going on; the flesh was turning green, and air was forming in the cellular membrane. The body was thin, but not very emaciated. There were no external marks of violence, except a small mark on the forehead about the size of a shilling. The brain was of a healthy appearance; there was no engorgement of the vessels, external or internal; no congestion. On examining the chest, I found on the right side that the membrane lining the interior of the chest and that of the right lung adhered. The lobes of the right side of the lung adhered; there were old adhesions—signs of inflammation. Part of the lung on that side was puckered, hard, and had some deposit in it. Some of that deposit was undergoing softening. The greater part of that lung—five sixths, at least—was in a very engorged state; a very small part only was of a healthy character. The left side of the membrane lining the chest and that covering the lung adhered close, and was incapable of separation throughout its whole extent, except by force; that also was an old affection. The lung was almost converted into a substance of a fleshy nature—permitting very little air to enter, and presenting no appearance of a healthy lung. On the right side was some fluid of a dark-red colour effused into the chest, not bloody serum, but I think an exudation of the lung after death. The heart was large and flabby, its valves were sound. The stomach and intestines were distended with gas; the stomach contained about two tablespoonfuls, or an ounce. The intestines throughout were healthy. There was some fæcal matter in both intestines, but small in quantity. The spleen was large and very engorged, offering a rather granular appearance. The right kidney appeared healthy; the left enlarged and softened.

Robert Plowright examined: I am porter at

the Aldersgate workhouse. A person, whom I believe was the deceased Benn, slept on the 3rd of August all night at the Aldersgate Union. According to our custom he was entered :—"Age fifty-four, of the parish of Guildford, dark complexion, hazel eyes, hump-backed, five feet eleven inches in height; is going to the hospital." He left on the morning of the 4th. He stated that he had some property. We gave him some supper on the evening of the 3rd, of pea-soup and five ounces of bread, and the same quantity of bread the next morning, with some gruel. He said when leaving, that he was going to the hospital, but did not particularize any one. He was dressed in a ragged surtout coat, light trousers, and old shoes: his clothes were very bad. He looked to me like a man who had seen better days. He left the union without complaining.

The Coroner doubted whether he stood so high as the individual described by Plowright. Mr. Gibson thought he was five feet ten inches. The rest of the description applied.

Owen Matthews, the undertaker, said he should think the coffin was about five feet ten; he did not measure the body.

George Farrow examined: I am gatekeeper and constable at the West London Union; I do not remember Benn; I have no entry of him. I have an entry of sixty-six persons who were admitted on Thursday night, but none of the entries answer to the description of Benn. I always ask, before any go out in the morning, if any one has any complaint. I always book the visits of the surgeons; we have a dispensary and medicines in the house. I cannot recognise the man by any part of the description that I have heard. We never refuse any at our union while we have room; we admit all. If any ask for food we give them bread; if nothing is asked nothing is given.

George Merner sworn: I am porter at the Royal Free Hospital gate. I well recollect Benn applying for admission on the 6th of August; he wanted to go into the hospital. I told him that we had no beds, that we were very sorry that many patients were presenting themselves whom we were obliged to deny. He went round into the waiting-room, and I saw no more of him at that time, but remained at my post till he came round again. I asked him what was his name and where he came from; he said he was a labourer, his name was Benn, and that he came from the West Smithfield Union and had been directed to come to the hospital. I said I am sorry, but we have no beds. He saw the doctor; he did not bring any paper; he said that the doctor told him they had no beds. The doctor, he said had recommended him to go back to the union, or to St. Bartholomew's Hospital. Directly after he was gone a person called out, saying that the man who had just come out had laid down. That was after Dr. Marsden had seen him. I considered it my duty to go out to the man; I found him then lying down about three or four yards from the hospital gate. Several people were standing round him. I raised him to a sitting posture and said to him, "My good man, you had better go to the union as soon as you can, for you cannot stay here." He made no reply. I said, "If you cannot get up I will help you," and I set him on his legs, raising him by his arm and his collar. He supported himself by a stick. I said "The union is not far, they will take you in; tell them we have no beds." I watched him a little way along the pavement and then returned to my duties. No one made any remarks at the time in my hearing. I saw no more of him. There are several persons present who will witness to my conduct towards him, that it was kind and without harshness.

A Guardian here wished the court to inquire if it was true that there were no beds in the hospital in which the unfortunate man might have been placed?

The Coroner could not put the question. He knew what was his duty, and could not submit to receive instruction in it from any one; the inquiry would be searching.

Richard Gregory sworn: I am coachman to Dr. Marsden, and live at 65, Lincoln's-inn-fields. I saw Benn come out of the Royal Free Hospital on the Friday afternoon; he came out at the side gate. No one spoke to him. I did not hear the porter speak to him when he came out. He went and sat down a few yards from the gate. He did not fall down. He did not speak; a female went and told the porter he was sitting down. The porter came and said "You must not sit here, you had better go down to the workhouse as fast you can." The porter took him by the right arm and one man assisted to raise him up. It was done quite carefully. I heard no one make any remark, nor did I hear Simpson say anything. I do not know Simpson. There were twelve or thirteen persons who came round him. Did not hear any such expression as "murderous conduct." I was at the time sitting on the coachbox. I did not see him fall. There was no violence used.

William Beattie sworn: I am a hearthrug-maker. I was at the Royal Free Hospital as a patient on the day when the deceased made his application. I saw the man sit down outside the hospital, and saw the porter lift him up without any violence. He was raised up by his collar and right arm. I heard him advise the deceased to go to the workhouse as fast as he could, and told him the distance was not great. He used him as gently as possible. I did not hear Benn say anything in reply to Merner. I remained there two or three minutes after Benn was gone. I do not recollect Simpson. I heard some one say it was a pity that they did not take him in, he looked so bad. I went to the hospital on Tuesday, according to my habit as a patient, and then learned that an inquiry was on foot.

Dr. Worthington, incumbent of Trinity Church, Gray's-inn-lane, would like to ask a question.

The Coroner: Sit down, sir. If silence is not maintained I shall be compelled to interfere in a way that I should wish to avoid. I cannot allow these interruptions in my duty.

Dr. Worthington: I also have a duty.

Dr. William Marsden sworn: I live in Lincoln's-inn-fields, and am one of the medical officers of the Royal Free Hospital. On the 6th of August Benn applied for admission to that institution a little after three o'clock. I saw him in the surgeon's room, where I examine patients. I said to him, "What is the matter with you?" He replied, "I am very unwell, I want to get into the hospital. I slept in the workhouse last night and the night before, and have been in London several weeks. I felt his pulse and examined his tongue. I told him that he had heard me say to several patients that we had no beds at liberty, otherwise I would take him in; but, if he liked, I would prescribe for him, and he could have the medicine. He said, "It is of no use doing that, I want a bed and something to eat." I replied, "This is not a poorhouse, you must go to the union from whence you came." He said he had passed the over night at the Holborn Union, West-street, Smithfield. He made no remark or reply. I did not judge him to be labouring under *acute* disease. He appeared feeble, but not particularly so. I had at that time one hundred and twenty-three male applicants for admission into the hospital, besides females, and twenty-three wanted beds; we had no vacant beds at that time. It was a fact that we could not receive him. I do not know precisely how many patients we had. We have two large wards locked up, which have not been open for the last twelve months, in consequence of a diminution in the funds. The wards appropriated to patients were full. I had no other reason for not admitting him. I should certainly have done so, if I had had a bed, though I thought it not a hospital case, but rather more adapted to the poorhouse. It is a common thing for thirty or forty persons to come in one day and say that they are sent from unions, but they only want food. I am simply stating a fact, in saying this, and am not giving an opinion. The porter had instructions, before any patients came, that the hospital was full, and he only performed his duty when he stated that fact to the applicants. The man, when so informed by the porter, insisted upon going forward, and presented himself with the other patients. It is a common question with me to these patients, "Where did you sleep last night?" We have been found fault with by the governors for receiving such cases as more properly should be sent to a union maintained by the parish, than to an institution supported by private donations for the relief of the sick. One nobleman had withdrawn his subscription on that ground, and a resolution was passed against admitting such. I ordered him no assistance at the hospital. It used to be a custom till within the last twelve-months to give relief, but since the falling off in the funds the governors have thought it best to draw it. Persons came, and we gave them money; and many came feigning disease, merely to get the donation. It is still continued in some cases; sometimes it is given in money; at other times in such a shape as seems fittest, as porter or other requisites. There are one hundred and forty beds in the hospital, and the wards were full at the time; there were more than thirty patients in the hospital: I should think between thirty and forty.

Dr. Worthington: And that in an hospital receiving an income of £9000 a year!

Merner recalled: I was not on Friday specially instructed that there were no beds; I had general orders to that effect, but was not to obstruct any one wishing to see the medical officers. There was no notice put up at the hospital gates that the beds were full. I sent those who came to the nearest union. I keep a list of names of those persons who represent that they are sent by officers of unions.

Dr. Marsden: I told him that if he could wait till the next day, and could come again, he should have the first bed. There was no unoccupied bed at the disposal of the medical officers. The institution is supported by voluntary contributions.

Merner recalled: I do not know whether or not any patient was admitted to the Royal Free Hospital on Friday: there might have been an accident, but I am not sure.

Elizabeth and Charlotte Benn, sisters of the deceased, were then called, but did not appear.

The Foreman of the Jury then visited the witness Eagle in the sick ward, and, on his return, reported him too ill to attend.

Mr. Gibson was then recalled, and in answer to the question, "What was the cause of death?" replied, "Primarily, the organic disease under which he had for some time laboured; immediately, it was want of food and the other attentions which his state of health made needful.

The Court: We are here, Mr. Gibson, only dealing with the immediate cause. You have heard the evidence of the case; do you attribute his death to his non-admission to the Royal Free Hospital?

Mr. Gibson: Not especially to that source. I believe that if he had been received and relieved at an earlier period, and placed in suitable circumstances, he would not have died when he did; but I believe that, whatever treatment he might have received, his life could not have been much prolonged.

The Court: Do you believe that any treatment whatever, here or at the Royal Free Hospital could, have saved his life?

Mr. Gibson: For some little time.

The Court: The organic disease was in the lungs?

Mr. Gibson: Yes.

The Court: Could he have been restored to anything like health by any treatment which could have been employed?

Mr. Gibson: I believe not.

The Court: Do you, then, infer his death on the 7th August to natural disease, or to any other natural cause, or to the withholding of that assistance which his case required?

Mr. Gibson: I think one cannot be taken without the other. His first condition must be admitted before the second. Had he been in

a state of health the man would not have died from the privations which he experienced. The habits of intemperance which, I think, were indicated had made inroads on his constitution.

The Court: The whole case is before you; the jury will have to form their verdict, and your testimony is most important; please, therefore, to give a clear answer to my question. From what cause do you believe the deceased died on the 7th of August?

Mr. Gibson: I cannot answer that question [illegible] a more positive manner than I have already [illegible]; I think we are under [illegible] of [illegible]ling the want of food with the previous [illegible]ence of organic disease; the question is [illegible]ound, and I cannot make it simple. I visit daily the sick ward, and see all its inmates and [illegible]ribe for them at the bedside; my order [illegible] [illegible]ion [illegible] each patient is copied, and a copy is pasted on the bottle. In cases of emergency my practice has been to prepare the medicine and despatch some one with it immediately. The medical officer has at all times full power over the dietary; no parsimonious spirit of the guardians ever interferes with the full carrying out of the dietary orders given by the medical officers. Wine and beef-tea are given wherever necessary, and by the book it will be seen for what patients they are prescribed.

The Court: What are your arrangements with your assistant?

Mr. Gibson: I have no written arrangement with him; Mr. Jones has the same power of ordering what he thinks requisite as I have. I consider the treatment of the sick in this ward as under my control.

The Court: Whom then do you blame in this case?

Mr. Gibson: My assistant.

The Court: What are your instructions to him?

Mr. Gibson: His practice has been to attend in my absence, and in cases of emergency; and he has always had the power of adding what, in his judgment, the case required. He has been with me two years and a half.

The Court: Do you wish, Mr. Jones, to make any observation before the case goes to the jury?

Mr. Jones: I do not, Sir. I did not order the man wine or other cordials, because I thought he was not in a fit state to bear it.

Mr. Gibson said that the system was not to blame, for Mr. Jones might have freely ordered what was necessary, and it would have been given, whether it had been wine, beef-tea, or any other remedy he might have thought fit. We have had in the union eight gallons of wine within the last week. I have no doubt that the patients have had it. It is under the care of a most respectable woman; besides which, each patient has a statement of what is ordered for him pasted on his bottle, and they generally look sharp after the wine.

Thomas Heath examined: I live in Weston-street, Spafields; am by trade a smith, and was at the hospital in Grey's Inn-lane on Friday, the 6th of August; whilst I was waiting, the deceased came and sat for a quarter of an hour before the doctor came. I went in next to him, and was undoing my leg whilst the doctor was talking to him. The doctor said, "I cannot admit you, as I have no bed; I will administer to you as an out-patient, if you think proper." He said, "No, he wanted a bed." The doctor said, "If you will come to-morrow, I will take you in, if possible." I heard him say that he was eighty-three miles from home. I thought he was in a state of extreme destitution; he looked as though he was starving.

Mr. Gibson: I think it was a case that might have been admitted either at a hospital or a workhouse. Mr. Jones's attendance is sanctioned by the guardians and by the commissioners.

The Coroner then, charging the jury, said:—Gentlemen, this inquiry was instituted in consequence of a statement first made by the witness, Simpson, who was examined last Thursday. He applied to me on the Tuesday following the poor man's death, making a statement which has been again made before you, relative to the non-admission of the deceased into the Royal Free Hospital, and his subsequent speedy death, from which I judged some inquiry to be necessary, and sent a constable to learn the particulars of the case. Simpson said, that on calling at the workhouse he ascertained that the body was about to be buried; but from the report of the constable I thought that a judicial inquiry was absolutely necessary; still it was not by any complaint, or any supposition, that anything had been done wrong in this house, that my mind was led to that conclusion. No complaint against any officers of this establishment was made, nor was it intimated to me that any neglect which had been shown to the deceased here his death had been hastened. In all these cases, gentlemen, there are many difficulties to encounter with regard to the law, to evidence, and in tracing the facts of the case, and frequently they are too great to be entirely surmounted. In this case we have a very imperfect history of the man: from two o'clock on Friday afternoon to his death on Saturday morning, is the whole of the period respecting which we have any certain knowledge. Where he slept and how he was dislodged, whether by force or otherwise, we do not know. I thought it might turn out that such had been the case; and it should be known and understood that distressed people have, by the law of the land, a right to relief as clear as the title of as any gentleman in England to the free and undisturbed possession and enjoyment of his estate; and therefore, heavy, indeed, is the responsibility of those who are intrusted with the execution and administration of that right, and woe be to him who withholds it from the needy. In this case the conduct of some approaches to that extremity; its history discloses the most painful facts—a picture of circumstances which we could hardly have believed would take place in a civilized country, and which we could never have anticipated from this inquiry. The first witness was Henry Simpson; he saw Benn on August 6, outside the hospital gate, lying on the bare stones, and groaning apparently in great pain; he did not then speak to him, which he explains by saying that he saw the porter take him up, and heard the porter say to him, "Come, old man, you must not stop here, you must go to the union where you came from;" he saw the porter raise him up, and, with the assistance of his stick, he walked on as far as Trinity Church; soon after witness saw him lying a second time on the stones. Witness was walking in the same direction, and said, "You had better let me assist you to the house;" and he succeeded in getting him up, and took him and gave him some ginger beer. The unhappy man said he had come from the country and had walked eighty miles, and had slept lately in various workhouses in London, and on Thursday night somewhere near Smithfield; he said that he had complained of illness at the workhouse, and that they had turned him out. Whether this was strictly true or not we have no means of ascertaining. He said, "I cannot die in the street. I am very ill." His eyes were sunk in his head, and he looked like a skeleton; he could not eat anything, but complained of thirst. The porter at this house said that he ought to have gone to St. Pancras Workhouse. Now, there exists in some minds certain jealous feelings with reference to the admission of the poor into public institutions: they appear to arise from the Law of Settlement, and I am afraid they will continue so long as the law remains in its present state; but we must deal with matters as we find them, and it is to be hoped that the day is not far distant when the restrictions and obstacles of that law will be got rid of. Two hours after the admission of the deceased, Simpson called at the house, and found that the doctor had been sent for, but had not arrived; no medical man had seen him; nothing had been given to him. On Tuesday Simpson called at the house, and was told that the doctor had seen him soon after witness had left on Friday. It is admitted that the man did apply on Friday at the Royal Free Hospital, and that after he came out he lay, sat, or fell on the stones, and that he was picked up and set to walk, and that, about 150 yards farther on, he was seen on the stones again. These things all show his state when he applied at the hospital. Dr. Marsden saw him, and told him that the beds were full, but it seems incredible that a man in his condition should have been allowed to leave any public institution without receiving any relief. Neither money nor food, it appears, was offered to him. The public subscribe to that institution in the belief that there the hand of charity will be freely and instantly extended to all whose want and destitution require relief; and no statement that the beds were filled will satisfy any one that some simple and immediate relief might not have been offered. Such a course might have been somewhat out of the usual routine, but in such a case routine must be set at defiance—system is not to be maintained at the expense of the wants, and perhaps the life, of a fellow creature, but must bow to the emergency of the occasion. But nothing that may have taken place at the Royal Free Hospital can be held to excuse what is done at another place; each must stand on its own merits. I cannot, however, refrain from expressing my concern that no relief was given at the hospital when his condition might have indicated it to non-medical as well as professional observers. That such a man should be found in the street, in the middle of the day, within a few hours of death, is astounding. He was admitted here between two and three, and nothing is given him; the doctor is sent for, when you would have expected that the cook would have been the proper person; but the doctor does not arrive until four; he ordered medicine for him, and left; and then Chickleday says that he went to the doctor in the evening, a few minutes before six, returning at half-past six; the medicine was not delivered till after eight: Plummer says not till nine. These statements have been made again and again, till there is no disputing them. Mr. Jones's statement was, that he examined the man, and considered that he was sinking fast, and that he considered the case hopeless. Other witnesses say that, although he looked very bad, they did not think he was so near death. Now, the man had walked here, and Mr. Jones considered it a hopeless case from inanition, yet he orders him a hot-bath! Why, it is a great exertion to go into a bath even to a man of strong constitution, and what must it be to one so exhausted as this poor man was? He could not stand. Now, if Mr. Jones thought the case hopeless, why have him put in a bath? He should have known that such exertion left life hanging on a thread, and it might have killed him. The man tried to get to the sick ward, but could not; he was carried there between five and six o'clock in the evening. Nothing was given him but a few table-spoonfuls of gruel, and the tea which the woman gave to him. Mr. Jones thought his stomach was too irritable to bear anything, but the evidence says that he did not vomit at all. So that, if anything had been given, it would have sustained his system for a while; although, under the conditions described by Mr. Gibson, we cannot say how long. Mr. Gibson I know as a man of great worth and high character in his profession; he has described the system of the union to you, but you have now to do with the matter in hand, and not with the system. Mr. Gibson has not attempted to explain this most extraordinary omission; all we know is, that the man was brought here, and that from his first admission he did not receive those succours from the persons appointed to carry out the intentions of the law in this institution which he required. These are the main facts of the case, with the exception of Mr. Gibson's estimate of disease. It appears to me that an opinion existed in the mind of Mr. Jones, that the man was not in a state of disease, since he says he attributed his death to want of food,

and returns such a cause in the certificate; but, if so, why did Mr. Jones take no measures to supply such want? A notion exists in the minds of some medical officers, and I fear Mr. Jones is one of them, that when men are in want they should apply to their own parish, and not to another. If this is not the explanation, then I know not how to account for his conduct, since he saw that the man was sinking from the want of food. Now, supposing the circumstances to be slightly varied, and, instead of an individual expiring from want of food, imagine that a man was drowning: would you hesitate about rendering him assistance until you had learned to what parish he properly belonged? And yet here, strange to say, is a poor man whom your porter, your constable, the man in charge of the sick ward, and all who were in the ward, saw in his extremity, and not one drop of brandy, beef tea, or any stimulating cordial does he get till nine at night! Mr. Jones is a man educated in his profession, and has been an assistant to Mr. Gibson for two years and a half, and nothing has occurred before this court to affect his character but his conduct in this case. In judging of the blame to be attributed, we must bear in mind what persons in office are empowered to do. The law empowers medical officers to administer to the sick whatever they may judge proper, at the cost of the union; and it cannot be denied that those who are intrusted with this power, and exercise it wrongfully, incur a most awful responsibility, not only legal but moral. But Mr. Jones says he thought it was a hopeless case, and yet the circumstances appear so ordinary that he did not mention them to Mr. Gibson; and, although the man died, so little extraordinary does the case seem that he was about to be buried without an inquest; and the certificate had been prepared for that purpose—"He died from debility, caused by want of food," is the language of that document. I cannot but remark that this conduct, on the part of Mr. Jones, is most painful to reflect on. Mr. Gibson has given a statement of the condition of the body, and he could not help giving the primary disease as part of the cause of death; but, if it could be clearly proved that the death of Benn had been brought on by the neglect of the medical officer, he would be liable to a charge of manslaughter. From Mr. Gibson's statement, it is clear that he could not have lived long; these facts you must compare. You will possibly find that the evidence is not so positive as to justify the finding of a verdict of manslaughter; but, if you think there has been neglect anywhere, the ends of justice may, perhaps, be sufficiently answered by your connecting the name of such person or persons with an expression of censure. This last course appears to me to be best warranted by the evidence. I cannot direct you more particularly, but commend the case to your consideration, to be judged by according to the evidence.

The jury, after deliberating about half an hour, returned the following verdict:—"That the deceased William Benn died on the 7th of August of organic disease in the lungs and general debility, accelerated by want of food; and it is the opinion of the jury that there has been great neglect on the part of Mr. Jones."

The proceedings then terminated.

AN EXTRAORDINARY MIRAGE, WITNESSED AT BIRKENHEAD, IN CHESHIRE, IN SEPTEMBER, 1846.

Communicated to the British Association, Tuesday, 29th June, 1847, by DAVID P. THOMPSON, M.D. Edinburgh, Wrenbury, Cheshire.

It was towards the close of the autumn of 1846, a year remarkable both in the political and scientific annals of Europe, and to the meteorologist peculiarly striking, that the following singular mirage was witnessed. It was upon Sunday, the 27th of September; the afternoon was calm and warm; the sky serene, with light grey clouds in the horizon, when, about 3 P.M., a lady, residing in the Great Park, Birkenhead, while looking from her window towards the Mersey, beheld a representation of Edinburgh depicted upon the clouds. She called her husband, who also saw the phenomenon.

This enchanting vision was most distinctly visible—the phantom city being so clearly depicted as to appear a reality. The objects presented were natural, and were seen steadily; the picture continued about forty minutes.

Gazing with wonder on this picture of the Scottish capital in the clouds, above the modern Tyre, it was remembered that at that time a panoramic model of Edinburgh was being exhibited in the Zoological Gardens of Liverpool.

The scenic representation which was thus the subject of this electric refraction, was painted in oil on one side only, and was in different pieces, presenting a front view, inclined to the Mersey at an angle of nearly 45°. There was a small lake at its base. The model was a good representation of Edinburgh, and the aerial figure could not be mistaken, especially by those who are familiar with the real city.

GOSSIP OF THE WEEK.

ROYAL COLLEGE OF SURGEONS.—The following gentlemen, having undergone the necessary examinations for the diploma of this college, were admitted members on Friday evening, the 20th inst., viz.:- Messrs. Sydney George Bousfield, Horncastle; Thomas Arnold Rogers, Regent-street; William Henry Cook, Croydon; Edward Burrowes Sinclair, Dublin; William Augustine Roche, Cork; Robert Edwards Jones, Long Melford, Suffolk; Moore Andrew Swan, Donegal; Maurice Halley, Clonmel; Edward Collis Curran, Dublin; Ronald Gunn, Dublin; John Newton, George-street, New-road; and David Griffith Jones, Llanrwst, North Wales. At the same meeting of the Court of Examiners, Messrs. Dodwell Brown Whipple and John Ward passed for naval surgeons; these gentlemen had previously been admitted members of the college, the diploma of the former bearing date October 25, 1839, the latter May 23, 1842.—On the 23rd inst., viz.:—W. L. Cashel, R. T. Spark, C. Ferraby, T. W. Crosse, R. Abercrombie, J. M. Camplin, M. J. Booth, C. T. Wagstaff, W. O. J. Wollaston, and B. F. Matthews.

JUDGE POLLOCK AND THE MEDICAL PROFESSION.—In connection with the trial of Thompson for the murder of his wife at Carlisle, Sergeant Wilkins applied to Chief Baron Pollock for costs. His lordship promised to do all in his power, and merits the thanks of the profession—(ay! and of the public, too)—for what he did. Each medical witness received two guineas per day for time and skill, and eight guineas each for assize attendance (independently of the inquest fee). This is as it ought to be. The Chief Baron, we believe, is a good chemist, and acquainted, also, with the requisite anatomy, special and general, for such cases. It is evident that the learned judge approved of the manner in which the medical evidence at Carlisle had been got up and was given.

MYSTERIES OF CREATION.—Captain Morton, of Jamaica, already noticed in our columns with reference to the origin of the Giant's Causeway and the cause of increased temperature found in digging wells, ventures to call the attention of European philosophers to what he considers the extraordinary phenomenon of living plants springing from dead insects! Though the myriads of ants and other prolific sources of destruction in tropical countries, he states, render it difficult to trace every change from insect to vegetable life, he has been perfectly successful in his researches with regard to the wasp, having collected numerous specimens of this insect in various stages of germination, throwing out shoots, roots, and growing into a prickly briar. Captain Morton supposes many in England connected with the West India islands must be equally familiar with this wonderful process of creation, and ready to bear testimony to the fact, should the beautiful principle it involves be still beyond the pale of natural philosophy in England.—(Literary Gazette.) The editor adds, "Our Jamaica correspondent does not seem to be aware that one of the Polystix species is pretty generally known in Europe for its curious blending of vegetable with insect life. This appearance of the vegetating wasp is caused by a parasitic fungus, the Sphæria, which affects the insect whilst living, and grows out of and feeds upon it when dead."

ANCIENT RELICS.—The discovery of human bones by the workmen engaged in preparing the ground for the railway terminus at St. Leonard's, in Perth, has been followed by other and more extensive remains. Several stone coffins of Saxon workmanship have been come to, containing burnt clay urns, with ashes in several cases; showing that this had been a public burying place long ere the Catholic days. A very singular discovery has also been made of a Roman road, many feet below the present surface, and immediately below a deep bed of clay. Perth, or Victoria, is well known to have been one of the principal Roman stations north of the Forth; and the remains of the roads communicating with the camp at Ardoch in the west, and at Delvine on the Tay, are still to be seen.

Some peas, which had been found in an Egyptian tomb, have been sown, and are said to have yielded a very large increase.

There has been a severe epidemic amongst the cattle in the valleys d'Ossau, d'Aspe, and de Boretons (Basses Pyrénées). The inhabitants have also suffered. Two individuals of Issor who skinned the dead animals, themselves became victims of the epidemic.

OBITUARY.—Aug. 17th, at Lake View, Mount Nugent, of typhus fever, T. Drapes, Esq., M.D., aged 32.—July 25th, at Handsworth, Francis Burdett Moffatt, M.D.—July 28th, aged 73, John Reeve, Esq., surgeon, of Kegworth.—Aug. 2nd, of fever, Richard Stephens, M.D.—Aug. 2nd, at Clones, of fever, James T. Hurst, M.D.—Aug. 9th, at Bath, aged 82, Joseph Kearsley, M.D., formerly Deputy-Inspector of the Ordnance Medical Department.

MORTALITY TABLE.

For the Week ending Saturday, August 21, 1847

Causes of Death.	Total.	Average of 5 Summers.
ALL CAUSES	1057	940
SPECIFIED CAUSES	1056	935
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	371	16
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	112	103
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	146	157
Diseases of the Lungs, and of the other Organs of Respiration	184	226
Diseases of the Heart and Blood-vessels	30	25
Diseases of the Stomach, Liver, and other organs of Digestion	127	94
Diseases of the Kidneys, &c.	10	8
Childbirth, Diseases of the Uterus, &c.	12	10
Rheumatism, Diseases of the Bones, Joints, &c.	13	7
Diseases of the Skin, Cellular Tissue, &c.	7	[illegible]
Old Age	31	50
Violence, Privation, Cold, and Intemperance	18	26

COURSE OF LECTURES ON CLINICAL MEDICINE,

Delivered in the THEATRE of QUEEN'S COLLEGE, Birmingham.

By SAMUEL WRIGHT, M.D.,

Physician to Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham; Physician to the General Dispensary; Extraordinary Member, and formerly Senior President, of the Royal Medical, Royal Physical, Hunterian Medical, and Cuvierian Natural History Societies of Edinburgh, &c.

Case of erysipelas; details of; treatment; results; pathological character of erysipelas; how distinguished from erythema; how from phlegmon; erysipelas a contagious disease; illustrations of the spontaneous origin and communicability of this disease; observations thereon; remarks upon the treatment of erysipelas; general treatment the most important; necessity of varying this according to the degree of inflammation and the strength of the patient; danger of over-depletion; comments upon the case above narrated; local treatment of erysipelas; varieties; observations upon their relative value; conclusion of the course; terminating observations.

GENTLEMEN,—In my last lecture I promised you that its successor should chiefly embrace the subject of erysipelas, of which you saw an instructive example in the hospital a month ago. The sufferer was the poor fellow Bayliss, whose death from epilepsy I recorded in my last communication with you.

Whilst under treatment for the disease that killed him, my attention was one morning directed to the seton at the back of his neck. The discharging surface and the contiguous structure, to the extent of eight or ten inches in circumference, had a very inflamed look. The secretion was much less than ordinary, and the pus thinner. The patient was thirsty and feverish, and had lost his appetite. Pulse 98, and firmer than usual; skin hot; tongue dry and furred; bowels moderately open.

The seton was removed, and the inflamed part covered with a large white-bread poultice, which was directed to be renewed every four hours. Cap. stat. hydrarg. chloridi, gr. v.

℞. Sodæ bicarb., vini ipecac., aa. ʒj.; tinct. hyoscy., ʒij.; aquæ, ℥viij. M. ft. mist. cujus cap. coch. ampla duo tertiis horis.

The next morning the patient was no better. The bowels had been several times well opened, but the thirst and fever were unabated. The tongue was still furred, and the skin hot, and the pulse firm and rapid. The poultice to be continued. To take with each dose of the mixture one of the following pills:—

℞. Hydrarg. chloridi, gr. iij.; pulv. antimonialis, gr. viij.; extr. hyoscyami, q.s. ut ft. pil. viij.

The following day, July 8, he was much in the same general condition. There was less inflammation in and around the seton-mark, but it was now extending, with all the characteristics of erysipelas, over the front of the neck and the lower part of the face. The poulticing was discontinued, and cloths dipped in cold vinegar and water applied to the inflamed parts. The medicines as before.

July 9. The fever still high, and the inflammation still spreading. Since yesterday it has extended over the whole face, which is swollen to nearly double its natural size. Vesications have appeared upon both ears, and upon the right side of the neck. The surface of the body generally is very hot and dry; urine scanty and high coloured; bowels open, but the abdomen is becoming tympanitic; pulse 112, firm and regular; tongue dry, red at its edges, and brown in the centre. Patient very restless, and wandering incessantly. The hair to be cut close, and the head kept moderately cool. *Contr. remedia.*

In the afternoon of this day there was little change, except that the abdomen had become more tympanitic. A turpentine enema was given, which occasioned a copious discharge of flatus, and some dark-coloured lose fæces.

10. Patient much in the same state; fever still urgent; inflammation and swelling unabated; bowels open, and less tympanitic; kidneys rather more active. In the evening of this day, appearances were little altered, except that the patient was perfectly insensible. The abdomen was more tympanitic than in the morning; great restlessness; *subsultus*; there was perfect unconsciousness, but no abatement of the fever, and no tendency to sinking; the vesications were larger on the ears and neck, but the inflammation was as expressed as ever.

11. There was a very slight appearance of amendment this morning. Desquamation was beginning to show itself in some parts of the neck; the face and head were less hot and swollen, and the redness was rather lighter; the bowels were open, and the tympany was comparatively inconsiderable; the kidneys were acting better, and the secretion depositing a lithate of ammonia sediment. Still the fever was high; pulse 100 and resistent of pressure; tongue quite dry, red at the tip and brown in the centre; there was less restlessness, but the patient could scarcely be roused to a state of temporary consciousness. The mixture to be continued, and a pill taken with every other dose.

In the evening of this day there were more decided signs of amendment. The tumefaction of the face was so much reduced that the patient could partially open one eye, which he did when shouted to and requested to make the effort. The inflammatory blush of the skin had still further diminished, and patches of desquamation were beginning to make their appearance in different parts of the face; the tongue was less brown in the centre, and slightly moist at its edges; the gums were rather tumefied, and there was a very faint mercurial odour in the breath; the surface of the body generally was softer, and seemingly inclined to perspiration; bowels open; urine tolerably plentiful; the pulse was under 100 per minute, but had still an undue firmness in it. The pills to be omitted; the mixture continued as before.

12. The patient still advancing, though slowly; more conscious than yesterday, but was very delirious in the night; no abdominal tenderness, and no tympany; bowels well open; urine copious and limpid; face less swollen, and desiccations spreading; tongue about the same, and aphthous spots appearing upon its edges; pulse less quick, but not reduced in strength. The mixture to be taken three times a day.

13. Improvement still more manifest this morning; patient slept well through the night, and perspired freely; tongue moist, but extensively studded with aphthous spots; bowels and kidneys acting well; pulse 80, soft and regular; patient quite sensible, though not very communicative; complains of no pain. To have beef-tea, with toast, three times a day.

℞. Decocti cinchonæ, ℥viij.; ammon. carb., ʒss. M. cap. coch. larga duo ter die.

14. Patient in every respect better; expression of face almost natural, except that the right eye is still closed; secretions healthy, and in sufficient quantity; strength somewhat improved, and appetite increasing. The amendment rapidly advanced, and on the 16th the patient was convalescent.

Erysipelas is simply an inflammation, commencing in the derma, and extending more or less into the subcutaneous areolar tissue. Its characteristics are, as you saw, pain, heat, redness, tumefaction, and desiccation or vesication. By the last, by its disposition to spread, and by its implication of the tissue subjacent to the skin, it is distinguished from erythema. It differs from phlegmonous inflammation chiefly in the tendency which the latter has to circumscribe itself, and to form an abscess. Sometimes, however, erysipelatous inflammation is productive of

purulent deposit: this is chiefly in places that abound with loose cellular tissue. In the case of Bayliss, whilst the vesications were numerous upon his ears and the side of his face, pus was being formed under the right eye. It was subsequently discharged by puncture, and amounted in quantity to nearly two drachms.

Erysipelas is a communicative disease, and often has its origin in infection. Of course, however, it is capable of a spontaneous evolution. In the bed next the one wherein Bayliss lay, a boy had erysipelas in one leg. I believe there were no local causes to account for it, and it appeared to be symptomatic, as it often is, of a bad state of general health. Before I was made acquainted with the proximity of my patient to such a source of danger, erysipelatous inflammation had seized upon the wound in his neck, and the consequences I have told you. In a short while, another patient in the same ward was attacked with the same ailment, and I began to be apprehensive that we should have it making the circuit of the hospital. The instances are many of a calamity like this, and of most disastrous results ensuing. By placing our patients, however, in a ward by themselves, we cut of all communication with the others, and thus happily limited the disease to the three cases I have mentioned. In these you have an instructive illustration of the origin and spread of this formidable affection. In the first instance the origin was constitutional, and the manifestation not very severe. In its simplest form, of which this was an example, erysipelas is seldom unmanageable. The boy was dyspeptic and debilitated, and the inflammation appeared in his leg: this is a part favourable to the mild progress of the disease, and to its localization. The subcutaneous areolar tissue here is not ample, and erysipelatous inflammation, in consequence, is seldom severe in it, or disposed to spread. From this boy, however, it passed to my patient, and acquired a character and an intensity from the very nature of the parts it seized. Commencing in the neck, and extending to the face, was a very different matter to being limited to one leg. In this second case, the parts implicated were extensive and vascular, thus giving every encouragement to the inflammatory action; whilst the contiguity of the brain made us apprehensive of its suffering from metastasis. From this patient it might have been communicated to another, and in him have acquired a phlegmonic character; whilst in a fourth subject it might have found an opportunity of showing its worst form, by terminating in gangrene. These several seizures might have been the occasion of other such, and the whole hospital, as I have said, have felt the consequences of the contagion. From small beginnings it is possible, you see, for the greatest calamities to arise. Happily we were afforded only a limited illustration of this well-known truth, but still quite sufficient to give you very distinctive evidence of the origin and progress of communicable disease.

The treatment of erysipelas is twofold—general and local. The former is the more important, because of the constitutional peculiarities which mark the severer forms of the disease. The peculiarities I allude to are strength of fever and violence of inflammation on the one hand; and depression, with tendency to sink, on the other. These not only call for opposite modes of treatment, but caution us also against letting either plan be excessive. By unduly sustaining and stimulating the cases marked by prostration and low febrile action, you may heighten this until an opposite treatment becomes necessary; but the strength of the patient forbids depletion, and there is a choice of evils—either to sink from the remedy or from the disease. On the contrary, in the robust inflammatory subject, if you bleed, purge, or in any wise deplete and depress largely and suddenly, he is likely either to be prostrated at once and to die without reaction, or to be so weakened as to be only capable of support by means which are pretty sure to bring a return of the inflammation and its consequences. If the statistics of the lancet-treatment in erysipelas were before us, I think they would furnish some notable illustrations of "killing no murder." Mind, I am not saying that bleeding from the arm is never necessary in erysipelas. Often it is, and, when judiciously practised, it is as often productive of the best effects. But, even when indicated in this disease, it should be employed with the greatest caution; there is no latitude to be given to heroic measures; the lurking tendency to sink, as I have said, should make you careful how you encourage it by over debilitating. The old plan of treating all inflammations alike, has something homicidal about it. Yet it has its advocates, for I had once the misfortune for some time to be a practical witness of the fact. I have seen patients bled for erysipelas as though they were suffering from peritonitis or pleurisy. I need not tell you that they died! The last melancholy case of this kind that occurred, to my knowledge, was in the person of a fine athletic young man who, after two or three days' dissipation, was attacked with erysipelas in the neck. On the second day of its appearance, though it was neither severe nor threatening to spread far, yet, becoming alarmed, he sought advice, and submitted to a chirurgical remedy that soon arrested the inflammation. The poor fellow was profusely bled until he fainted; the reaction was the signal for *delirium tremens*, of which he died within three days.

The case of Bayliss is a good illustration of the value of cautious treatment in erysipelas. It was a very formidable attack, and yet the patient recovered without desperate measures. The disease first showed itself on the suppurating surface of the seton: this was an irritable, highly vascular spot, that at once displayed the inflammatory action in its severest form. The discharge diminished directly, and ceased on the removal of the tape. Under ordinary circumstances, the sudden arrest of such a drain would be likely to be followed by determination of blood to the head: it would be the more likely, in this instance, because of the local inflammatory cause, and its subsequent extension. Here was at once a pathological probability in the distance which made the prognosis anything but favourable. The erysipelas spread rapidly over the neck and the face, involving both in one common inflammation, whose leading characteristic was intensity. This was the case we had to treat! The pulse, though firmer and more rapid than natural, as of course it would be, yet never acquired a very inflammatory character. At the commencement there was nothing in it, or in the patient's other symptoms, to indicate inflammation of the brain or of its membranes. These were my reasons for not ordering depletion at first. As I then told you, bleeding is so delicate a matter in erysipelas that I thought it better to wait for an unequivocal evidence of its necessity, than to anticipate this at the expense of the patient's strength and safety. After the subsidence of the more violent symptoms, the pulse retained a character that told of no extreme state. Less quick and less firm than at first, it had yet neither the sluggishly oppressive feel of cerebral congestion, nor the weakness and irregularity indicative of sinking. I made the pulse my guide throughout the attack; prepared to deplete if the state of the circulation demanded it, and to stimulate if depression should render this necessary. My own opinion inclined me to neither of these extremes; and I therefore pursued a middle course. In the absence of more directly reducing means, the patient at the commencement had a smart mercurial purge, which brought away a considerable quantity of bile and fæces, thus unloading the liver and preventing congestion, with its remote influences; and emptying the bowels of accumulated materials whose retention would no doubt have caused much sympathetic fever. The febrifuge mixture was constituted of materials calculated to allay gastro-intestinal irritation, to tranquillize the system, and act upon the skin. These were all desirable objects to be fulfilled, and I am not aware that I could have met them better than by appropriate doses of soda, ipecacuanha, and hyoscyamus. Small successive doses of calomel and antimonial powder were subsequently given to aid the action of the mixture, and to prepare the absorbent system for the removal of the products of inflammation, should any such be effused. Mercury is a very depressing agent, and the frequency of its exhibition was therefore diminished, proportionately to the subsidence of the inflammatory symptoms, until at last it was dispensed with altogether. This was all the general treatment during the acute stage of the disease, with the exception of the turpentine enema, which was given to rouse the torpid intestines, and to divert from the brain, which seemed to be threatened with oppression. The local inflammation subsided before the pulse had lost its frequency and firmness; the persistence of the latter was the reason why I continued the febrifuge treatment after the erysipelatous condition had begun to disappear. So long as the pulse retained its unnatural force and quickness, we were not free from a liability to a return of the erysipelas, either in its original seat or elsewhere. Directly that the circulation gave signs of feebleness, bark and ammonia were given, and, as you know, with the happiest effects.

The local treatment of erysipelas is various, but not nearly of so much importance as the general treatment. Indeed, I have seen some very severe cases of erysipelas recover without the use of any local means whatever. Topical depletion is sometimes necessary. When this can be effected by scarification, it is preferable to leeching. It not unfrequently happens that each leech-bite becomes the centre of a severe inflammation, and that the erysipelas is aggravated in consequence. When the leeches have been unhealthy, they have occasioned sloughing, and even gangrene. Flour, starch, magnesia, rotten-stone, and other absorbent substances have been recommended to be applied to the inflamed surface. I have rarely seen them do any good. It is true, they defend the parts from atmospheric influence, and thus frequently relieve pain; but, at the same time, they prevent transpiration, which is the natural cooling process of the living surface, and a consequence is increase of heat, and not unfrequently of inflammation. Mercurial ointment, and other greasy applications, I think are worse than useless. Nitrate of silver is a favourite local remedy with some practitioners. I have certainly seen it check the spread of erysipelas most completely; but it is an uncouth material to rub over a man's face. In the cases in which I have tried it, it has been quite as efficacious when drawn in a margin of half an inch broad just outside the erysipelatous blush, as when extended over the entire surface. Fomentations with hot water, or decoction of poppies, are often of excellent service. Whilst attending the case at the hospital, I was also attending a similar, though less severe, one, in consultation with Mr. Pye Chavasse. Additionally to mild mercurial and saline treatment, we ordered hot fomentations: the patient soon recovered. I generally, however, prefer these when there seems any tendency of the inflammation to leave the surface and visit deep-seated parts. In such cases the assiduous application of hot fomentations is often valuable. The cloths should be applied in constant succession, and care taken that a draught of cold air does not reach the parts directly after the removal of the cloths. A chill of this sort has sometimes been followed by great aggravation of the ailment. Pounded ice, and iced water, are occasionally used: they have been known to produce gangrene. I prefer water, or vinegar and water, of moderate coolness. This keeps the parts moist and the pores open, and absorbs the excess of heat gradually, without producing the sudden shock and collapse which are apt to follow the application of severer refrigerants. The cool cloths should be kept constantly on the inflamed surface, or strong reaction is apt to set in. Directly that they become warm, they should be

removed, and succeeded by others: the readiness with which this can be done, and the length of time that it can be continued, is another source of advantage possessed by cool over the ... applications.

... this is my thirtieth clinical lecture, and my last this session. In concluding, permit me to thank you for the polite and undeviating attention with which you have listened to my discourses. Much of their labour has been lessened by the gratifying manner in which you have invariably received them. It has been to me a source of the greatest pleasure to find that my occupancy of this chair has accorded with your own wishes; it will be equally agreeable to me to learn that I have not held it vainly, but have been honoured in the fact of having been useful to you as an instructor. At least, I can conscientiously say, that this has been my earnest desire throughout the delivery of the course now terminated. I commenced it, as you know, without any preparation; when I was far from being in good health; and when public and private professional obligations left me little opportunity for reading or reflection. I mention these facts, not ostentatiously, but as providing me with, I hope, an acceptable apology for various defects which have often marked the style and substance of my lectures. Had the time been permitted me for deliberating upon their arrangement and composition, I might have made them better worthy of your acceptance. But such has not been the case: more than once, indeed, I have had to occupy your time without having provided myself with a single note.

The cases which have been submitted to your consideration, with what commentary I have been capable of, I have taken from the general course of hospital business, only making selections when I have thought that, in so doing, I have been consulting your advantage. The time allotted to the clinical course did not give me the opportunity of treating so many topics as I could have wished; many instructive cases which have passed before us I have been obliged to omit from the list of those chosen for recapitulation and remark in the theatre of the college. Amongst them have been several valuable illustrations of diseases of the heart and lungs. Should the privilege be mine of a clinical instructor another year, it is my intention to confine my lectures to the above subjects. Important and complicated as they are, I shall perhaps better serve you by giving a course upon them exclusively, than by treating them variously with other less weighty topics.

And now, gentlemen, whether for a season or for ever, I bid you farewell. You have my best wishes for your health and welfare: at all times I shall be delighted to hear of your professional success, to which I shall ever feel happy and honoured in the opportunity of contributing.

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.

By Professor MATTEUCCI, *of Pisa.*

PART XIII.

NERVOUS FORCE.—(*Conclusion.*)

Notwithstanding the great number of experiments made by the author respecting the phenomenon of induced contractions, he doubts the possibility of deducing from the facts revealed by these experiments a clear and definite physical theory of this phenomenon. He confines himself, accordingly, to a minute discussion of the several hypotheses that may be started to explain the phenomenon of induced contractions. We will restrict ourselves here to give the general conclusions at which he arrives.

1. The hypothesis which would explain the phenomenon of induced contractions by assuming that the electric current which excites the *inducing* contraction is propagated to the nerve of the galvanoscopic frog, is altogether inadmissible; this hypothesis is amply and sufficiently disproved by the fact that *induced* contractions are obtained equally in cases where the *inducing* contraction is excited by the application of any mechanical stimulus, instead of that of the electric current. We need not waste our time, therefore, with stating the many additional objections that might be urged against it.

2. The notion that the induced contraction is the effect of a mechanical stimulus—or, to speak with greater precision, of the contraction of one of the inducing muscles, which might be assumed to impart a mechanic shock to the galvanoscopic frog—has been disproved experimentally by the author. Besides, how could we reconcile with this notion the cessation of the induced contraction occasioned by the interposition of a thin gold leaf or scale of mica between the nerve and the muscle?

3. It has been stated already that the author's first experiments led him to suppose that muscular contractions are attended with evolution of electricity. This assumption would, indeed, afford a very simple explanation of the phenomenon of induced contractions; but the results of subsequent experiments have, unfortunately, disproved it.

We are still ignorant as to the cause of muscular contraction; all that we know of this phenomenon may be summed up in the following propositions:—

1. Muscular contractions are induced by acting, even at a considerable distance from the muscle, upon the nerve spreading its ramifications to the latter.

2. The integrity of the nervous filament, from the excited point to the muscle, is indispensable.

3. The excitation is transmitted from the nerve to the muscle with a velocity comparable to that of electricity, light, radiant heat.

4. All causes that modify, promote, or prevent the manifestations of the physico-chemical phenomena occurring in the nutrition of the muscle, have an analogous action on the contractility of this organ.

5. The laws of muscular contraction present a certain analogy with the physical laws of elasticity.

Induced contraction may accordingly be looked upon as a phenomenon of induction attributable to that unknown force which circulates in the nerves and produces muscular contraction. It would seem more rational to term *muscular induction* what we have hitherto called induced contraction.

A muscle in contraction exercises an inductive action upon a living nerve.

In conclusion, a few words on the *production* of the nervous force. True, our knowledge of this force is confined to its manifestations in the living animal; yet, in our investigation into the mode of its production, we cannot altogether disregard *physical analogies*. Every manifestation, of any force whatsoever, is preceded by a transformation of matter, by a chemical action. Heat, electricity, light, furnish every instant proofs confirmatory of the correctness of this axiom. Even disregarding these analogies, let us examine the conditions in which the development of the nervous force takes place in the living animal. After long walks, or hard work, animals feel tired and require rest and food. Now, although we are without precise facts and data indispensable to establish an intimate and really scientific connection between the effects of labour, rest, and food on the one, and the loss and reparation of the nervous force on the other, hand, yet we cannot abstain from discussing these facts, however complex they may be, upon the principles of mechanics and general physics. Muscular exercise, of whatever kind, is constantly attended with loss of force; and, as we see the animal machine recover its aptitude for exercise after feeding and rest, we are naturally led to assume that the force necessary for muscular action is derived from the chemical processes of nutrition. Interrupt for a certain time the circulation of the blood in a muscle, and the latter will speedily lose its contractility; with the return of the blood, the muscular force will reappear. In animals in which the circulation and respiration are very active, the development of the muscular force is more considerable than in others of less active circulation and respiration.

But *which* of the numerous chemical actions occurring in the animal organism gives birth to the force that presides over muscular contraction? It is impossible to give a satisfactory reply to this question.

The physiologists of the present day admit that animal heat is produced by the combustion of fatty matters, and still more by that of the bodies into which the fecula is transformed in the process of digestion; whilst the production of the nervous force is attributed to the chemical actions occurring in the transformations suffered by the neutral nitrogenous substances of the tissues. We know, however, of no fact or experiment supplying a direct proof of this assumed difference of origin between animal heat and the nervous force.

Of all the chemical actions occurring in the animal organism, the only one which we know perfectly and are able to measure, is that which produces carbonic acid. On an average, an adult converts into, and exhales in the form of, carbonic acid from ten to fifteen grammes of carbon *per horam.*

Starting from these data, we may endeavour to compare the nervous force resulting from this chemical action—taking as the expression of this force the mechanical labour accomplished by an adult in the space of one day—with the amount of labour which the same action is capable of producing either by the agency of the heat, or by that of the electricity evolved by it. In other terms, we may ascertain whether we obtain with steam-engines or electro-magnetic apparatus, and by means of a certain fixed and definite chemical action, a mechanic effect equal to, or differing from, that produced by the same action working in the animal organism.

But, before we can enter upon this inquiry, we must admit either one or the other of the two following hypotheses:—We know that the animal organism evolves heat, electricity, and the nervous force; and we admit that the causes producing these forces reside in the chemical processes of nutrition. Now, we may suppose either that a certain chemical action produces *constant, invariable, and distinct quantities respectively of heat, electricity, and nervous force, which quantities are altogether independent of one another;* or that it produces invariably a *constant amount of force without any regard to the form* in which that force manifests itself.

The following illustration may serve to render these propositions more clearly intelligible. The combustion of zinc in oxygen produces light and heat: the oxidation of the same metal, by the decomposition of water, gives rise to the evolution of heat alone, or of heat and electricity if the metal is touched with platinum wire. Now, let us suppose we could transform these respective forces into a certain amount of mechanic labour produced by them: it might be assumed in that case that the *sum total* of the respective amounts is invariably the same, and that where one of the two forces fails to be evolved, the other is evolved in a proportionally higher degree, and supplies thus the deficiency; but it might be assumed, likewise, that the respective forces are evolved independently of one another. The latter supposition would seem to be borne out by the results of certain experiments made by the author: he measured the amount of heat disengaged in the oxidation of zinc by the decomposition of water, and found it constantly the same with that of the heat evolved in conjunction with electricity, and very nearly the same as that of the heat evolved in conjunction with light (in the other processes of oxidation of zinc).

We may, accordingly, reckon the whole of the chemical action of the combustion of the carbon in the animal organism as productive of the nervous force, independently of the heat and electricity which this action may produce besides; and we may then inquire whether this when taking place in the animal or-

ganism, produces effects analogous to, or differing from, those which it would produce if taking place in a steam-engine or an electro-magnetic apparatus.

The author was once travelling with the celebrated engineer, Robert [illegible]. The travellers had occasion to send an individual to a distance of about forty miles, which he accomplished on foot in less than [illegible] hours' march, consuming [illegible] this time, in the respiratory process, [illegible] grammes of carbon. The [illegible] from Mr. Stephenson that it would [illegible] about five kilogrammes of coal to [illegible] individual the same distance with a locomotive.

Dumas has calculated the amount of coal which a steam-engine would consume to carry a man from the level of the sea to the summit of Mont Blanc. He calculated this amount from 1000 to 1200 grammes. A man can climb to the summit of the same mountain in two days' time, consuming thus only 300 grammes of carbon. The difference in this latter instance is less marked than in the former, because the power obtained from a fixed steam-engine is much more considerable than that yielded by the engines of a locomotive; this much, however, is evident, that the difference is still very great, and that the nervous force evolved by a certain chemical action, in the organism effects a much larger amount of labour than is effected by the conversion of the same action into heat.

The great advantage that results from the transformation of a chemical action in the animal into nervous force is evident also from the results of the following experiment made by the author:—

He measured the amount of mechanical labour obtained by applying to the nerves of a frog a current engendered by a definite amount of zinc oxidizing in a pile; the resulting numbers were as follows:—Three milligrammes of zinc oxidizing in one day supply a current which, supposing it possible to apply it constantly and uninterruptedly to the nerves of a frog, would produce a muscular force measured by 5·6419 kilogrammes raised one mètre in the same space of time. These figures are, probably, inexact; but the sources of error in the author's experiments are all one way, viz., tending to underrate the effect produced by the oxidation of the three milligrammes of zinc.

The combustion of the same quantity of zinc would yield an amount of heat such as, employed to generate steam, would execute an amount of labour equivalent to 830·4 grammes raised one mètre.

Finally, applying the current produced by the combustion of three milligrammes of zinc to an electro-magnetic machine, the power obtained is = 960 grammes raised one mètre.

We are accordingly led to conclude that the mechanical power produced by a chemical action transformed into nervous force in an animal is very considerable, and that all the inventions of man, however ingenious, fall still very short of that degree of perfection which is observed in the machines constructed by nature.

The Bees and the Hedgehog.—A gentleman in this neighbourhood had a tame hedgehog in his garden, which, in seeking his food, was at the same time a promoter of horticulture, by destroying many noxious insects. One day lately he unluckily went near a hive of bees, and a number of them attacked him with great fury; he defended himself by standing on his hind feet and striking with his fore paws. Finding, however, that the bees were getting the best of it, he coiled himself up in his bristly armour, but in doing so enclosed some of his enemies, who stung him severely. He then unrolled himself and renewed the fight for some time, but eventually retreated into a bush. Next morning the poor hedgehog was found dead, showing that, however completely the stomachs of these animals can resist poison, they are not proof against its external application, in the shape of the smarting sting of the bee.—*Dumfries Courier*.

STATISTICS OF MIDWIFERY.

By D. LEWIS, M.D.,
Member of the Royal College of Physicians, London; and Physician to the Islington Dispensary.

During a connection of fifteen years with the Royal Maternity Charity, for delivering poor married women at their own homes, I have carefully collated from the midwives' books the following account of cases that were attended by them.

I have given each hundred separately, so that it may serve as an index to every practitioner in midwifery, however limited his practice.

The following twenty thousand cases are taken from the humbler classes of society, viz., the working classes—poor married women delivered at their own homes, and often in want of the common necessaries of life; yet the average mortality and difficult labours will be found at be less amongst the poor than the rich, who are too often pampered with luxuries incompatible with the operations of nature.

The statistical table was constructed about four years ago, but owing to my absence from England I had no opportunity of publishing it.

23, Finsbury-place, Aug. 16.

	Presentations.													
Number of Cases.	Head.	Face.	Arm.	Breech.	Feet.	Placental.	Funis.	Living.	Still-born.	Boys.	Girls.	Requiring Instruments.	Twins.	Remarks.
100	103	..	..	1	..	..	..	103	1	57	46	..	3	
100	93	..	2	1	4	..	..	97	3	52	48	..	..	
100	90	..	..	1	..	..	..	98	2	56	44	..	..	
100	98	..	..	3	..	..	..	100	1	51	50	..	1	
100	101	..	..	..	..	..	..	100	1	44	57	..	1	
100	99	..	..	..	1	..	..	98	2	49	51	..	..	
100	97	..	..	2	1	..	..	99	1	53	47	..	..	
100	91	2	1	2	5	..	..	97	4	49	52	1	1	
100	98	..	1	1	1	..	..	99	2	51	50	..	1	
100	100	..	..	3	1	..	..	100	3	46	57	2	3	
1000	978	2	4	13	13	..	..	990	20	508	502	3	10	3 cases of hemorrhage before labour.
100	100	..	..	..	..	..	..	96	4	56	44	..	..	3 cases of adherent placentas.
100	101	..	..	1	1	..	..	99	4	64	39	..	3	1 case of prolapsus uteri.
100	101	..	..	..	..	..	..	96	5	52	49	2	1	1 case of convulsions.
100	102	1	..	..	..	..	..	97	6	56	47	1	3	1 case of peritonitis.
100	98	1	..	2	2	..	..	99	4	46	57	3	3	
100	100	..	..	..	5	..	..	97	8	62	43	3	5	
100	92	5	..	2	1	..	1	96	5	58	43	1	1	
100	96	..	1	2	..	..	2	99	2	58	43	1	1	
100	98	..	1	..	..	..	1	98	2	55	45	2	..	
100	95	..	1	1	1	..	3	99	2	49	52	2	1	
1000	983	7	3	8	10	..	7	976	42	556	462	15	18	
100	99	2	1	2	1	..	..	103	2	53	52	..	5	7 cases of adherent placentas.
100	101	1	..	3	..	..	..	103	2	54	51	..	5	5 cases of hemorrhage.
100	95	4	..	2	..	..	..	99	2	49	52	..	1	3 labours brought on by secale.
100	100	..	..	..	1	..	..	100	1	57	44	..	1	1 case of peritonitis.
100	100	..	..	..	1	..	..	101	..	47	54	..	1	1 case of prolapsus uteri.
100	96	1	3	..	..	..	..	95	5	54	46	..	..	2 cases of sloughing vaginas.
100	96	..	1	3	..	..	..	96	4	54	46	..	..	3 women died just after labour.
100	98	..	..	4	..	1	..	99	4	51	52	..	3	(1 of apoplexy.)
100	93	3	1	2	1	..	1	100	1	57	44	..	1	
100	94	5	..	..	..	1	..	98	2	53	47	..	..	
1000	979	16	6	16	4	2	1	994	23	529	488	..	17	
100	98	4	..	2	1	..	..	100	..	51	49	..	..	4 cases of hemorrhage.
100	99	2	..	2	..	..	..	100	3	55	48	..	3	1 case brought on by secale.
100	93	4	1	8	..	..	..	95	6	45	56	..	1	
100	93	5	..	1	2	..	..	98	3	48	53	..	1	
100	100	..	1	..	..	..	..	95	6	34	67	3	1	
100	97	..	1	3	..	..	..	97	4	52	49	..	1	
100	96	..	..	5	2	..	..	98	5	62	41	..	3	
100	93	2	1	6	2	..	..	102	1	50	53	..	3	
100	96	..	..	4	1	..	..	99	2	49	52	2	1	
100	94	2	..	4	..	..	..	97	3	60	40	1	..	
1000	958	19	4	30	8	..	..	981	33	506	508	6	14	
100	92	1	..	8	..	..	..	98	3	50	51	..	1	1 case of hemorrhage.
100	96	2	..	2	..	..	..	96	4	57	43	..	..	1 woman died.
100	92	2	1	5	..	..	..	95	5	51	49	1	..	
100	93	2	1	7	1	..	..	98	5	49	54	..	3	
100	94	2	..	3	1	..	..	95	5	53	47	..	..	
100	98	..	1	2	..	..	..	95	6	58	43	..	1	
100	98	1	1	..	1	..	..	97	4	57	44	1	1	
100	99	..	..	..	1	..	..	96	4	51	49	..	..	
100	99	1	1	..	..	..	..	99	2	57	44	2	1	
100	99	..	..	..	1	..	..	95	5	50	50	..	..	
1000	959	11	5	27	5	..	..	964	43	533	474	4	7	
100	98	..	..	1	2	..	..	98	3	50	51	..	1	7 cases of hemorrhage.
100	99	..	..	2	2	..	..	99	4	47	56	..	3	6 women died.
100	98	..	..	2	1	..	..	95	6	50	51	..	1	
100	98	1	1	2	..	..	1	99	4	57	46	..	3	
100	98	..	..	3	..	..	..	95	6	50	51	..	1	
100	98	1	..	2	2	..	..	97	6	48	55	..	3	
100	97	1	..	..	3	..	..	99	2	42	59	..	1	
100	97	1	..	1	2	..	..	93	8	[illegible]	48	..	1	
100	96	..	..	2	2	..	..	91	9	[illegible]	51	..	..	
100	100	..	..	1	..	..	..	92	9	47	54	..	1	
1000	979	4	1	16	14	..	1	958	57	493	523	..	15	
100	98	..	..	2	..	..	..	94	6	55	45	..	..	7 women died.
100	99	..	..	1	1	..	..	95	6	50	51	..	1	6 cases of hemorrhage.
100	100	..	..	1	..	..	..	92	9	47	54	..	1	2 adherent placentae.
100	99	..	..	1	..	..	..	98	2	48	52	..	..	1 case of peritonitis.
100	102	2	..	1	..	..	..	100	5	55	50	..	5	1 case of convulsions.
100	95	1	1	1	2	..	..	99	2	47	54	..	1	2 cases of suppurated mammæ.
100	99	..	..	1	1	..	..	[illegible]	3	[illegible]	[illegible]	1	1	
100	98	1	..	2	..	..	..	[illegible]	4	[illegible]	[illegible]	..	1	
100	95	1	..	4	1	..	..	[illegible]	6	[illegible]	[illegible]	1	1	
100	95	2	..	5	..	..	..	97	3	61	[illegible]	..	..	
1000	981	7	1	17	5	..	..	965	46	530	481	2	11	

Number of Cases.	Presentations. Head.	Face.	Arm.	Breech.	Feet.	Placental.	Funis.	Living.	Still-born.	Boys.	Girls.	Requiring Instruments.	Twins.	Remarks.
100	100	..	..	..	..	..	..	99	1	44	56	..	..	5 women died. 6 cases of hemorrhage. 3 cases of adherent placentas. 1 case of peritonitis.
100	100	..	..	..	..	..	..	100	..	47	53	..	..	
100	99	..	2	1	2	1	..	100	5	57	48	..	5	
100	99	1	..	..	..	..	..	99	1	56	44	1	..	
100	100	..	..	1	1	1	..	97	6	63	40	..	2	
100	99	..	..	2	1	..	1	95	8	51	52	..	3	
100	97	..	1	..	..	..	2	96	5	55	46	..	1	
100	96	1	..	2	1	..	..	96	4	57	43	..	..	
100	97	..	..	2	1	..	..	100	1	46	55	..	1	
100	96	1	..	2	..	..	..	100	1	55	46	..	1	
1000	984	3	3	18	6	2	4	982	32	531	483	1	14	
100	100	..	..	..	..	..	..	96	4	44	56	..	..	12 cases of hemorrhage. 2 cases of adherent placentas. 3 women died (one of whom died of cholera undelivered).
100	98	..	1	1	..	..	..	96	4	50	30	..	..	
100	100	..	..	..	..	..	..	94	6	47	53	..	..	
100	97	..	..	2	2	..	..	93	8	48	53	..	1	
100	100	..	..	2	1	..	..	99	4	56	47	..	3	
100	96	1	1	1	2	..	..	96	5	51	50	..	1	
100	98	1	..	1	1	..	..	100	1	59	42	..	1	
100	99	..	..	1	..	..	..	99	1	53	47	..	..	
100	100	..	..	1	2	..	..	98	5	58	45	..	3	
100	100	..	..	..	..	..	..	96	4	53	47	..	..	
1000	988	2	2	9	8	..	..	967	42	519	490	..	9	
100	98	1	..	6	..	..	..	97	3	48	52	..	..	6 cases of hemorrhage. 3 cases of peritonitis. 1 case of adherent placenta. 1 case of convulsions. 6 women died.
100	97	..	..	3	..	..	..	95	5	50	50	..	..	
100	96	..	..	4	..	..	..	99	1	62	38	..	..	
100	100	..	..	1	..	..	..	98	3	48	53	..	1	
100	97	..	..	1	..	..	2	96	4	60	40	..	..	
100	97	..	2	1	1	..	..	95	6	53	48	..	1	
100	101	..	..	1	1	..	..	100	3	57	46	..	3	
100	96	1	2	2	..	..	..	97	4	56	45	..	1	
100	98	1	..	3	1	..	..	100	3	62	41	..	3	
100	94		..	2	4	..	3	96	7	62	41	..	3	
1000	969	3	4	24	[illegible]	..	5	973	39	558	454	..	12	
100	99	..	..	1	1	..	..	96	5	52	49	..	1	3 cases of adherent placentas. 9 cases of hemorrhage. 1 case of suppurated mammæ. 6 women died.
100	100	..	1	9	..	..	..	100	2	51	49	..	3	
100	98	..	..	..	2	..	..	95	5	43	57	..	..	
100	95	1	..	1	4	..	..	94	7	59	42	..	1	
100	102	1	1	..	1	..	..	98	7	65	40	..	5	
100	101	2	..	..	..	..	..	98	5	62	41	..	3	
100	100	..	..	..	..	..	..	99	1	47	53	..	..	
100	100	..	1	..	..	..	..	99	2	66	35	..	1	
100	97	..	1	4	1	..	..	98	5	51	52	..	3	
100	97	1	..	2	..	..	..	96	4	54	46	..	..	
1000	989	5	4	10	9	..	..	973	44	553	464	..	17	
100	98	..	..	1	..	1	..	97	3	54	46	..	..	5 cases of hemorrhage. 2 cases of suppurated mammæ. 1 case of peritonitis. 1 case of convulsions. 3 women died.
100	101	..	1	..	1	..	..	100	3	50	53	..	3	
100	96	..	1	2	1	..	..	93	7	54	46	1	..	
100	100	..	..	..	1	..	..	97	4	51	50	..	1	
100	97	3	..	1	..	..	..	95	6	55	46	..	1	
100	95	..	..	6	..	..	..	97	4	49	52	..	1	
100	98	..	..	2	..	..	..	95	5	47	53	..	..	
100	101	..	..	6	..	..	..	102	5	57	50	..	7	
100	99	..	..	1	..	..	..	96	4	46	54	..	..	
100	100	..	..	..	..	..	..	98	2	53	47	..	..	
1000	985	3	2	19	3	1	..	970	43	516	497	1	13	
100	96	1	..	6	..	..	..	97	6	47	56	..	3	6 cases of adherent placentas. 5 cases of hemorrhage. 1 case of suppurated mammæ. 1 case of convulsions. 1 case of prolapsus uteri. 3 women died.
100	96	3	..	1	1	..	..	98	3	44	57	..	1	
100	96	2	..	3	..	..	..	96	5	42	59	..	1	
100	96	..	..	2	2	..	..	96	4	52	48	..	..	
100	99	1	..	3	..	..	..	99	4	55	48	..	3	
100	98	..	..	1	..	..	1	96	4	50	50	..	..	
100	101	..	..	2	..	..	..	102	1	51	52	..	3	
100	97	..	..	3	1	..	..	99	2	43	58	..	1	
100	99	..	..	4	..	..	..	97	[illegible]	49	54	[illegible]	3	
100	99	..	..	1	..	..	..	99	1	56	44	..	..	
1000	977	7	..	26	4	..	1	979	36	489	526	..	15	
100	98	..	..	4	1	..	..	102	1	49	54	..	3	6 cases of adherent placentas. 9 cases of hemorrhage. 4 women died.
100	96	1	..	3	..	..	..	98	2	52	48	..	..	
100	96	..	1	2	..	..	..	97	3	48	52	..	..	
100	99	2	..	2	..	..	..	98	5	41	62	..	3	
100	94	3	..	..	1	2	..	97	3	46	54	..	..	
100	95	1	..	2	..	..	2	97	3	43	57	..	..	
100	99	..	..	3	1	..	..	97	6	68	35	1	3	
100	93	4	..	2	..	1	..	96	4	51	49	..	..	
100	95	2	..	3	1	..	..	98	3	54	47	..	1	
100	99	1	..	1	4	..	..	100	5	51	54	..	5	
1000	964	14	1	23	8	2	2	980	35	503	512	1	15	
100	96	..	1	1	2	..	..	97	3	39	61	1	..	7 cases of hemorrhage. 2 cases of adherent placentas. 1 woman died.
100	100	..	1	..	..	..	..	99	2	48	53	..	1	
100	97	1	1	1	1	..	..	96	5	53	48	..	1	
100	93	2	1	2	2	..	..	94	6	49	51	..	..	
100	98	..	1	1	..	..	..	98	2	37	63	..	..	
100	99	..	..	..	4	..	2	96	9	55	50	..	5	
100	[illegible]	..	..	1	1	..	1	[illegible]	6	49	[illegible]	..	1	
100	[illegible]	..	..	2	1	..	..	95	6	55	46	..	1	
100	[illegible]	..	..	1	..	..	1	[illegible]	5	52	49	..	1	
100	[illegible]	1	1	1	..	..	..	[illegible]	2	56	48	..	1	
1000	976	[illegible]	[illegible]	10	11	..	[illegible]	[illegible]	[illegible]	[illegible]	518	1	11	

ROYAL BERKSHIRE HOSPITAL.

SURGICAL REPORTS AND OBSERVATIONS,

By F. A. BULLEY, Esq., F.R.C.S., Surgeon to the Hospital.

PARTIAL CLOSURE OF THE JAWS, WITH RIGID CONTRACTION OF THE LEFT MASSETER MUSCLE, CURED BY MECHANICAL EXTENSION.

George S., a blacksmith, admitted Dec. 3, 1844, on account of a partial closure of the lower jaw, which had existed rather more than a fortnight. He is unable by his own efforts to separate the jaws to a greater distance from each other than about a quarter of an inch, and day by day he finds the difficulty is increasing. There is a feeling of hardness and swelling of the bone extending from its angle forwards for about two inches, this swelling having been nearly twice as large as it is at present; he has suffered considerable pain at this part, but is now comparatively easy through the use of leeches and blistering, which have relieved the pain and subdued the swelling. The masseter muscle on the same side feels hardened and contracted, and very painful, especially when slightly put upon the stretch in endeavouring to separate the jaws; the articulation of the jaw is apparently unaffected by the disease, the lateral movements being free, and performed without any uneasiness in the joint.

He states that he was employed in shoeing a vicious horse, which bit him and threw him down, and in some way struck him on the face, but in what exact manner, from the suddenness of the movement, he is unable to recollect.

The treatment consisted at first of such means as were calculated to diminish the pain and swelling of the jaw, such as the application of leeches and small blisters, which, after a short time, relieved these symptoms. The jaw remaining partially closed, and the masseter muscle continuing in the same hardened, contracted state, after the disappearance of the swelling it was deemed expedient to attempt to separate the jaws by gradual mechanical extension; and an instrument with two wide blades, capable of being nicely regulated by the action of a screw, was contrived for that purpose.

At first very little progress was made, and for some days I could scarcely observe that any further perceptible separation had been effected, being, moreover, obliged to use the instrument but for very short periods at a time, on account of the pain produced by the stretching of the masseter muscle; as he got accustomed to the operation, however, and could bear it longer, I could observe that, day by day, the distance between the jaws became increased, until at length he was able to open his mouth to its fullest extent without difficulty, and masticate his food as well as before the accident; and, at the end of the month from the commencement of the mechanical treatment, he left the hospital quite cured, and I have every reason to believe he has remained well ever since. The extension, which was applied daily, usually occupied from twenty to thirty minutes at a time, gradually increasing the force during its application, the blades of the dilator being covered with India-rubber sheeting, to prevent injury to the teeth.

COMPLETE CLOSURE OF THE JAWS, WITH RIGID CONTRACTION OF THE MASSETER, CURED BY MECHANICAL EXTENSION AND THE APPLICATION OF ELECTRO-GALVANISM.

John H., aged thirty-five, labourer, was admitted as an out-patient June 28, on account of a fixed closure of the jaws, which had existed about eight days before he came to the hospital. The jaws were firmly locked together, and could not by any ordinary means be separated from each other, the only interval between them being occasioned by his being naturally rather underhung, which had allowed of small quantities of

Number of Cases.	Presentations. Head.	Face.	Arm.	Breech.	Feet.	Placental.	Funis.	Living.	Still-born.	Boys.	Girls.	Requiring Instruments.	Twins.	Remarks.
100	98	1	1	2	..	..	..	95	6	46	55	..	1	2 cases of adherent placentas.
100	96	2	..	..	3	..	..	93	8	58	48	..	1	5 cases of hemorrhage.
100	98	..	..	2	..	..	3	96	7	50	53	..	3	1 woman died.
100	96	2	..	1	1	..	..	96	4	53	47	..	..	
100	97	2	1	..	5	..	..	101	4	58	47	..	5	
100	95	..	..	4	1	..	..	96	4	55	45	..	..	
100	98	1	..	1	1	..	..	95	6	58	43	..	1	
100	95	4	..	3	..	..	..	99	2	53	48	1	1	
100	95	2	..	3	..	..	..	93	7	53	47	..	..	
100	98	2	2	5	1	..	..	92	8	50	50	..	..	
1000	[illegible]	15	4	26	12	..	3	956	56	529	483	1	12	
100	99	..	1	1	..	..	..	97	4	52	49	..	1	1 case of ruptured perineum and suppurated mammæ.
100	96	..	..	3	2	..	..	94	7	62	39	1	1	1 case of adherent placenta.
100	96	..	1	5	1	..	..	97	6	56	47	1	3	1 woman died.
100	92	4	..	3	2	..	..	97	4	40	61	2	1	
100	93	..	..	4	4	..	..	98	3	54	47	3	1	
100	95	1	..	2	5	..	..	93	10	58	45	1	3	
100	91	3	1	1	7	..	..	97	6	41	62	3	3	
100	91	3	..	1	6	..	..	95	6	51	50	2	1	
100	98	1	..	1	3	..	..	99	4	60	43	..	3	
100	97	1	1	..	2	..	..	96	5	55	46	..	1	
1000	948	13	4	21	32	..	..	963	55	529	489	13	18	
100	102	..	..	..	1	..	..	98	5	46	57	..	3	6 cases of adherent placentas.
100	98	..	..	2	..	..	..	96	4	60	40	..	..	8 cases of hemorrhage.
100	101	..	..	1	1	..	..	101	2	51	52	..	3	1 case of prolapsus vesicæ.
100	100	..	..	1	..	..	..	99	2	50	51	..	1	1 case of convulsions.
100	101	..	..	..	..	..	..	98	3	58	43	..	1	1 suppurated mammæ.
100	92	2	2	2	..	..	1	94	6	39	61	..	..	1 woman died.
100	97	..	1	1	1	..	..	98	2	56	44	..	..	
100	96	..	..	4	1	..	..	100	1	47	54	..	1	
100	97	1	1	3	1	..	..	99	4	54	49	..	3	
100	100	..	..	..	..	..	..	99	1	50	50	..	..	
1000	985	3	4	14	5	..	1	982	30	511	501	..	12	
100	98	..	1	1	1	..	..	97	4	52	49	..	1	9 cases of adherent placentas.
100	98	1	..	..	1	..	..	95	5	63	37	..	..	7 cases of hemorrhage.
100	95	..	1	2	2	..	1	91	7	59	42	..	1	1 case of inflammation of the uterus.
100	98	2	..	..	..	..	..	98	2	42	58	..	..	2 women died.
100	95	1	..	4	1	..	..	93	8	37	61	..	1	
100	97	..	..	2	2	..	..	98	3	48	53	..	1	
100	97	..	..	1	1	..	1	96	4	54	46	..	..	
100	94	1	1	2	2	..	..	97	3	54	46	..	..	
100	99	..	..	2	..	..	..	98	3	51	50	..	1	
100	96	3	..	1	1	..	..	98	3	55	46	..	1	
1000	967	8	3	15	11	..	2	964	42	515	491	..	6	
100	96	..	..	5	..	..	..	96	5	48	53	..	1	1 case of hemorrhage.
100	99	..	..	4	..	..	..	95	8	59	44	..	3	1 case of adherent placenta.
100	96	..	1	2	2	..	..	94	7	56	45	..	1	3 women died.
100	97	1	..	1	..	2	..	94	7	53	48	..	1	
100	100	..	..	1	..	..	..	97	4	54	47	..	1	
100	96	2	..	1	2	..	..	97	4	51	50	3	1	
100	100	..	..	..	..	..	..	97	3	47	53	..	..	
100	96	4	..	3	..	..	..	98	5	50	53	..	3	
100	103	..	1	2	..	..	..	103	2	49	56	..	5	
100	97	..	2	2	..	..	..	90	11	54	47	..	1	
1000	979	7	4	21	4	2	..	961	56	521	496	3	17	

The Summary of Twenty Thousand Cases.

Millennium.	Number of Cases.	Presentations. Head.	Face.	Arm.	Breech.	Feet.	Placental.	Funis.	Living.	Still-born.	Boys.	Girls.	Requiring Instruments.	Twins.
1	1000	978	2	4	13	13	..	..	990	20	508	502	3	10
2	1000	983	7	3	8	10	..	7	976	42	556	462	15	18
3	1000	973	16	6	16	4	2	1	994	23	529	488	..	17
4	1000	953	19	4	30	8	..	..	981	33	506	508	6	14
5	1000	959	11	5	27	5	..	..	964	42	533	474	4	7
6	1000	979	4	1	16	14	..	1	958	57	493	522	..	15
7	1000	981	7	1	17	5	..	..	965	46	530	481	2	11
8	1000	984	3	3	12	6	2	4	982	32	531	483	1	14
9	1000	988	2	2	9	8	..	..	967	42	519	490	..	9
10	1000	969	3	4	24	7	..	5	973	39	558	454	..	12
11	1000	969	5	4	10	9	..	..	973	44	553	464	..	17
12	1000	985	3	2	19	3	1	..	970	43	516	497	1	13
13	1000	977	7	..	26	4	..	1	979	36	489	526	..	15
14	1000	964	14	1	23	8	3	2	980	35	503	512	1	15
15	1000	976	4	6	10	11	..	4	965	46	493	518	1	11
16	1000	953	15	4	26	12	..	3	956	56	529	483	1	12
17	1000	948	13	4	21	32	..	..	[illegible]	55	569	499	13	18
18	1000	985	3	4	14	5	..	1	[illegible]	30	511	501	..	12
19	1000	967	8	3	15	11	..	2	964	42	515	491	..	6
20	1000	979	7	4	21	4	2	..	961	56	521	496	[illegible]	17
Total	20,000	19,468	153	65	[illegible]	179	10	31	19,443	890	10,493	9,841	51	[illegible]

liquid food being passed upwards into the mouth; the separation, however, in this direction was so slight that he preferred taking what little sustenance he had been able to take through some spaces left by the decay of one or two of the molar teeth in the lower jaw, which he accomplished by passing the bowl of a small teaspoon within the cheek, and, turning aside his head, thus allowed the liquid it contained to flow into his mouth. He complained of extreme general weakness, from insufficient nourishment, not having tasted animal food of any kind for several days, and he had also latterly become very thin. On examination the masseter muscle on the left side of the face was found to be rigidly contracted, and of almost cartilaginous hardness, having all the characteristics of a muscle affected with tetanic spasm. Apparently no other muscle of the face was similarly affected. Occasionally he had felt great pain in the affected muscle, especially after using his own efforts to open the jaw

He gave me the following account of the origin and progress of his complaint:—He had been engaged, with a number of other men, in placing carriages on Ascot-heath race-course, on June 2, when the pole of one which he was assisting accidentally swung round, and struck him on the side of the face; he was slightly stupified by the blow, but quickly recovered himself, and, beyond a slight stiffness of the part, experienced little or no inconvenience for three or four days; when, in returning home after the races were over, he got wet, and caught a severe cold, attended with great hoarseness, which continued about a week, during which time he felt but little of the jaw, with the exception of a trifling difficulty in masticating his food. At the end of that time, however, the hoarseness, which had been so great as almost to deprive him of speech, disappeared, and the stiffness of the jaw began to increase, so that he now felt a real difficulty in mastication; this difficulty increasing day by day, until at last the jaws became so firmly set together that he could not by any means separate them from each other. During this period the pain in the cheek, although not very severe, was constant, and was increased by pressing or pinching the contracted masseter muscle.

He had continued in this state during the ten days prior to the commencement of this report. The treatment immediately adopted was, the gradual separation of the jaws by means of the same apparatus as had been used in the other case; the thin blades of the instrument having been with some difficulty introduced between the teeth, a moderate extension was continued for nearly half an hour, at the end of which time, by very gradually increasing the force, the jaws had become separated to the extent of five-sixteenths of an inch. In the afternoon, electro-galvanic currents of moderate intensity were directed through the contracted masseter by placing one of the sponge conductors in the mouth underneath the muscle, and the other opposite to it outside the cheek. The operation of the electro-galvanism appeared of itself to produce some slight benefit to the part, as, without any force, the jaws could be separated about one-sixteenth part of an inch further than before it was applied.

29. The electro-galvanism was repeated, together with the use of the dilator, continued for twenty-five minutes; the extension occasioned some little pain in the contracted muscle, especially in that portion nearest the zygoma, which the galvanism seemed to relieve.

30. A separation of seven-sixteenths of an inch has been gained by a continuance of the treatment.

July 2. He can separate the jaws by his own muscular efforts to the extent of half an inch, and can now manage to drink a considerable quantity of fluid without inconvenience, and masticate small-sized pieces of food. He is beginning to regain his strength.

3. The extension to-day produced a separation of five-eighths, or more than half an inch; it was attended, however, with considerable pain, which was relieved, as before, by the [illegible] of the [illegible].

Head....19,468							
Face 153							
Arm 65							
Breech .. 357							
Feet 179							
Placenta 10	Living 19,443	Boys....10,422	Cases....20,000				
Funis.... 31	Still-born...... 820	Girls.... 9,841	Twins .. 263				
20,263	20,263	20,263	20,263				

Head	·9734 per centum, or	97·34 per cent. =	97 3-10,	or one case in	1 nearly.		
Face	·0076 ,,	0·76 ,,	8-10,	,,	131 ,,		
Arm	·0032 ,,	0·32 ,,	3-10,	,,	312 ,,		
Breech	·0178 ,,	1·78 ,,	1 8-10,	,,	56 ,,		
Feet..........	·0089 ,,	0·89 ,,	9-10,	,,	112 ,,		
Placenta......	·0005 ,,	0·05 ,,	5-100,	,,	2000 ,,		
Funis	·0015 ,,	0·15 ,,	1-10,	,,	666 ,,		
Living	·9721 ,,	97·21 ,,	97 2-10,	,,	1 ,,		
Still-born	·0410 ,,	4·10 ,,	4 1-10,	,,	24 ,,		
Boys..........	·5211 ,,	52·11 ,,	52 1-10,	,,	2 ,,		
Girls	·4920 ,,	49·20 ,,	49 2-10,	,,	2 ,,		
Twins	·0131 ,,	1·31 ,,	1 3-10,	,,	76 ,,		
Instruments ..	·0025 ,,	0·25 ,,	2-10,	,,	400 ,,		

Cases in whole observations.

106 hemorrhage before, after, and during labour	·530 per cent.,	=	5-10,	or one case in	189
60 adherent placenta, removed by medical officers, and one woman always subject to it	·300	,,	3-10,	,,	333
56 died from various causes (one from cholera undelivered)	·280	,,	3-10,	,,	357

7. The mechanical separation of the jaws has been daily practised, as well as the electro-galvanism, with a trifling improvement.

10 No improvement, from his having taken cold through working late at night in his garden. To have a stimulating liniment rubbed into the affected side of the face twice a day.

12. Complains of the affected side of the face feeling very stiff and uncomfortable, which he attributes to the use of the liniment. To discontinue the liniment.

15. The mechanical and other means have been continued; he can now by his own efforts separate the jaws to the extent of three-fourths of an inch.

27. Scarcely any improvement having taken place within the last few days, and as the poor fellow was daily losing strength from want of sufficient food, he was admitted as an in-patient of the hospital, the same means being employed as had been perseveringly used during the whole previous period of the treatment. To have extra diet, and a pint of porter daily.

29. Complained of a more than usual stiffness of the jaw, as well as for the first time in the thighs and legs, which he described as being affected with a curious crampy feeling. Fearing that he might become, even at this remote period, the subject of general tetanus, I had him placed in a hot salt-water bath, from which he appeared to derive almost immediate relief.

30. The warm-bath has entirely relieved the pains. No uneasiness about the jaw.

Aug. 2. A slight return of the crampy sensations in the limbs. To repeat the hot-bath.

5. The mechanical separation of the jaws has been daily practised since his admission into the hospital, and, as he could now easily separate them by his own efforts to the extent of an inch and a quarter, it was judged expedient to discontinue the use of the dilator, leaving the remainder of the treatment entirely to the electro-galvanism.

14. The masseter muscle on the affected side has nearly recovered its natural softness and extensibility, and there appears to be very little difference in its action from the other; he can now masticate his food without difficulty, opening and shutting the mouth almost with the same ease as before the accident.

21. Discharged cured.

Observations.—It has been remarked by Professor Forgusson, that examples of permanent contraction of the masseter muscle, independent of any tetanic affection, are not often met with in practice. He had met with several instances of permanent inability to open the mouth to such an extent as to permit the patient to masticate, but could not say that his attention had been particularly attracted by the rigidity of any particular muscle. In such a case he had successfully practised the subcutaneous section of the masseter,(a) a proceeding which, in such able hands, might be easily accomplished, but which would not be without its difficulty and hazard to ordinary operators; it was with a view, therefore, to obviate the necessity for such an operation that I undertook in these two cases the separation of the jaws by the gradual and careful employment of mechanism.

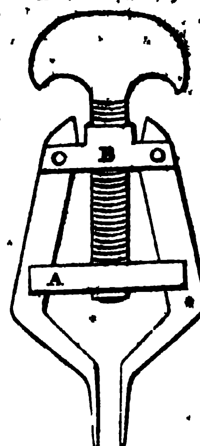
It will be observed that in the case last related I employed electro-galvanism simultaneously with the mechanical extension; and I could not but remark its value as a remedial agent, more especially in relieving the pain produced by the stretching, which on each occasion it appeared to do, and thus enabled the patient to bear a greater amount of extension at a time, and its more frequent employment, than he might otherwise have been able to have done; its influence, also, in assisting the relaxation of the contracted muscle, when used *without* the extension, was so obvious that I should not hesitate, in any future case of *general* tetanus, in giving a more extended application of it the preference in the treatment to any other means with which I am at present acquainted.

Had I been acquainted with the power of this agent in mitigating the pain produced by the extension, and practised it in the first of these cases, I feel satisfied that the cure would have been performed in much less time than it occupied without it, and with much less inconvenience to the patient.

The dilator, which would doubtless be equally useful in all cases where a simple but powerful speculum-oris was required, may be obtained of Messrs. Weiss, surgical instrument-makers in the Strand, as constructed after the model of the one used in the foregoing cases.

(a) Vide "Provincial Med. and Surg. Journal" for Jan. 29, 1842.

INSTRUMENT USED IN ...



Flat surface of the blade of the full size.

Side view of the dilator diminished. The cross bar A revolves upon the central screw, and is provided with a deep square notch at each end, in which the branches work. This bar being made to approach the point at B, by turning the central screw, the branches are separated from each other by a very powerful leverage.

THE PHYSIOGNOMY OF DISEASES OR SEMEIOTICS IN THEIR ASSIMILATIVE CHARACTERS.

By GEORGE CORFE (Author of "A Popular Treatise on the Kidney," &c.), of the Middlesex Hospital.

[Illustrated by Portraits of Cases.]

(Continued from p. 433.)

The most severe lacerations and injuries to which the human frame can be liable are found in our hospital surgeries: some of them, most trifling to appearance, ending in death; and others, of the severest form, rallying and healing up under the mode of treatment prescribed.

These are facts as incontrovertible as they are extraordinary, and tend to show us that God is indeed the Supreme Governor of nations, thrones, and individuals; of life, of health, and of death.

The study of physiognomy was much attended to amongst the Greeks and ancient philosophers, but was not revived until the middle ages.(a) Baptista Porta, a physiognomist of great eminence, wrote a treatise "On the Physiognomy of Plants and of Birds." The "Magia Physiognomica" of Gaspar Schottus, the work of Boyle, and lastly, the elaborate treatise of that singularly gifted author, Lavater, have reduced the subject to some definite and scientific principles.

Haller thus expresses himself:—"It is the will of God, the great author of society, that the affections of the mind should express themselves by the voice, the gestures, but especially by the countenance. Nor is this species of language wholly denied even to the brute creation. They, too, by signs, express their love of kind, social friendship, maternal affection, rage, joy, grief, fear, and all the more violent emotions. A dog easily discovers whether you be angry with him, by your face and tone of voice. The bellowing of the bull, and the roaring of the lion, are indicative language, too well understood to be controverted. I shall say little of sound, though it

(a) Aristotle formerly treated of the subject, and states that a peculiar form of body is invariably accompanied with a peculiar disposition of the mind, and a human intellect is never found in the corporeal frame of a beast. As a lion, by his strong hair, deep voice, and large extremities, exhibits his amazing powers of body; and the hare betrays its pusillanimity by its slender extremities, soft down, and other features, so the character of a vigorous mind and that of a feeble mind, are respectively seen in the corporeal frame of man.

is undeniably certain that every affection has a tone peculiar to itself."(a)

But the physiognomy of countenance in health has been most ably treated of by Lavater, who asks, "Does the human face—that mirror of the Deity, that masterpiece of the visible creation—present no appearance of cause and effect, no relation between the external and the internal, the visible and the invisible, the cause and what it produces? Would not common sense revolt against the absurdity of maintaining that a robust man may have a perfect resemblance to one infirm, a person in full health to one dying of a consumption, a man of an ardent character to one of a sedate and gentle disposition?" He, too, was not insensible to the amazing advantages that were to be obtained from a study of the physiognomy under diseases. As to the physician, he remarks, the physiognomy of the patient frequently instructs him better than all the verbal information he can receive. It is astonishing how far physicians have carried their sagacity in this respect. "I shall be told," says another writer, "that physiognomy is often deceitful. Yes, it is possible to counterfeit, but the apparent constraint generally betrays the imposture; and it as easy to distinguish a natural from an assumed air, as a thought that is just from one that is brilliant. Paint laid on, however dexterously, is never the skin itself. I am not in the least staggered by the objection that a fair outside may cover a corrupted heart."(a)

"What would medicine be without the knowledge of symptoms, and what were symptomatical knowledge without physiognomy? and just as a man does not become a professed politician by reading Grotius and Puffendorf, so a physician does not become skilful by attending Boerhaave's lectures. Whoever thought of advancing objections against the doctrine of diversities of diseases? Woe be to that physician who, without employing physiological or pathological physiognomy—who, without consulting in every particular case his physiognomical sentiment—should tie himself down to treat every disease according to its specific class, without once thinking to modify his prescriptions in conformity to the peculiar symptoms which he observes in his patient. Rank, condition, habit, estate, dress—all concur to the modification of man; every one is a several veil spread over him. But to pierce through all these coverings into his real character—to discover in these foreign and contingent determinations, solid and fixed principles by which to settle what man really is—this appears extremely difficult, if not impossible." True, this is the sole prerogative of Him whose eye can alone search the heart and know the inward workings of its interminable labyrinths. "It is true man is acted upon by everything around him, but he, in his turn, acts upon all these external objects, and, if he receives their impression, he also communicates his own. Hence it is that a judgment may be formed of a man's character from his dress, his house, his furniture. Nature forms us, but we transform her work, and this very metamorphosis becomes a second nature. All faces, all forms, all created beings, differ from one another, not only with respect to their class, their genus, their species, but also with respect to their individuality."—*Lavater, by D. Hunter*, vol. 1, 1798.

Having thrown out a few introductory remarks, I now proceed to a closer view of the subject proposed, namely, a brief dissertation on "The Physiognomy of Diseases in their Assimilative Characters." It is a wide field, after all: nevertheless we can particularize and portray individuals of the copper-coloured Indian race, of the black-skinned African, or the tawny Chinese: so we may try to trace the lineaments of disease generally, and of some in particular; though the species present the like features often, yet in nature, character, and end, they vary in the greatest degree. If it were not true that divers diseases are seen to present similar symptoms in one stage or other of their progress, whence would come the difficulties which start up, and which are weighed with such care and intense anxiety by the judicious and skilful medical man? The object, therefore, of these considerations is to bring forward the assimilation or likeness—certainly not family likeness—of diseases to each other: for though they are not in any respect akin to each other, but in the general name, disease, as one inhabitant of the earth is no relation to his antipodes, excepting in the general term man, yet the portraying of these varied lineaments of disease, which assimilate in a general character, may open the path a little wider to, and thus facilitate, the clinical student in his studies of internal diseases.

On rushing into a rich flower garden, we are bewildered with profuse abundance, dazzled by countless specimens, and distracted by splendid variety; and perhaps the bouquet, afterwards gathered, may consist of the commonest and least odoriferous productions of the crowded parterres; so with myself, as I turn a retrograde step into the scenes of our wards, and try to cull from memory's precincts a store of rich and interesting facts to illustrate the theory I have taken up, I feel bewildered with numbers, and distracted with immense variety. It is very possible, that I may select the least interesting from the thousands of our physicians' cases which I have had under my care; however, whatever be their value as examples, they are correct as portraits, and I trust will be closely enough applied to illustrate my meaning. Thus the very mass of material which some artificers are required to build from is the chief impediment in the raising of their edifice.

So close is the knitted texture of head and body, that it is a rare occurrence to be enabled to designate a disease purely cerebral, or wholly thoracic. A man may rupture a cerebral artery from mental or bodily exertion; he may have pneumonia from a sudden chill of his body, and so forth; but as the disease, no matter from what origin, is concentrated in the brain, or in the lungs, and as the chief symptoms seem to converge to that part, so we give the name of the disease to the distress in that organ, especially in the terms "apoplexy with oppressed breathing," or "pneumonia with delirium," &c. &c. This being premised, the classification of the higher diseases, according to their physiognomy in the first glance of the eye, will be readily admitted.

The whole man, indeed, sympathizes in an ache or a pain in any part of the bodily frame; but such sympathy is far greater in some organs than in others. Man is a dependent creature; and, speaking in deep submission to the One eternal Great Cause, there is an unceasing mutual dependence upon the action and perfect play of every vital performer of the vast orchestra of the bodily powers:—

"Strange that a harp of thousand strings
Should last in tune so long!"

says the pious Dr. Watts. Yes; and one little discordant tone here is enough to spoil the whole harmony.

The subject, then, seems to admit of the following arrangement as a sketch of the "Physiognomy of Diseases in their Assimilative Characters."

Class I.

Division I. *Cerebral Diseases in Insensibility; Countenance lethargic.*

From Apoplexy.
Ramollissement.
Otitis, &c.
Tumours.
Arachnitis.
Injuries of the head.

Division II. *Cerebral Asphyxia in Stupor; Countenance livid.*

From Narcotic poisons.
Coma.
Hepatic disorders.
Renal degeneration.
Intoxication.
Syncope (hemorrhagic).
Facial paralysis.

Division III. *Cerebral Sympathies in Irrationality; Countenance distressed.*

From Delirium tremens.
Paralysis agitans.
Paralysis e veneno.
Hysteria.
Mania.
Epilepsy.
Chorea.
Pericarditis.
Pneumonia.
Enteritis.
Fever.

Class II.

Division I. *Thoracic Derangement; Countenance dusky.*

From Pneumonia.
Pleuro-pneumonia.
Pneumonic engouement.
Œdema pulmonum.
Asthma.
Bronchitis.
Endo-carditis.

Division II. *Thoracic Derangement; Countenance anxious.*

From Laryngitis.
Tracheitis.
Spasm of diaphragm.

(a) "Haller. Elementa Physiologica," t. 5, p. 590. There is a curious and most interesting work bearing upon this subject, by Dr. Gardner, "The Music of Nature," in which he elucidates the various cries, howlings, calls, and moanings, &c., of the brute creation.

"Who has not recognised the plaintive tones of the mateless wood-pigeon and turtle cooing for its return, whilst passing by the thick woods after sunset? Who cannot recognise the difference between the sorrowful howl of a faithful dog which has lost his master, and the fierce bark of another which has been alarmed by some stranger? Every one is familiar, too, with the common cluck, special cluck, and alarm cluck of the fostering hen. Truly the subject is a wide and pleasant field to wander into, but I must not digress further, but would observe only, that even the position of the eye, nose, and ear in various animals, proves the truth of physiognomy as a science. Take the latter organ as an example. In timid creatures, as the sheep, the feline class, and those which are pursued, as the hare, rabbit, &c., and ruminants in general, this organ is inclined backwards towards the direction from which the sound of their pursuer proceeds, whilst at the same time, being so very movable, it may be thrown so flat upon the head and neck as not to impede the rapidity of their flight. This may be noticed in that noble creature the horse. Who has not seen the downcast ears of the jaded cab horses in London, as they pass along, kept in one constant state of terror by the gnarling driver, and the fear of the too-oft-applied lash to its emaciated sides? and who has not observed the favourite cat, seated at the fireside, knowingly throw one ear back towards the door, to gather up the strange sounds of some approaching but unfamiliar step?

"Sir H. Davy observed, that dogs when blindfolded have the power of finding their way by the sense of smell; every lane, field, or town has its particular smell.

"Dr. Darwin, in his 'Zoonomia,' remarks, that if a string of horses is noticed upon travel, you will find that the first horse points his ears forward, and the last behind him, keeping watch; but the intermediate ones, who seem not to be called upon to do this duty, appear careless and perfectly at their ease.

"A dog, belonging to a change-ringer, used to accompany his master to the belfry of St. Martin's Church, in Leicester; and upon commencing a peal of changes he would lay himself quietly down, and not attempt to stir till the bells began to 'ring round,' which intimated the finishing of the peal, and which he always noticed. He would then get up, shake himself, and prepare to be off from an amusement for which he had less relish than his [illegible]"
W. Gardner's "Music of Nature."

(a) Gellert's "Lessons on Morality."

Pleurodynia.
Pleuritis.

Class III.

Adominal Seisures; Countenance pinched.

From Colic.
Colica pictonum.
Gallstones.
Urinary ditto.
Spasm of gall-bladder.

Constipation.
Intussusception.
Hernia.
Ascarides.
Peritonitis.
„ hysterical.
„ true.

Class IV.

Division I. *Emaciation of Frame, &c.; Countenance wan.*

From Tubercular disease.
Cancer Stomach.
„ uterus.
„ rectum.
„ mammæ.
Hemorrhage.
„ stomach.
„ uterus.
Mesenteric disease.
Renal disease.
Entozoa.

Division II. *Emaciation of Frame; slight; Countenance of peculiar hues.*

From Cardiac disease.
Emphysema.
Œdema pulmonum.
„ pleuræ (hydrothorax).
Malignant diseases.
Icterus.

Class V.

Enlargement of Organs, Glands, &c.; Countenance disturbed.

From Goitre.
Tonsillitis.
Cynanche parotidea.
Empyema.
Dropsy.
„ general.
„ peritoneal.
„ hepatic.
„ ovarian.
„ cardiac.
„ mesenteric.
„ splenic.
Tympanitis (abdominal).
Tumours.
„ ovarian.
uterine.
cystic.
hepatic.
splenic.
aneurismal.
Acute rheumatism.
„ fibrous.
„ synovial.
Hypertrophy cordis.

Class VI.

Division I. *Vascular Excitement; Countenance flushed.*

From Erysipelas.
Rubeola.
Scarlatina.
„ notha.
Urticaria.
Phlebitis.
Rubeoloid fever.

Division II. *Vascular Atony; Countenance languid.*

From Purpura.
Erythema nodosum.

Class I.

Division I. [illegible] *Disease* [illegible] *Insensibility; [illegible] lethargic.*

From [illegible]

Ramollissement.
Otitis, &c.
Tumours.
Arachnitis.
Injuries of the head.

There is no department of semeiology in which so much valuable, precise, and oftentimes infallible information is conveyed to the mind of the experienced medical physiognomist, as in that of cerebral diseases and disturbances. The physiologist is prepared to expect such things when he surveys the human face, and finds in it four muscles, at least, peculiar to man, and which are evidently designed to convey the mute language of expression. (a) These muscles of expression take the lead, it may be said, in exhibiting or portraying all the varied shades, alterations, and lineaments in the physiognomy of disease. It has been truly observed that a practitioner who has a discerning and an experienced eye in medical physiognomy will attain, in many instances, to a readiness of diagnosis and a certainty of prognosis which will astonish persons who have neglected this study.

DISSECTION OF A LARGE SCROTAL HERNIA, WHICH EXTENDED FOUR INCHES BELOW THE KNEES.

By JOSEPH THOMPSON, Esq., Surgeon, Nottingham.

John Harris, aged fifty-four, was admitted into the Union Hospital two years and ten months ago, on account of an immense inguinal hernia of the left side. He was a framework-knitter, of middle stature, pale, and sharp features. About thirty-seven years back he served four years in the militia, but states that he has been of steady habits. There is no proof that any of his relations have been afflicted with rupture. When the tumour, which he ascribes to a fall, first made its appearance about ten or eleven years since, it was about the size of an egg and reducible, he being at that time a corpulent man weighing twelve stones. He did not apply to any surgeon for relief, but put a truss on himself, which produced considerable excoriation and inflammation. About four years ago an abscess formed in the scrotum, which was opened, and afterwards the tumour progressively enlarged up to the time of his admission. He worked for two years after the protrusion, but not within the last eight, during which latter period it has been irreducible. The circumference of the hernia on admission was thirty-two inches, but subsequently there was at intervals a temporary enlargement of it, depending, as he supposed, upon potatoes and pea-soup, which he occasionally took as a part of his diet, which caused diarrhœa and flatulence. He never was habitually costive. The penis has been concealed in the tumour for five years. From the time of his being received into the hospital he has had frequent attacks of purging, and latterly he has exhibited unequivocal symptoms of granular degeneration of the kidneys. The former has for some weeks been incessant, and the symptoms altogether have been such as to indicate ulceration of the colon, of which, coupled with Bright's disease, the poor man died on May [illegible].

Post-mortem twenty-four hours after Death.—Body not greatly emaciated; lower extremities œdematous, particularly the right; anchylosis of the left knee. I determined upon examining, first, the cavity of the abdomen; second, the hernial tumour. There was a layer of adipose tissue, three quarters of an inch thick, in front of the abdominal muscles. The viscera being exposed, the stomach was found to occupy a more perpendicular position than usual, being, together with a portion of the transverse colon, dragged by the omentum towards the left abdominal ring. The small intestines—small in quantity—inclined to the left side, being seated chiefly behind the omentum. A part of the cœcum had passed into the hernial sac; the other, with the ascending and a portion of the transverse colon, remained in the cavity of the abdomen. The rectum, where it usually joins the colon, turned forwards through the internal ring. A ligature having been passed round these parts at the abdominal ring, they were removed and measured, the small intestines being five feet five inches long, the large twenty inches. There was not any disease of the small, but some solitary ulcerations upon the mucous membrane of the large, intestines. The omentum was much thickened, owing to a great quantity of fat deposited between its layers. The appendices epiploicæ were large and numerous. Venous congestion of the stomach at the cardiac extremity, and slight inflammation at the pyloric, with softening of the mucous membrane throughout. Spleen and pancreas in a healthy condition. The left kidney was situated in the left hypochondriac region, its upper extremity reaching as high as the seventh rib. It was increased to two and a half times its natural size, flabby, easily stripped of its capsule, beneath which were several serous cysts. The distinction between the cortical and tubular structures scarcely existed; the whole being softened, of a mottled appearance, and granular. The calyces and infundibuli were much dilated, and two small calculi removed from the former. The right was reduced to half its proper size, and presented nearly the same appearances as the left. The liver, of the natural dimensions, was somewhat thickened and rounded at its borders, readily lacerated, and slightly affected with fatty degeneration. The gall-bladder contained a calculus of a black colour, and a considerable quantity of light orange-coloured bile. The bladder contained half a pint of urine. The hernial tumour, which measured thirty-seven inches round its widest part, eighteen and a half round its neck, and thirty two from the abdominal ring in front to the posterior of the neck, reached four inches below the knees. The penis and testicles were completely hidden in its structure. The scrotum was exceedingly thickened and rugose, and in some places indurated and ulcerated from frequent attacks of inflammation. An ulceration existed at the bottom of the tumour anteriorly, and one on its left side, the result of sloughing caused by the weight of the left thigh reposing upon it at this part, the knee being anchylosed, and not permitting of frequent change of position. The veins in the neighbourhood of these ulcerations are of large size, and have often furnished a considerable exudation of serum. They have occasionally burst and given rise to hemorrhage. The hairs of the scrotum are distant and scattered. The orifice of the prepuce, eight inches below the symphysis pubis, is situated on the right side of tumour, and from this the raphé extends downwards, dividing the rupture into two unequal parts, four-fifths being on the left and one-fifth on the right side. An incision was now made through all the tissues down to the spermatic fascia from the abdominal ring to the bottom of the tumour. In front, and at the lateral parts of the scrotum below, the distance from the surface to the fascia could not be less than two inches. The scrotum had an indurated feel, and when pressed it could be reduced in thickness owing to the escape of serum with which it was infiltrated. On dissecting aside these parts, so as to expose the spermatic fascia, an abscess was opened at the lower extremity of the incision, and a small teacupful of dark offensive matter escaped. The intestines did not open into the abscess, but formed the upper boundary of it, and were so adherent one to another as to prevent the escape of the purulent matter, although in absolute contact with it. The left posterior, inferior, and anterior walls of this abscess were formed by the thickened scrotum, whilst the right was formed by a hydrocele of the left tunica vaginalis. These had not been discovered during life, owing to the immensely thickened state of the scrotum, and the want of irregularity of the tumour. The fascia spermatica having been ex-

(a) These four are the corrugator supercilii; the triangularis oris; the depressor alæ nasi; the nasalis labii superioris; together with the anterior portion of the occipito-frontalis.

posed along the anterior and lateral parts, was slit up and found much increased in strength and thickness. The cremaster muscle was very much developed, and sent its fibres from the lower border of the internal oblique and transversalis muscles downwards and inwards for a great distance, whilst those at the inner side of the ring commencing at the insertion of the above-named muscles were more distinct, took a more curved direction outwards, and did not extend so far. The naked eye could not discern whether or not these fibres were continuous one with the other. The fascia transversalis was also very dense and strong, and could be separated from the sac with the greatest ease. When the latter had been opened from the top to the bottom, and its contents brought into view, it was found adherent to the enclosed parts through the lower half of its extent, but in its upper half no adhesions were found at the ring or elsewhere. Although the fingers could not be passed behind the parts protruded, this depended upon the meso-colon being reflected so as to be continuous with the sac. The fingers could be placed between the colon, which was behind, and the small intestines; and between the latter and the omentum which was in front, and extended from the ring to the bottom of the sac. All the parts were behind the omentum, and when that was divided, one part was turned upwards and the other downwards, but before the latter could be accomplished it had to be torn from the sac in front and the intestines behind. The small intestines, as well as being adherent to the sac and omentum, were glued to each other and to the colon; and in this way the abscess which has been mentioned was bounded above, without allowing of any escape of matter between the convolutions of the intestines, although the sac was absent at this part. The relative position of the parts protruded was as follows:—Beginning at the outer side of the abdominal ring posteriorly, a portion of the transverse colon descended along the outer side of the sac behind the intestines to the bottom, and after having crossed over the abscess ascended to the ring, which it entered posterior to the cœcum and small bowels, to become continuous with the rectum. By this course it formed a sort of basin in which were lodged the small intestines and the lower half of the cœcum, the latter being near the ring at the right side. The small intestines, together with the portion of the cœcum, were eight feet one inch long, and free from disease. The mesentery, at its furthest point from the bowel, was three quarters of an inch thick. The colon was forty inches long, had much fat connected with it, but not in the form of appendices; and its lining membrane presented ulcerations of different shapes and sizes, almost innumerable. The hydrocele, which has been alluded to, was about fourteen inches below the ring, and the spermatic chord behind the hernia, inclining much towards the right side. The right testis reached about ten inches below the ring, being seated on the right of the tumour, inclining backwards. The penis, as well as all these parts, was so completely buried in the scrotum as not to be distinguishable by the touch, extending obliquely inwards in the direction of the opening of the prepuce already described. Between the latter and the glans penis there was a considerable distance; and the glans, from the pressure it had sustained, was very small, and covered by its peculiar secretion. It was at one time suspected that it would be necessary to use the catheter; but, under the circumstances, it would have been difficult to have reached the bladder, or even the orifice of the urethra, without slitting up the prepuce; and, if that had been done, perhaps even then it would have been difficult to pass an instrument into the bladder. The fist could, without difficulty, be passed through the inguinal canal into the abdomen. The epigastric artery ran along the inner side of the neck of the sac.

It is not my intention to make many observations upon this case; I wish, however, to remark, that much more than half of the large and small intestines had passed into the hernial sac; that the course of the ingesta would be, first, from the stomach into the duodenum, then along the five feet five inches of small intestine contained in the abdominal cavity; second, through the internal abdominal ring and the eight feet one inch of small intestine, and the half of the cœcum contained in the hernial sac; third, into the cavity of the abdomen, through the other half of the cœcum and the twenty inches of colon existing in that cavity, and again through the inner ring, along the forty inches of colon in the hernia, until at last it arrived at the same part again, to become continuous with the rectum. I ought to mention that the apparent shortness of the intestinal tube is accounted for as follows:—The mesentery and mesocolon were not cut close to the bowels, and the latter not stretched before the measurements were taken. This, however, is of little consequence, as it does not interfere with the relative proportion of intestines contained in the abdomen and hernia. The action of the abdominal muscles could only influence the parts included within the abdomen; and the process of defecation, so far, at least, as the contents of the hernial sac were concerned, must have been accomplished solely by the peristaltic action of the bowels, unless it were possible the hypertrophied condition of the scrotum could enable it to assist in the performance of that function. When all the adhesions are considered, together with the extraordinary course and altered situation of the intestines, it is truly wonderful how the latter relieved themselves with so much facility. That the thickened state of the scrotum was a provision of nature against injury to the protruded parts I think there can be no doubt, and it is to be regretted that no portion of the dartos was reserved, that a minute examination might have been made of its peculiar structure. When it is considered that the rupture reached below the knees, it will be at once perceived what an elongation must have taken place of the superior and inferior mesenteric arteries and veins, &c. &c. Many questions of importance suggest themselves in connection with this case, but I forbear making any further comments, as my chief object has been to give publicity to it, without taking up too much of your valuable space with observations which everybody can make as well or better than myself.

In conclusion, I am indebted to my friend Dr. Stiff for the history of the case.

Nottingham, August, 1847.

ON THE ELECTRIC THEORY OF LIFE.

By R. BRANDON, Esq.

Since we can take electricity from human beings by isolating them, it is fair to infer that this fluid forms part of the animal economy; and as many, if not all, of the phenomena of life can be produced by electricity or by galvanism, I think it not unreasonable to explain life by the electric theory. It is much better to have defenite ideas on given subjects, and I, for one, would much rather believe that the nervous fluid was electric, than search after an ideal liquid called the nervous fluid. May not the nerves be conductors of electricity? and is not thought electric? The brain is the organ for the transmission of the electric fluid, which it receives from the nerves or conductors; and from the external senses and the expressed ideas or words is the reflection of the impressions daguerrotyped on the brain, and made comprehensible to others by means of language. Friction is one means of generating electricity; and the friction between the human organs is the cause of life, for let these be quiescent for any lengthened period, and life becomes latent; but death does not ensue until decomposition takes place, and to prevent this you must restore the play between the various organs necessary for life, which we may oftentimes effect when we least hope for success, if we will but try to place a subject apparently dead under the same circumstances as one who is alive. Thus a man apparently dead, if from disease or from drowning, or any other cause, wants motion, circulation, respiration, animal heat, we can give motion by galvanism, blood by transfusion, respiration by artificial respiration, and animal heat is evolved by this process and by the external and internal application of caloric, by means of a hot-bath at 110°, and by stimulants, such as brandy, &c. We are much too apt to think our patients dead, because they are apparently so, and I am inclined to think the safer method would be to apply means for the recovery of all those who are thought to be dead, in order to prevent premature burial, and to discover those who are only brought down to a state of syncope by the exhausting effects of perhaps a protracted disorder, too little food, and too much treatment. Simple inspection is not enough to determine which body may be recovered, and which may not, since many have been left for dead in whom life was but latent, and who have afterwards recovered through accidental causes, or by the remedial power of Nature's cure, viz., time. Some of the symptoms of insanity may, I think, be explained by means of the electric theory: thus, when the circulation becomes over active in the brain, the friction between the blood-vessels and their contents, and between the blood-vessels and the brain, becomes more considerable, and, more electricity being evolved, more ideas are produced, the external senses become excited, convey impressions over quickly to the brain; and these, daguerrotyped on the brain, are conducted to the organs of speech by the nerves, to be expressed by words: thence patients with too active a circulation in the brain have too many impressions conveyed to the world within (the brain), and are always expressing these impressions by words. The cure, in such cases, is obvious, namely, to calm the troubled circulation by kind moral treatment, by diet, by a temporary seclusion from the world and its troubles, and, when necessary, by a special treatment to the brain, or other organ reacting on this: for insanity is not always a disease of the brain at first, but is often so in very protracted cases, where there is much violence, many illusions, and constant utterance of words without apparent meaning. Haslem thinks that a loose state of the scalp, in the posterior part of the head, indicates effusion of liquid between the membranes of the brain. I believe that affections of this organ were much more common formerly, when chains and the whip were used, than at present: since, now we try a more rational method of cure, and endeavour to control the patient by obtaining his confidence, and by a moral and somewhat non-restraint system, rather than by coercion. I regret to state that I have heard the fact asserted, on good authority, that there is much cruelty used in some establishments in Belgium; and my informants, being Belgians, are not likely to deceive me. The brain is the centre of all impressions, and it receives sensation by means of electric vibrations produced by the contact of the electricity conveyed the nerves and external senses with that elec fluid which is contained within the skull, as in a Leyden jar a slight shock is produced by the contact of a connecting rod, which explodes the contained fluid by means well known to chemists and all scientific persons. The animal part of ourselves is but the medium for the transmission of the electric or nervous fluid; whenever the electricity of the external is brought in contact with the electricity contained within the cavities of our bodies, electric shocks are produced, which are conveyed by the nerves to the brain, where another series of electric vibrations takes place, producing various phenomena, according to their intensity. To make myself more clearly understood, I will state my belief that man resembles a Ley inasmuch that he is loaded inside and with electricity; and that, when these different kinds of electricity come in contact, electric vibrations take place, which are some-

veyed by the nerves to the brain. When the shock is violent, it produces by its intensity what we call pain; and this impression is conveyed oftentimes to the organs of speech, and the fact is expressed by words; and to the extremities, causing certain movements indicative of suffering. Impressions may be conveyed from the brain to the extremities, or *vice versâ*. When there is too much blood in the head, and the nervous matter is pressed upon by this fluid, there is diminished sensibility, because there is less space for the electric fluid. There is but a given amount of surface in the brain, and when this is pressed upon by blood, it is not in a state for the production of those electric vibrations which produce sensation. The pressure of too much blood in the head is the cause of diminished sensibility in the insane; and the cure is obvious. I should consider this diminished sensibility as an indication of the necessity of applying a few leeches to the head or neck—a treatment which could do no harm, and would oftentimes produce much good.

Hanwell, Aug. 30.

ON THE EXTRACTION OF FOREIGN SUBSTANCES IN THE ŒSOPHAGUS.

By M. FONTAN (de Chazelle).

Two pieces of money and a wedge of wood have been easily removed from the œsophagus, by means of an instrument invented by M. Fontan, constructed and used in the following manner:—The shaft is a small piece of whalebone, of forty or fifty centimètres long, one and a half wide, and three millimètres thick; its extreme end cut like a carp's tongue, and perforated, two millimètres from the edge, with a red-hot needle. This hole receives a piece of red thread rather longer than the whalebone; the part three millimètres from the hole, nearly to the end, should be thinner, in order to render it more flexible. When used the operator draws the thread rather tightly, to make the whalebone concave, to agree with the convexity of the root of the tongue. When it reaches the pharynx, he loosens the thread to give to the stem its natural rectitude, and to avoid by this means contact with the epiglottis. He then raises his hand to give the instrument a little swinging movement, and proceeds to search for the obstruction, which is easily discovered by a slight resistance and a rather dull sound. At this period it is sufficient to press the instrument gently, so as to make it pass between the obstruction and the hinder division of the pharynx. When it is thought that the whalebone has passed this body by two or three centimètres, we withdraw the thread until the whalebone comes into the form of a V, so as to surround the foreign body. It then only remains to withdraw the instrument and hold the thread tightly, to keep the whalebone in a bow, to prevent injury to the mucous membrane of the œsophagus and the muscular fibres, which appear to contract as the instrument is being withdrawn.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of Aug. 23; M. BRONGNIART in the Chair.

PURULENT OPHTHALMIA OF INFANTS.—M. Velpeau read a communication which he had received from Dr. Chassaignac, surgeon of the Foundling Hospital. Purulent ophthalmia had been hitherto almost constantly followed with loss of vision, in that establishment. Since the method employed by M. Chassaignac had been resorted to, this unfortunate termination had not been observed in a single case. On examination of the diseased eyes, M. Chassaignac had recognised that the mucous surface of the tunica sclerotica, and of the internal aspect of the eyelids, was covered with a transparent false membrane, which became opaque by immersion into water, and which aggravated the disease, first, by acting as a foreign body, and secondly, by interfering with the immediate application of remedies. The membrane might be removed with a small forceps, and the rapidity of the cure was very much hastened by continued irrigations and douches of water on the eyeball and on the inner face of the eyelids.

ACADEMY OF MEDICINE.

Meeting of Aug. 24; M. BEGIN in the Chair.

ELECTION OF A SECRETAIRE PERPETUEL.—Almost the entire meeting was taken up by this election; the ballot-box was carried round three times, and the final result was the election of M. Dubois (d'Amiens) by a majority of 56 votes against M. Roger Collard, who obtained 43. Meeting adjourned at half-past five.

TREATMENT OF POLYPI OF THE PHARYNX AND NASAL FOSSÆ.—M. Velpeau asserts that the fibrous polypi of these regions do not require to be removed in totality in order to be radically cured. It is sufficient, in the professor's opinion, to disorganize a portion of the tumour, and what is left mortifies spontaneously in a short time. In one case of nasal polypus extending as far back as the fauces, M. Velpeau crushed only the most prominent part of the tumour; and in another case of pharyngeal polypus, the professor was satisfied with the destruction of one third of the growth: in both these cases the rest of the tumours were totally destroyed by consecutive gangrene. During a couple of days after operation, some signs of inflammation show themselves in the vicinity of the crushed polypus, which becomes the seat of suppuration of a putrid nature, and in a space of time varying from six to twelve days the tumour falls away. Thus the destruction of the fibrous polypi of the pharynx, or of the nasal fossæ, has become, in M. Velpeau's hands, an operation of a very simple nature, and unattended with risk; it is, besides, much more rapidly performed, and less painful, than the other methods hitherto resorted to for the fulfilment of the same object.—*Bulletin de Thérapeutique.*

TREATMENT OF VARICOSE VEINS BY GALVANO-PUNCTURE.

The success of this method in the treatment of small aneurisms naturally suggested its application to the cure of varicose veins. The following instances of success we extract from the *Journal des Connaissances Méd.-Chirurgicales*

CASE I.—A peasant, aged thirty-six, was admitted into the hospital of Milan on July 6, 1846; he was affected with numerous and large varicose veins on both inferior extremities. Electricity was applied in the following manner: a roller bandage was applied from the toes to the knee, and another from the groin to the knee, leaving a space of about four inches between the two bandages. The patient stood during the operation, and two platina needles were each introduced through one of the venous coils, and their extremity left free in the cavity of the veins. Two other needles were also introduced, in a parallel direction with the former, but not passed into the veins. One wire (zinc) was placed in communication with the needles penetrating the veins, the other wire (copper) with the external needles. During thirty minutes the galvanic pile was thrown into action, the patient complaining now and then of a burning sensation. A red areola formed round the punctures towards the end of the operation. After twenty-four hours, clots were felt in the veins, and acquired greater solidity during the ensuing days; but the patient declined going through the same process again, and was dismissed on the 13th, leaving the surgeons in doubt as to the ultimate success of the attempt.

CASE II.—On the 2nd of August a miller, [illegible] fifty, was received into the hospital of Va[illegible], suffering so much from varicose veins that he had been obliged to interrupt his labour. The internal saphena presented nodes varying from the size of a walnut to that of a pea. On the 3rd, one of the tumours was submitted to the gal[illegible] twelve minutes, and was [illegible] days; after ten operations all the varicose veins disappeared. Dr. Beotani and Dr. Milani were the operators.

D. M'CARTHY, D.M.P.

Pregnancy and Parturition during the Existence of Cancer Uteri.—Dr. Joseph Eve, Professor of Obstetrics in the Medical College of Georgia, gives the history of a remarkable case of pregnancy and parturition in connection with cancer of the uterus. The patient was young, apparently healthy, and robust, and the process of gestation was conducted most perfectly, notwithstanding undoubted evidence of cancerous ulceration from the discharge and characteristic fetor. On the first examination, at the period of labour, the head was found low in the pelvis; the mouth of the womb extinguished, except a small portion, which had a humid, hard, rough, unnatural feel. The labour was far more difficult, painful, and protracted, than her two preceding ones. The child was eventually expelled by the unaided efforts of nature. At this time there was noticed a smell very similar to that of cancer of the womb. Two or three months previously to her confinement she consulted her medical attendant relative to a sanguine discharge to which she had been subject for some time; and it was feared that it might depend on placenta prævia, but which was afterwards discovered to be in consequence of carcinoma. Since then it has been ascertained that she experienced severe pains in the region of the uterus, and such unusual sensations that caused her for a long time to doubt whether she was pregnant. After confinement she had an offensive discharge *per vaginam*, and, upon examination, an offensive scirrhous enlargement of the neck of the uterus was discovered. The extent of the ulceration could not be satisfactorily discovered by the speculum, as from violent hysteric convulsion it was obliged to be removed before a proper inspection could be made. She was put on the internal use of proto-iodide of mercury, chloride of soda being used as a vaginal injection, and sulphate of morphine given when in pain. In a fortnight the cancerous ulceration had made most frightful and destructive progress, having involved not only the posterior lip but the hinder part of the cervix. A lotion of nitrate of silver was prescribed, with a view of correcting the fetor and improving the condition of the ulcers. After this she became subject to most alarming and exhausting hemorrhages at each menstrual period; suffering also severe lancinating pains, her strength rapidly failing, and her body becoming emaciated. Two weeks subsequently it was found that the disorganization was proceeding with great rapidity. After the destruction of the posterior lip, posterior portion of the neck, and body of the uterus, the ulceration extended through the vagina and rectum, allowing the fæces to pass from the latter through the former, and must have involved even the sacral plexus of nerves, from the excruciating paroxysmal pains she suffered in that region. For seven months longer she continued to linger in the most painful and deplorable condition, experiencing sufferings indescribably severe. There is no account of a *post-mortem* inspection. Pregnancy and cancer have each a prejudicial influence over the other—the former hastening the progress and fatal termination of the latter; while this in the majority of cases causes either abortion, or the death of the fœtus when delivery occurs at the full term. Of 120 cases of malignant disease of the uterus, referred to by Mr. Lever, abortion occurred [illegible] per cent.; in 27 of delivery, 15 children w[illegible]rn dead, 10 living, and in 2 the result was not known. The child in the present case was a fine and healthy one, and lived.

Gunshot Wound in the Left Axilla.—A man belonging to the United States' army was shot accidentally by another who was immediately opposite to him, and about one hundred and twenty yards distant. The man was not seen by the surgeon until the evening of the second day after the accident, when no signs of the ball

could be detected by the most careful examination. The patient was then labouring under the most distressing dyspnœa. When first shot he expectorated blood freely, but when seen the next day, there was neither cough nor expectoration. The ball had entered at the left axilla. The left cavity of the chest seemed to be half full of blood, and on raising the man, and turning him on the left side, at least half a pint of blood escaped through the wound. The following day he was bled twice, and the treatment was strictly antiphlogistic. About a week after, the track of the ball was plainly to be seen. After passing through the chest it made its exit half way, and just below the spine of the scapula; thence glancing inwards and downwards, lodged near the spinous process of the twelfth dorsal vertebra, where it was extracted. The man lived, and, from a robust and healthy individual has become thin and pale, and is troubled with a frequent cough.

Treatment of Surgical Affections by Elevation of the Diseased Parts.—M. Gerdy has for some time been in the habit of treating certain inflammatory affections by placing the limb, or part, in such a position as to favour the return of blood to the heart. The plan has this advantage, that it does not exclude the application of the usual means of treatment; but in many cases it is sufficient itself to effect a cure. M. Gerdy raises the end of the bed on which the patient lies by placing a chair under it, thus raising the foot upon the summit of an inclined plane. Once so placed, and care being taken that no injurious pressure is exerted, the patient must not move from the position, even to satisfy natural wants, for he may destroy in a few minutes all the benefits which have been obtained by whole days of repose. The advantage of this plan of treatment is not, however, confined to inflammation, but is equally serviceable in ulcers, uterine hemorrhages, and varicose veins. In many instances of the latter disease, elevation alone of the limb has been completely successful. The utility of this plan is incontestible in varicocele. The following conclusions have been arrived at:—1. That the elevation of the diseased part is able, without the intervention of other therapeutical measures, to cut short certain inflammations, if it be employed sufficiently early. 2. That in phlegmon it relieves pain by diminishing the quantity of blood in the part. 3. That it advances the cure of engorgements and chronic profluvia of the uterus. 4. That certain hemorrhages may be suspended by it. 5. That it is able to cure certain ulcers of the lower extremities. 6. That varices and hemorrhoids are advantageously modified by elevation. 7. That, where it is not sufficient in itself to effect a cure, it is always a potent auxiliary.

Turpeth Mineral as an Emetic in Croup.—Dr. Hubbard, of Hallowell, Maine, U.S., recommends very highly the use of the yellow sulphate of mercury as an emetic in croup, on the ground of its promptness and certainty, its never producing catharsis, and its not being followed by prostration like that occasioned by tartar emetic. Its emetic operation usually continues from an hour to an hour and a half, accompanied and followed by none of the distressing nausea, prostration, and depletion of antimony. From two to three grains may be given to a child two years old, and repeated in ten or fifteen minutes, until emesis is produced. If the first dose fails, the second usually acts as soon as it touches the stomach.

Exhilarating Effects of the Sulphate of Quinine.—Dr. Baldwin, of Montgomery, U.S., in attending a young man suffering from remittent fever of quotidian type, ordered thirty-six grains of sulphate of quinine, to be divided into twelve pills, two of which were to be taken every two hours. The patient, however, in two hours took the whole of them, and, from having been taciturn and anxious about his situation, became ..., and seemed to enjoy a fine flow o... The pulse was slightly increased in ...y, and he laughed immoderately at his ... He knew every person in the ...cted events that had transpired before, and yet would make statements, and insist on their truth, which were known to be only the workings of his excited imagination. Nine hours after taking the dose he was less disposed to talk, and complained of fulness about his head. In twenty-four hours the effects of the medicine seemed to have subsided; he still complained, however, of disagreeable feeling about his head, recollected the strange fancies that had possessed him, and became rather depressed in spirits. He took no more quinine, and had no other paroxysm of fever, though his convalescence was protracted, suffering more or less from disordered bowels for eight or ten days, and complaining of disagreeable sensations in his head. There was great similarity of the action of quinine in this case to that of protoxide of nitrogen.

Adipocere.—Dr. Blakeman, of New York, in company with some other members of the profession, inspected the body of a woman which had been interred in one of the burying-grounds of the city for seventeen years. The coffin in which it had been enclosed was very little affected by inhumation. The form of the cadaver was perfectly preserved. The extremity of the nose was gone, and the features of the face partially discernible. The arms, which were placed along the sides, had become much compressed by the swelling of the body, and the hands had broken off at the wrists. The remains of one hand, upon the right side of the abdomen, were distinctly visible, and the fore finger, with its nail, was entire. The rotundity of the breast was perfect; the abdomen flattened, as if by compression against the lid of the coffin. The left foot, like the hands, had separated from the ankle. The shape of the thighs was remarkably preserved. The shroud adhered to the body, and was not decayed, though discoloured. The body presented a greenish hue, from mould with which it was covered, and a fresher coat of pure white had been deposited upon it since its exposure to the air. The cap was distinct upon the head, and the bow of black ribbon on one side, somewhat faded, remained. A piece about a foot square was cut out of the abdominal walls so as to expose the cavity. The knife passed easily through their substance, which was found to consist entirely of a yellowish, cheesy substance. The thin layer of abdominal muscles could be distinguished, similarly converted beneath the adipose layer, which was very thick. The inner surface of the abdominal cavity was smooth. The viscera, and a large lump of adipocere, lay at the bottom. The diaphragm was distinctly seen. Below it, and towards the left, much shrunk and condensed, and having the consistence, somewhat, of lung, lay the liver. The stomach, having its natural form and a n acerated appearance, was distinctly visible; and some portions of the colon, collapsed and membranous, were discoverable. An odour resembling that of gum ammoniac exhaled from the body. The soil in which the coffin was interred was sandy and not moist; and two bodies of children buried over it, and others in the vicinity, were in a complete state of disorganization. The subject was sixty nine years of age, very fat, and weighed 170 pounds. The disease of which she died was not known.

Action of the Glands of the Stomach.—Julius Vogel, quoted in "The British and Foreign Medical Review," says, the gastric glands present certain peculiarities: the product of their secretion so far coincides with the saliva that it consists of an aqueous fluid, with salts and extractive matters, whilst the remains of dissolved gland-cells testify to the presence of protein, consumed and modified by organization. But the gastric juice exhibits the peculiarity of containing a free acid. The manner in which this acid is conveyed to it is so much the more difficult of explanation that we do not even know clearly its chemical character: for, while it was formerly regarded as hydrochloric acid, it is supposed by more recent investigators to be lactic, combined with a little phosphoric acid; which latter, however, simply owes its origin to the action of the lactic acid upon the alkaline phosphates simultaneously present. By what means is the presence of the free acid brought about? The answer to this question is difficult, and many conjectures may be hazarded on the subject. The acid undoubtedly owes its origin to the blood, and the process of its formation may be owing to the decomposition of some of the salts (alkaline lactates or chlorides) of that fluid by the cells of the gastric glands which retain the acid, while the alkali returns by diffusion into the blood. As the cells gradually become broken up and dissolved, the acid is liberated and mixes with the gastric juice.

Diaphragmatic Hernia.—This consists, says Mehliss, in "The British and Foreign Medical Review, in the formation of a diverticulum or hernial sack, the short end of which is directed upwards within the thorax, whilst the base opens into the abdomen. The sack is, for the most part, diminutive, but occasionally exceedingly capacious, and it always contains a smaller or greater portion of abdominal viscera. The parietes of the sack sometimes consist of the serous investment of the diaphragm only—the muscular fibres having merely undergone separation; at other times the walls include the muscular fibres, and the hernia is simply a partial distention of the organ along with its serous coats. In the majority of cases these herniæ have been accidentally discovered during the dissection of bodies, without any symptoms having even denoted their existence. In a few of the recorded instances, however, the enormous mass of abdominal organs, both hollow and parenchymatous, contained in the sack cannot have failed to produce the greatest disturbance to the organs, both of circulation and respiration. There are examples of a violent blow struck against the abdomen sufficing to produce fatal hernia at the anterior portion of the diaphragm, situate between the sternal and costal portions, where no muscular fibres occur, and the two serous sacks, therefore, meet. Hernia occurring in the body of the diaphragm is probably, in most instances, dependent on congenital malformation.

Treatment of Typhus at Freiburg.—Baumgärtner, after trial of different methods, relies upon the expectant method as the best. At the commencement he ventures on an emetic, and he is inclined to think that it has occasionally cut short the disease; but on this point he speaks doubtfully, as the cases thus treated successfully might not have been true examples of the disease. Many cases of typhus have been treated without administering any potent remedy throughout the whole course of the disease. Small doses of ipecacuanha, orliq. ammon. acet., have been given, and these because patients are apt to lose confidence and be dispirited unless something medicinal be done. The cases in which the expectant method was adopted were those in which the excretions were not suppressed, in particular those in which there were urinary deposits. In the first stage of cases complicated with pneumonia and bronchitis, large doses of calomel were given, and, occasionally, a general bleeding; but in the second stage the calomel was found to be decidedly hurtful. In cases of great prostration, wine was administered freely; and where the pulse was intermittent, and cramps present, the patient was put in a cold-bath, cold effusions applied to the head, and musk administered.

Development of the Skeleton.—Baumgärtner applies the Dualistic theory, now advocated in Germany by numerous physiologists, to the development of the skeleton, and propounds the doctrine that the latter is neither more nor less than a double ossific cell. He endeavours to show that an animal, at first, consists of one cell only, and that this divides into two cells—an anterior and posterior—enclosed in a common membrane. Each of these divide into two lateral halves, and into an upper and lower half, and then into further subdivisions; on one side the brain and spinal cord being developed with the posterior spinal column and the connected muscles; on the other, the anterior spinal column, the lungs, and abdominal viscera. From each of

the two primary body-cells four projections arise —those springing from the posterior cell being developed into the upper and lower jaw, those from the anterior corresponding to the four extremities.

Post-mortem Appearances in a Case of Typhlitis Stercoralis.—Dr. Günsburg, in his "Pathological Histology," cited in "The British and Foreign Review," gives the following:—"The walls of the cæcum were of double their ordinary volume; the peritoneal coat was covered with vessels full of dark blackish blood, especially towards the iliac end. The appendix vermiformis, on being opened, presented a horseshoe shape; the mucous membrane of its lower portion was of a pale grey colour, thickened, and presented numerous minute depressions, some of which were isolated, while others were associated into a sort of network. The upper portion was divided by a band into two diverticula, in each of which the mucous coat was converted into a gangrenous capsular membrane, enclosing a hard concretion. The concretion in the lower diverticulum had the form and size of a date kernel, and was of a bright yellow colour, but soon became brown on exposure to air. The diseased surface was covered by a thin layer of finely granular, yellowish-green matter, in which were detected a large number of four-sided rhombic prisms, scarcely averaging ·02 of a millimèter in length—fragments having the form of imperfectly round nucleoli, and in some instances surrounded by a capsule; a quantity of cylinders anastomosing at certain points and presenting occasional contractions and dilatations. These cylinders were both filled and surrounded with spherical corpuscles, having a diameter of ·005 of a millimèter, and by immeasurably minute molecular granules, which, when accumulated, presented a blackish-green appearance. On this layer of finely granular matter there was a brownish, very injected membrane. In the fibrous network there were numerous engorged capillaries, inflammatory cells, and crystals. The peritoneal coat, which could not be very clearly made out, was covered with crystalline fragments, and penetrated by numerous injected vessels; inflammatory cells could be observed between its elastic fibres. Hence typhlitis stercoralis is characterized by an extremely rapid exudative inflammatory process, occurring simultaneously in all the coats of the affected part, and dependent on mechanical irritation. To this follows gangrene, in consequence of the destruction of the supplying vessels; and hence the disintegration, not only of the normal elementary constituents, but also of the inflammatory products, into molecular particles. At the same time the inorganic elements of these tissues assume the crystalline form."

Glands found in the Mucous Membrane of the Larynx.—Günsburg describes them as follows:—"Simple grape-shaped glands filled with cells, and devoid of an excretory duct. Ramifying grape-shaped glands, grape-shaped glands with an excretory duct. The cells investing the glands studded with barbed and curved cilia. Simple flask-shaped glands, formed of several epithelial cells lying over one another, and filled with inflammatory cells. On their apices are one or more ciliated cells. Double flask-shaped glands, or several simple glands lying on one another, sometimes having an excretory duct in the form of an inverted cone. The glands often attain to a length of ·25 and a breadth of ·3 of a millimèter. They are full of cells varying in diameter from ·007 to ·01 of a millimèter, with a nucleus and several nucleoli, which entirely prevent us from distinguishing the construction of the glands. After their removal the tissue is seen to be composed of accurately-fitting cells of pavement epithelium, with nuclei having a diameter of ·005 of a millimèter. Sometimes there are also removed the nuclei of glandular epithelium, analogous in all respects to inflammatory cells, and the glands then exhibit simply a homogeneous membrane strewed with blackish specks. The cylindrical epithelium to which the cilia are attached, the pavement epithelium, and those cells which are newly formed in the glands, constitute the greater portion of the expectoration in cases of inflammation of the mucous membrane of the larynx."

Treatment of Chronic Hydrocephalus.—Gólis, of Vienna, recommends the hair of the child's head to be cut very close, and a drachm or two of mild mercurial ointment to be rubbed in every day, and the head covered with a flannel cap. Small doses of calomel are to be administered unless diarrhœa should supervene, when the ointment alone is to be used. This plan is to be continued for five or six weeks, and, if with benefit, the remedies are to be gradually discontinued, though the cap is to be worn for some time after the ointment has ceased to be used. If the disease does not yield to this treatment after the above-mentioned time, issues may be inserted into the back of the neck.

The Purposes of Lactic Acid in the Animal Economy.—Liebig says that this acid is employed to support the respiratory process; and the function performed by sugar, starch, and in general, all those substances which, in contact with animal matter, are convertible into lactic acid, ceases to be an hypothesis. These substances are convertible in the blood into lactates, which are destroyed as fast as they are produced, and which only accumulate where the supply of oxygen is less, or where some other attraction is opposed to the agency of that element.

REVIEWS.

Report on the Climate and Principal Diseases of the African Station, compiled from Documents in the Office of the Director-General of the Medical Department, and from other sources, in compliance with the directions of the Right Honourable the Lords Commissioners of the Admiralty. Under the immediate direction of Sir William Burnett, M.D., K.C.H., F.R.S. By Alexander Bryson, M.D., Surgeon R.N. London, 1847; pp. 260.

The great scourge of the naval force employed on the African station is remittent fever, a disease which prostrates the energies and destroys the lives of both officers and men. Its virulence is manifested amongst those crews which have frequent communication with the shore, and the disease often breaks out in vessels cruising off the land, though it seldom then presents such malignant characteristics. It is the opinion of Dr. Bryson that, if the duties of the station could be performed without approaching at any time within a few miles of the shore, the mortality would be very greatly reduced. A beneficial change would evidently result, not only from the men being less exposed to miasmatic exhalations, but from their being prevented indulging in those acts of intemperance which, in any climate, would act prejudicially on the health, especially in such a one as that which is found on the coast of Africa. That certain agents, either aërial or telluric, act in producing fever is evident from the facts brought forward in the work before us, as well as from the evidence of others who have been well qualified to give an opinion on the subject; but the liability of the European constitution to suffer from these causes is greatly increased by agencies over which control can be exercised.

Before entering more fully into a consideration of the latter agencies, it will be proper to advert to the nature of the climate of the African station. Here our author touches upon the doctrines which have been advanced from time to time by those who have had experience in the matter, and those who have had none, respecting the effects of certain supposed abnormal conditions of the atmosphere in the production of disease, especially the fevers of the country. The conclusion at which Dr. Bryson arrives is, that the "cause" is not absolutely and essentially a marsh production, but rather that it exists equally in dry and marshy places: although in the latter, from some contingent local cause impairing the general health, such as abounds on all parts of the coast, the system becomes more susceptible of its influence:—

"The temperature along the intertropical shores of Africa is much more equable than seems to be generally supposed. From the Gambia on the north, to Benguela on the south, of the equator, the general range in the hottest part of the year is between 80° and 86° in the shade on board ship, even in the most central of the equatorial regions, while on the extremes of the station, during the winter months, it rarely falls below 58°; during a tornado, however, on all parts of the station, it will sometimes fall in the course of a few minutes from its maximum to 75°, rising again gradually to its natural standard as soon as the storm has passed away. These latter sudden transitions may occasionally bring on a paroxysm of fever in the debilitated or aguish; but it is seldom, even when they come from the land loaded with dust and the aroma of a thousand plants, that they produce what may be called a regular attack of fever, or otherwise interfere with health; by cooling and clearing the atmosphere, they have rather an agreeable and an invigorating effect upon those whose constitutions are still unimpaired."

Occasionally there is a "muggy" condition of the atmosphere, which produces such physical prostration as disqualifies for even the most passive employments or amusements. It appears to be the result of an almost total cessation of the usual evaporation from the skin, which constantly remains covered with an unnatural clammy perspiration, exceedingly disagreeable. This state of the atmosphere is chiefly observable after the rains, when the "smokes" commence; these are dense masses of vapour which sometimes envelop the land for days together, either generally or partially, and, being driven seaward by the wind, are supposed, without proof, to bear with them the exciting principle of fever. At this time wet clothes retain their moisture day after day. Boots, shoes, leather belts, &c., are speedily covered with a thick mould, and rapidly decay. Iron rusts with rapidity, while at the same time the great increase of minute animal and vegetable life shows the aptitude of all substances to pass from the inorganic into the organic state.

The effects of the harmattan upon the vegetable kingdom are more conspicuous than upon the animal: trees appear to be suddenly blighted and stripped of their leaves, grass withers, the parched earth is rent in every direction, out of which it was supposed a noxious malaria issued; but, unfortunately for this theory, these are the most healthy seasons of the year to Europeans. The direct rays of the sun do not appear to be either oppressive or dangerous; and the influence of the moon is only worthy of notice in a secondary point of view by its action on the tides, which materially affects health. During the springs the greatest reflux of water into the estuaries of all large tidal rivers produces a large increase of marsh surface, and, consequently, a corresponding increase in miasmatic exhalations; hence it is thought that at these times fevers are more prevalent. It appears, therefore, that the African climate differs only from others in the same degrees of latitude in its greater humidity.

The boat service is mentioned as one of the most prolific sources of disease on the station. Officers and men appear ready to embark in any enterprise that offers a chance of adventure or a change of life, without the slightest regard to ulterior consequences. Here the cooking is often indifferent, and frequently dispensed with altogether, pork being sometimes eaten raw as it comes from the tub, and rum, for the want of water, frequently drunk in an undiluted state; thus producing, independent of the most adverse climatorial agencies, such functional derangement as tends to the general deterioration of health, and sooner or later to the induction of organic disease.

In illustration of this part of the subject, we quote the case of the Ætna, which arrived on the coast from England in December, 1833, for the purpose of resuming the survey in the

parallels 11° and 12° N.:—"On the 8th of January her tender, the Raven, with the boats of the ship, proceeded to survey the river Cachea; and having been employed in this duty for a few days, ascending the latter, they arrived at Farine, where they remained thirty-six hours; they then descended the river, and joined the Ætna on the 22nd of the same month. The weather during the time was close and sultry by day, but cold during the night; the thermometer at noon averaging 83° in the shade. The rise and fall of the tide are considerable, and the banks, which are muddy and shelving, extensively exposed at low water. The boats which were thus employed contained ten officers and forty-two seamen, seventeen of whom contracted fever, namely, four officers and thirteen seamen, and six died. The whole were attacked between the 27th of January and the 6th of February. The ship, on the suggestion of the surgeon, left the coast on the 4th of the latter month, ran for the Cape Verde Islands, and anchored in Porto Praya on the 8th, where the sick rapidly recovered. The disease, in some instances, was attended with yellowness of skin; but it is not stated whether black vomit took place in any of the fatal cases. Bleeding, purgatives, and diaphoretics were the principal remedial means used."

A very singular circumstance has been observed in men who have been long away upon boat expeditions: when they returned and reached the deck of their own vessel, they have been seen to reel and stagger, as if they were under the influence of spirits, from weakness, giddiness, &c., affording strong proofs of the severity of the service. The boats, moreover, when long absent, have been quite sodden with water, and their bottoms covered with seaweed.

A foul state of the hold often is a very prolific source of fever, though it does not follow that, because a ship has an offensive hold, she will be sickly; yet prudence would dictate that those places should be cleared out in some harbour where the labour might be conducted without risk to the men.

The accumulation of heaps of rubbish at the bottom of a ship is oftentimes astonishing, where, by the heat of the climate and the action of the salt water, they rapidly decay, and form a blackish mud, not dissimilar to that observed amongst the roots of mangrove thickets on the banks of rivers within the influence of the tide; it sometimes even acquires a consistence sufficient to block up the passage of the timbers.

In the case of the Conflict, which had thirty cases of fever, eight of which proved fatal on board, the hold was in a most filthy state. It is true that the invasion of the disease and the subsequent mortality are attributed to the exposure of the crew on shore during heavy rains, excess, and frequently sleeping in the open air; yet it is not improbable that causes within the ship might have been at work to give to the disease it malignant character. The fever was remittent, its symptoms varying in different cases.

"This vessel sailed from Sierra Leone on the 6th of August, and arrived at Ascension on the 29th, where, in consequence of a representation which was made to the commodore, relative to the state of the vessel below, it was directed that she should be thoroughly cleaned out. On the removal of the tanks and the limber boards the hold presented a very filthy appearance, blackish mud with vegetable matter being brought into view, the effluvium from which was at first insufferable. The passages of the pump-well were found to be completely blocked up. This filth having been removed, the holds were white-washed, well ventilated, and dried; the tanks were then restowed, and her stores embarked, after which she again sailed for the coast, where she arrived on the 17th of October, and resumed her duties on the Bights." This vessel was retained for a short time in active service, but being found defective, and the crew, from disease and want of discipline, being in a disorganized state the latter were sent to England, and the vessel made a hulk for the reception of prize crews.

In the case of the Heroine, employed upon the Benguela division of the station during the early part of the year 1844, fifteen cases of fever occurred, of which four were contracted while pumping out the hold of a leaky slaver in the harbour of St. Paul de Loando; and these were the worst. Three of the men were seized while at work, while the fourth did not present symptoms of disease until eight days afterwards. Two of the men died. The Bonetto is described as being in a filthy condition, the stench from the holds being almost insupportable; and that, on subsequently clearing her out, the corn and yams with which she was freighted were found to be in a state of decomposition. In this vessel the commander, master, purser, assistant-surgeon, and twenty-eight seamen and marines had fever, of whom twenty-eight recovered, three were invalided and sent to England, and eight died. In the Eclair, so celebrated on account of the dreadful fever which prevailed amongst her crew, though the holds were supposed to have been made perfectly clear at Bonna Vista, there was afterwards found, when she was recommissioned, a large collection of mud, fully three inches in depth, upon that portion of her bottom occupied by the boilers and machinery, which apparently had not been disturbed for a long time. It is no uncommon thing for an epidemic to become aggravated by opening the holds of a ship within the tropics.

Green firewood is mentioned by Dr. Bryson as favourable to the production of disease on board when closely stowed: it becomes heated, and emits a very disagreeable effluvium. The Vestal, in the year 1839, had a quantity of green wood on board, from which there arose so unpleasant a smell as to annoy the men at work in the hold; and when the wood was got up on deck to be stripped of its bark, the fever then prevalent on board seemed to become more virulent and fatal, while the men employed in stripping off the bark were all within two or three days seized with the disease in an aggravated form. As a measure of precaution, it is recommended in unhealthy climates to have wood denuded of its bark, split into moderate-sized pieces, and partly charred, previously to being sent on board.

Intemperance, as a source of disease, has been adverted to, when speaking of Sierra Leone, where its influence upon the men landed there is more particularly observable. "Unfortunately," says our author, "this vice is so firmly, although artificially, engrafted upon the nature or our seamen, that there is but little hope of its being even partially eradicated, until the daily issue of spirits in her Majesty's service be either totally discontinued, reduced in quantity, or issued only at more distant periods; and, so long as the naval service is recruited from the merchant shipping, until the infamous system there practised, of plying men with ardent spirits for the purpose of nefariously exacting an undue amount of labour from them, be also discontinued."

From the medical reports it is evident that remittent fever is the dreadful scourge of the African coast. It prevails at all times as an endemic, and at distant and uncertain periods occasionally assumes an epidemic form. In some cases the remittent character of the disease was well marked; in others it was more obscure. In some there were indications of local congestion affecting one or other of the principal organs while in others these symptoms were not present. It would be superfluous to enter into a detailed account of the symptoms; and we proceed to notice the medical treatment recommended. Emetics, we are informed, are occasionally had recourse to, apparently with benefit, when the attack is observed to be developed after a full meal; in an advanced stage of the disease they are inadmissible, from the danger of causing an irritable state of the stomach. Bleeding is viewed in rather a suspicious light; it is, however, recommended when the fever is accompanied by unequivocal symptoms of inflammation, the amount of depletion being strictly limited to the apparent exigency of the case—the operator guarding himself against being led away by the idea of subduing the febrile action by lessening the quantity of the vital fluids; for that they are frequently either so destructively superabundant, or so irregularly distributed, as to require reduction. "Fever," our author observes, "on the coast does not require a different mode of treatment from that pursued for fever in this country. Bleeding is seldom necessary after the first twenty-four hours from the commencement of the fever, and certainly never after forty-eight. If the blood drawn exhibits a deficiency of coluring matter, and a loose imperfectly-formed clot, it would be imprudent to repeat the operation, however high the symptoms ran. An early exhibition of cathartics is recommended, as the alimentary canal is generally in a loaded state; but, when often repeated, may induce a vitiated state of the secretions, and thus produce an effect it was desired to obviate. During the earlier stages of the disease, when the stomach is in an irritable state, a simple dose of calomel has sometimes had the effect of arresting vomiting; in the same dose it has also been useful as a purgative, having frequently, from its small bulk, been retained when every other cathartic was rejected. In the more advanced stages it has been given in combination with the disulphate of quinine, when it was considered desirable to keep up the specific action of the mineral, and at the same time necessary to have recourse to tonics. It is a mistaken notion to suppose that calomel is a specific; and ptyalism is not to be hastened, however great the quantity of mercury absorbed. Of all the remedies employed in fever, or in its sequelæ, upon the west coast of Africa, there is not any so unequivocably valuable as the disulphate of quinine. The most approved time to commence its administration in the remittent is the moment a perfect state of apyrexia is observed. It is usually given to the extent of from two to four grains every fourth or fifth hour, dissolved in water slightly acidulated with dilute sulphuric acid, or in white wine. When it fails in arresting the irregular intermittents which succeed the common endemic or the epidemic, it is seldom that any other medicine will succeed. Blisters are only useful to the head or nape of the neck when the brain is much affected from sanguineous congestion, and to the epigastrium, to relieve pain or check vomiting. Cold sponging, either generally or partially, is often resorted to when the fever runs high, with great heat of surface, and in most instances with considerable temporary relief."

The means employed for remedying the mischiefs arising from foul holds are, after cleansing, the use of the solution of the chloride of zinc, which appears to be a very valuable agent in destroying those noxious emanations proceeding from the bilge-water, mixed as it is with so much matter in a state of decomposition.

It appears, from table 22 of the volume, that "the annual ratio of mortality from disease alone on the African station for a period of twenty-one years was 54·4 per 1000 of the mean force employed. The fatal nature of the climate, however, becomes more apparent when placed in juxtaposition with the mortality on other stations, viz.:—

South America	7·7
Mediterranean	9·3
Home	9·8
East Indies	15·1
West Indies	18·1
Coast of Africa	54 4

"It is proper, nevertheless, to observe that nearly one-half of this proportional amount resulted from epidemic fever alone, which was confined to a few vessels of the squadron during the years 1828-9 and 30; again in 1837-8 and 39; and in the Eclair in 1845. Deducting the loss from epidemic fevers, therefore, the ratio of mortality from all other classes of disease on the station will be about 20·0 per 1000 of the mean force annually; this, however, can give no adequate idea of the permanent loss of health, which is assumed to be great. Still, from these and other data, it seems fair to deduce that if

boat service were in some degree restricted—if prize crews were not permitted to land at Sierra Leone—and if all vessels contracting epidemic disease were to leave the station, and proceed directly to a colder climate—the ratio of mortality, and the permanent loss of health, one year with another, would be reduced at least nearly one-half."

The work reflects great credit on the industry, talent, and learning of Dr. Bryson; and it cannot fail of being especially useful to those surgeons of the navy who may be stationed on the African coast, while the interesting facts which the volume develops will prove highly interesting to the whole profession.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.*

An Army Surgeon of Forty Years' Standing *writes us in reference to the branding of deserters:—"Some five and thirty years ago my assistant was ordered to mark a deserter with the letter 'D,' not by the commanding officer, but by the officer in command. My assistant wrote to me for information on the subject. My reply was, that it was a dangerous affair to disobey an order, but if I were so ordered I should require* time *to learn the art of inflicting such a punishment; for such I considered it, not having acquired it in my medical studies, and I should be cautious in undertaking what I was totally ignorant of. This occasioned the desired delay. I wrote to the Medical Department and to the Commander-in-Chief (the Duke of York) on the subject. The reply was, no such order existed; and his Royal Highness's answer was, that he considered the duty should be performed by the drum-major, or his assistants, as other punishments, under the eye of the medical officer. Now, in these more enlightened times, if the army surgeons submit to so degrading an order it is their own fault, for a general memorial will instantly put a stop to it." We think the suggestions of our correspondent well worthy of consideration, and hope they will speedily be acted upon.*

Dr. Edward Barry.—*The patient was a private in the United States army, wounded at the attack on Monterey. The man subsequently recovered.*

Hippocrates.—*Conia is both fluid and volatile. It is lighter than water, with a smell resembling hemlock. It is sparingly soluble in water, but imparts its odour and taste to it. Few poisons are more energetic than this. A single drop put into the eye of a rabbit killed it in ten minutes; three drops used in the same way killed a strong cat in a minute and a half; two grains, neutralized with hydrochloric acid, and injected into the femoral vein of a young dog, killed it in about three seconds. It is used in acute rheumatism and hooping-cough.*

Adolescens.—*There are many places where information may be obtained on the subject. A situation in town is rather difficult to be procured at first, as it is usually considered that a country and town practice differs considerably. An advertisement would probably procure what our correspondent wishes.*

Sigma.—*The prescription is evidently not the production of an educated practitioner, and what it is intended to accomplish we are unable to say.*

M.R.C.S.L.—*We believe that it is in contemplation to publish a new Pharmacopœia, but when the event will take place is better known to the College of Physicians than to ourselves.*

T. Henfrey.—1. *The regulations of the Company may be obtained by application to the secretary, at the Hall.* 2. *The Botanical Garden at Chelsea is open to students, under certain regulations.* 3. The Medical Times Almanac *contains a list of all the medical schools, hospitals, &c., in the Metropolis, with the fees which are paid.*

Esculapius.—*Dr. Mason Good's work is certainly an admirable one, and contains the most valuable information.*

Mr. Alfred Ebsworth, Bulwell, Notts.—*The communication has been received.*

B., Reading.—*We think confined to London.*

An Old Subscriber.—1. *The Apothecaries' Act is imperative; there must be an apprenticeship, or a party cannot be admitted to examination.* 2. *A party cannot recover for medical attendance unless a licentiate.*

Medicus.—*We do not trouble ourselves much about the burying-places of eminent medical men; we can gratify our correspondent, however, in reference to the illustrious Harvey. He lies in a vault in the church of Hemstead, a village in Essex, and access may always be obtained by paying a small fee to the clerk. His coffin, of lead, is in good preservation.*

A Surgeon in the Country.—*The entrance of air into veins is of rare occurrence, and the discovery of the circumstance is comparatively of recent origin. Boyer denies that the spontaneous entrance of air into veins has ever proved fatal.*

Celsus, Hull.—*We generally append the name of the publisher to the books reviewed. The price of the work by D. Noble, entitled, "The Brain, and its Physiology," we do not know. Apply to Mr. Churchill, Princes-street.*

A. J. V., a Five Years' Subscriber.—*We are so little acquainted with manuals intended for those who are about to pass Hall or College, that we are unable to recommend one, not knowing which is the best.*

L. J. M., London.—*Our correspondent has proposed to us a very difficult question, and one which we cannot answer. "What situation in London or its vicinity (say within ten miles) you would consider the best opening for a young man perfectly qualified, with moderate means, to commence as a general practitioner?"*

A Young Country Practitioner.—*Apply to Mr. E. Daniell, Newport-Pagnell.*

Paralyticus.—*We know nothing of the ten-guinea galvanic apparatus to which our correspondent refers. We would advise him to be cautious before he parts with his money.*

M.R.C.S.E., Oxford.—*The Company may not prosecute; but there is danger from any informer. By all means pass, in order to be safe.*

Etzmon.—*Our correspondent is facetious; we would advise him to write to M. Deschamps.*

Amicus Certus.—*The communication has been received, and the suggestions will be attended to.*

We beg to apologise to Dr. Wright, of Birmingham, *for the delay. It was unavoidable.*

Letters and communications have been received from Dr. R. Grattan, Dunmore-house, Carbery, Ireland; Dr. S. Wright, Queen's College, Birmingham; Amicus Certus; Etzmon; M.R.C.S.E., Oxford; Paralyticus; A Young Country Practitioner; L. J. M., London; A. J. V., a Five Years' Subscriber; Celsus, Hull; A Surgeon in the Country; Medicus; Esculapius; M.R.C.S.E.; T. Henfrey; Sigma; Adolescens; Hippocrates; Dr. E. Barry; An Army Surgeon of Forty Years' Standing; F. A. Bulley, Esq.; Mr. Brown, Windsor; Dr. Bracebridge, Maybole; Dr. Gardner, Crieff; Dr. Robinson, Fintara.

THE MEDICAL TIMES.

SATURDAY, SEPTEMBER 4, 1847.

PUBLIC PHYSIOLOGY.—THE WOMAN OF FASHION.

To the thoughtful physiologist there is no more frequent subject of pity and sympathy than THE WOMAN OF FASHION. The sturdy beggar-girl—with her red cheeks and naked feet—enjoys perhaps a happier lot, physically as well as socially; Nature's worst-fated progeny being often better off than the most favoured child of society. And this is civilization!

The "fair favourite of fortune," as she is called, begins life amiss. The outset of existence sees her the "puling and puking" penalty, the screaming labour-curse of some workhouse drab, *engaged* to give her mother's milk and kindness to the worth of two shillings *per diem*. For the unspeakable joys of primal watching and worship from the parent pair, she has the financialised affection of a characterless mercenary, and thus, well-born, she atones, in the unremembered woes of infancy, for the too high breeding of her sire and dam!

As the oak in the acorn, so the woman in the babe; who, then, shall measure for us how much of that unloved infancy's history, unmarked in *memory*, has been left inscribed in after *character?*—how far alien unfeelingness on one side been mesmerized into permanent organization on the other; or, under that winter of stranger care, what leaflets of gentle emotion, what germs of human happiness have been nipped to death at once, or stunted to shapes of dwarfishness and deformity for ever!

But without running through, at a risk of tediousness, the consecutive influences which form and modify the ultimate organism, let us rather look at THE WOMAN OF FASHION as she offers herself to us on that eminence to which all her existence has tended, and thence seek to throw down light on the agencies of which she has been made the victim.

What, then, in the major cases have we? Measuring her by that very test by which she appraises everything—pleasure—the physiologist and the philosopher have only to take from her a companion, faithful as her shadow—that social mask which but adds to the pain it conceals—to find everything to pity, and nothing to envy. There is nothing true, or complete, or unquestionable about her, but her pains, her griefs, and her chagrins. Wretched without her "pleasures," she is unhappy in them. She has the waking moments of the opium-eater without his dreams—the tortures of a non-natural life without its enjoyments!

Why is this? Because we have here a false and bad condition of humanity; and with it, as by a law of nature, proportionate punishment. The "*physique*" is at fault, not less than the *morale*;" and with them, in deep sympathy, suffers the *intellectual*. Nature, outraged by the worship of pleasure, vindicates herself by that very worship. She never designed the production of women of fashion and women of pleasure. It is against her ordinances that humanity should degenerate into an affair of frivolity and uselessness; and this has been so absolutely legislated for that the abuse exists only—and can exist only—through the perverted volitions of a still more perverted civilization. The pursuit of pleasure, as a *profession*, is the foolish invention of a luxurious age, and is, of its many foolish speculations, the most foolish and most unsuccessful. No extent of means and appliances can help the matter. Even the wealth and wisdom of Solomon leads there only to "vanity and vexation of spirit." It is a law of life that enjoyment go with duty and usefulness; and the way to make sure of happiness is to think of it in relation to others rather than to ourselves. Formed comprehensively—for the world without us, as for that within—no part of the great mechanism must be left to rust unused, or perish unexercised. With inaction there is atrophy for the strongest muscle; with inanity there is disease for the healthiest

brain. If amusement be a *use*, a serious *purpose* is a necessity. Exclusive devotion to the levities of life, while an abnegation of the best portions of our constitution, a self-dethronement, and a self-desertion, is yet never pleasure. Pleasure exists not in the continuous indulgence of one propensity, or exercise of one faculty. The whole organism, with all its generous and self-denying impulses, requires to be brought into action; and there is as much real enjoyment in the sacrifice one association may suggest, as in the self-indulgence recommended by another. We have a framework which, though miraculously pliable and accommodating, will by no ingenuity allow us to be *professional* pleasure-hunters, except at the worst risks and highest penalties: Nature, in fact, has laid down the offence as capital. Happiness, health, life, are the sure punishments she exacts for it.

These are truths so obvious to medical men that to tell us of a "Woman of Fashion" is almost at once to point out to us a subject of nervous disease. Society is full of women made in this way physically unfit for the duties it expects from them; and who, as women, mothers, and citizens, are worse than useless to the world's progress. If we note the varied forms of hysteria, hypochondria, and lunacy—laughing and crying by turns, faintings, risings in the throat, difficult respiration, a demoniac sort of corporeal possession, extreme weakness and irritability of every organ, exaggerated sensibility, exalted imagination, unstable resolution and character, excitement, melancholy, *ennui*, satiety, restlessness, spleen—such, the every-day phenomena of fashionable society, can be traced in clear sequence of cause and effect to the peculiar course of life that has been followed, and which has annihilated those qualities which give vigour to the muscles, or healthy energy to the brain. Their hours have been ill divided. Their midnights were passed in the excitement of an artificial day; their mornings in the enervation of a heated bed. Nature speaks in all ways, and with solar luminousness, against the abuse; but her protest is as ineffective as that of a peerage minority. Their food was ill chosen: it is tasking and depraving to the stomach, and stimulating to the organism. Their occupations have been bad: novel-reading, balls, theatres, and stimulating *réunions*; light, frivolous, exciting exercises, unhealthy to the brain and lungs—purposeless, unserious, and against the simple teachings of Hygiene and of Nature.

Thus women—the mothers of a new generation of Englishmen—go on in a time of high civilization: battling the laws of Nature, sapping their muscular strength and beauty: enfeebling the organs of respiration and nutrition, and putting irreparably out of order that beautiful nervous mechanism which alone can secure them the *mens sana in corpore sano*. By habit, system, plan—they go on producing as they best may, phthisis, hypochondriasis, hysteria, lunacy! And this is what the greatest wealth, the highest honours, and best means of information allow our highest born to accomplish for themselves amid the highest civilization of our nineteenth century!

It may be thought that these cases of feminine perversion of natural gifts are rarer than some of our expressions have indicated. It may be so of *outré* instances: but in examples of less striking character the accusation extends even more widely than we have drawn it; and if the curtain were withdrawn, we should perhaps find that we have understated both the intensity and the diffusiveness of the malady. In every public crisis that more or less comes home to the female bosom, how many cases—otherwise dormant—present themselves to the public eye of this species of feminine degeneration! It was among the fashionable women of Paris that were found those who successively, as Quietists, Jansenists, and followers of Mesmer, astonished the world by those odd phenomena which, associated with miracles by some, we know as results of nervous disease. In England we have had not dissimilar contagions (that of Irving's congregation being the most recent); and every day, to go to individuals, how frequently does the physician of high society meet persons who, like Pope's patient, "die of a rose in aromatic pain;" or, like the Duchesse mentioned by Reveillé Parise, complain that "the very wind from a person passing near them in winter suffices to give them catarrh;" or, like Anne of Austria, find swansdown too rough for comfortable usage; or, with the correspondent of Madame Sévigné, "feel sick at the mere sight of a good dinner!"

It is not, we need scarcely say, civilization that is in fault in all these, but a mistaken estimate of its elements and uses. The women of England are, in one view, too restricted by usage in their career of action; in another, they are ill informed as to the responsibility imposed on them by their organization. Human beings are not instruments of one string, like Paganini's violin. All their faculties, pschycal as physical, moral as intellectual, call for exercise, and, unless they have it, there is a broken harmony, and unmeaning and senseless discord. It is for medical men (as their privilege) to teach, as it is for the world (as their blessing) to receive, these truths.

SHIP FEVER.

The remarks which we considered it our duty to make a fortnight ago in our columns, in reference to merchant passenger vessels, we are happy to say have produced a beneficial effect upon many of those individuals whose ships are engaged in conveying emigrants to distant parts of the world. At Liverpool the movement has commenced in the right direction, and the fashion is beginning to prevail of taking surgeons on board of emigrant vessels. Till the law becomes imperative, however, we must expect that the practice will not become universal, and it will be the duty of the Government, at an early period of the next session of Parliament, to adopt such measures as may appear likely to conduce to the health and safety of persons who are travellers by sea. It is a fact which is highly creditable to our country, that within the last few years the attention of the Lords of the Admiralty has been especially directed to the hygiene of the royal navy, experienced medical gentlemen have been consulted, and their suggestions in many instances acted upon, to the great benefit of officers and men. This department of reform is, however, yet in its infancy, but such a beginning has been made as will naturally lead to a code of regulations well adapted to remove most of those evils which spring from foul holds, deficient ventilation, and bad habits.

Public calamities oftentimes are the means of advancing the general good of a people, by directing their attention to the sources from which they spring, and calling into action those energies which prevent a recurrence of similar disasters. The ship fever, which has been recently so destructive amongst the emigrants sailing to America, will open the eyes of the Government and public to abuses which have long existed in the mercantile navy. Under the fostering care of the demon of cupidity these have scattered disease and death amongst multitudes who have fallen victims, with scarcely a hand uplifted for their help, or a voice raised to bewail their unhappy lot. If the waves of the ocean could speak they would tell of numbers committed to the deep, who on its bosom contracted diseases which were first produced by the neglect of those who ought to have been their guardians, and then proceeded unchecked to a fatal termination. If, as ancient sages taught, the manes of the departed sometimes required to be appeased, the spirits of innocent victims of mercantile cupidity are now calling from the billows of the Atlantic to avenge their wrongs, by the correction of evils which inflicted suffering and death upon them.

It is painful to contemplate the amount of mortality which has recently prevailed in emigrant ships: from calculations which have been made, and which have been as accurate as circumstances would permit, at least a fifth of the whole number have died. The symptoms which characterize the plague show that it is a a malignant modification of typhus. Its first invasion is manifested by a rigor, speedily followed by great prostration of nervous energy, mental depression, and lassitude, while the conjunctiva exhibits the jaundiced hue which denotes a high state of congestion in the liver and impairment of its functions. In addition, there is oftentimes severe diarrhœa, bronchitis, and such profuse perspirations as to produce speedy prostration. Sometimes, also, about the sixth day petechiæ appear, which, with low delirium, or coma, announce the approach of death.

By an American journal we learn that, from returns made from the Montreal General Hospital, a fair criterion may be deduced of the average mortality of the ship fever, even under its most favourable chances of treatment. From the 28th of May to the 28th of June, 298 sick emigrants were admitted. Of these, 143 were cases of typhus, 18 were cases of diarrhœa, and 97 of common continued fever. The mortality among the typhus cases, every one of which was of the petechial type, was 1 to 4·9, or 20·4 per cent. Of the cases of simple continued fever and diarrhœa only one respectively died; while, estimating the mortality upon the general number of admissions, we find it to have been for the same period 1 to every 7·7 cases, or 12·9 per cent., the total admissions having been 324, and the deaths 42.

Now, we unhesitatingly affirm that this mortal disease did not get amongst the emigrants in consequence of contagion from Irish emigrants. If the position be assumed that it did, in order to shield certain parties from blame, it is one that is very weak, for if the disease had manifested itself in any one seeking a passage prior to embarkation, why take such a one? If it had not, and persons coming not from Ireland were first attacked, the sister country could not be the innocent cause of the frightful malady. From the facts which have come to our knowledge we can account for it in other ways. The vessels themselves, which are frequently chartered to convey emigrants to America, are oftentimes very improper receptacles for human beings for any length of time. Craft that have seen hard service for many years, and which are bought up for comparatively a small sum, are too frequently

employed. They are patched and painted for the occasion, and are made "mantraps," from which if victims escape when once caught, it is almost by miracle. The timbers are frequently sodden till almost decayed; the seams admit so much water as to require the frequent use of the pump to prevent too great an accumulation in the hold, while here there is such a mixture of sea-water with animal and vegetable substances in a state of decay, that the gaseous emanations, in spite of disinfecting agents, are too strong for one particular organ of sense to bear. Within the last three years vessels have put to sea in such a rickety condition that it has been declared by those competent of judging, that they must founder if anything like violent storms were experienced in the voyage.

We talk of foul drains and ill-constructed sewers, as being the prolific sources of disease in populous cities, but these are not more injurious to health than the filthy holds of crazy vessels crammed with human beings.

The food, also, with which emigrants are furnished is too frequently of a very inferior character. True it is that the Government requires a certain amount in good order to be shipped for each individual, but its authority is set at nought, and its officers are slow in discovering and exposing those infringements of law which justly deserve a severe punishment. Inferior food badly cooked cannot fail of increasing a liability to disease, when there are causes in operation to produce it, and of aggravating all the symptoms when once it is manifested in the constitution.

The steerage, moreover, is constructed in such a manner as to stow away the greatest number of human beings in the smallest space, without any regard to their comfort or health. Here men, women, and children are huddled together, in utter defiance of morality or decency: there is no classification of sex or age—no exercise of salutary authority by the captain or his officers: hence, there is often perpetrated the greatest excesses, and filth is sometimes allowed to accumulate to such an extent as to render it a matter of no small labour to pass to different parts of this region uncontaminated by the impurities. Such was the condition of some of the vessels in which fever recently prevailed; and it was actually necessary to lay down planks over the liquid filth and dirt in order to get to the passengers, who were too ill to leave their berths.

Here, then, we have causes which are adequate to the production of fever of the worst type, and it can be no matter of astonishment when it manifests itself. There can be no guarantee whether few or many individuals will suffer, or whether the disease will assume a malignant or mild character. As the owners of vessels have made such ample provision for the production of fever, it becomes a matter of serious inquiry, what provision have they made to check its progress when once it has appeared? We are compelled to answer, scarcely any. The law requires that every ship which carries one hundred persons or upwards on board, and every ship having fifty persons or upwards on board, the voyage of which is likely to exceed twelve weeks, shall carry as one of the complement some person duly authorised by law to practise in this kingdom as a physician, surgeon, or apothecary. But the greater part of the merchant navy does not come under the operation of this law, and another part which does, utterly disregards its requirements. Very few ships that leave our shores, except those belonging to the Government, carry a surgeon; and if there are any owners who think it will entrap more passengers by announcing that a medical gentleman is engaged for a voyage, they seek for one who does not ask a salary for his services, only a free passage with the privilege of sitting at the captain's table. A free passage is fudge gratis, for the surgeon pays dearly enough by the service which he renders to those who may become sick. Little does the inexperienced professional imagine what a one-sided bargain he has struck when he engages to *work* his way over to the American shores. He must hold himself in readiness for service night and day, must set limbs when fractured, risk his life in the attendance of fever patients, be cooped up at night in a narrow and foul-smelling berth, and in the day sit at the captain's table in the character of a gentleman pauper. It is expecting too much of human nature for such a one to discharge his duties as cheerfully and efficiently as another who receives a fair reward and respectable treatment for his services.

Moreover, the evasion of the law by the mercantile navy in dispensing altogether with the services of properly-qualified medical men, or employing them without pay, acts most injuriously on the whole profession. It forces a number of young men to set up for themselves, who, if other fields of labour were opened up, with the prospect of fair remuneration, would enter upon them, and this would be one powerful means of doing away with much of that competition which reduces the price of professional labour and lowers the standard of medical respectability. No ship of any magnitude ought to be permitted to leave these shores without a surgeon on board, and, with such a law rigidly enforced, candidates would soon be able to demand a respectable remuneration for their duties, while many of the causes which are suffered now to exercise an uncontrolled influence in the production and perpetuation of fever would no longer exist. Merchants are secretly ashamed of their conduct in this respect, and it is only for the profession to watch them narrowly and expose their delinquencies to induce them to reform. At the same time Government should be memorialized, that any defect in existing laws which relate to the health of ships' crews and passengers may be remedied, and there will be then good reasons to hope that an effectual check will be put to the ravages of ship fever.

MORALS AND MEDICINE IN FRANCE.—CASE OF THE DUKE DE PRASLIN.

"Let me have
A dram of poison; such soon-speeding gear
As will disperse itself through all the veins,
That the life-weary taker may fall dead,
And that the trunk may be discharged of breath
As violently as hasty powder fired
Doth hurry from the fatal cannon's womb."
SHAKSPERE.

THE murder of the Duchess of Praslin by her own husband, and his subsequent *felo de se* in the Prison of the Luxembourg, have excited the greatest interest not only throughout France, but also in our own country. A more barbarous act than that which hurried the deceased lady out of existence has never been perpetrated in any civilized nation, fifty wounds having been inflicted by the assassin on his victim, whose desperate struggles for life give an additional interest to the domestic tragedy. Articles of furniture were scattered about the floor. On different parts of the walls and doors were visible marks of a bloody hand. Portions of hair were found adhering to the bed, and some of the same colour in the hand of the victim. Suspicion immediately falling upon the husband, he was put under close *surveillance* on the evening of the 18th, and the police never quitted him night or day. When on the following days he was closely examined, it was observed that there was a complete prostration of corporeal and mental energy, and, it having been surmised that he had taken poison, medical aid was sought to counteract its effects. The criminal so far recovered that he was removed to the Prison of the Luxembourg on the 21st, where he still continued to improve till the evening of the 23rd, when violent symptoms of a fresh character manifested themselves, and on the following afternoon, at five o'clock, he expired.

From the facts which have been published, we are enabled to conjecture that the Duke de Praslin took, on two different occasions, poisons—the first at his own house on the evening of the 18th, shortly after the murder; the second on the 21st, in the prison, from the effects of which latter dose he died some eighteen or twenty hours after it was swallowed. There can be little doubt in the minds of scientific men that the first attempt at self-destruction was made by taking laudanum, the second by arsenic; but, in order to remove blame from certain high official persons, it has been diligently promulgated that the duke only swallowed one dose, composed of arsenic and laudanum, in his own house, shortly after the arrival of the police, from the effects of which he died some five or six days afterwards. In order to give plausibility to this statement, the *Journal des Débats* declared that, after the arrest, a phial was discovered in the pocket of the criminal's dressing-gown, which had contained a mixture of the two poisons just mentioned. It is an explanation, however, which the public will hardly receive, and which the profession will reject as not being substantiated by the symptoms which afterwards developed themselves.

It appears that the contents of three phials, discovered on the table, as well as that seized in the pocket of the dressing-gown, were analysed by M. Chevalier, professor at the Ecole de Pharmacie. The result of this examination was, that two of the three phials taken from the table were found to contain laudanum, the third, nitric acid, and that which was delivered by the magistrate to the agent, contained a very small quantity of white arsenic mixed with laudanum, which had left in it a yellow tint. The contents of this latter bottle, the authorities would wish it to be believed, were swallowed by the accused. But let us look to the symptoms manifested, in order that we may draw our conclusions. In the first instance they were decidedly those produced by the taking of a narcotic poison, viz., prostration of strength, drowsiness, incoherent expressions, vomiting, and diarrhœa. The physicians were watching the effects of the narcotic, and they were made to say, through the medium of certain newspapers, that laudanum in an over dose never produces vomiting or diarrhœa! and that the symptoms of poisoning by arsenic are so little known that the most illustrious medical men may be mistaken in their diagnosis! The attendants on this occasion were MM. Orfila, Andral, and Louis, and they endeavoured to counteract the poison by the vigorous use of ice and wine! The patient unfortunately got better, when suddenly on the 23rd he was again seized with vomiting, which was now accompanied by the most excruciating sufferings, finished in a few hours by death.

Looking at the medical history of this case, we must say that it is utterly improbable that the criminal could have died with the symptoms which presented themselves from the first dose taken six days before, but that his death resulted from a large dose of arsenic taken a few hours previously. It has been diligently circulated, through the medium of the press, that laudanum never produces the symptoms which were first manifested in this case. If M. Orfila and his colleagues sanctioned the publication of this statement, they must have done so with the deliberate conviction that it was untrue, and thus permitted an indelible stain to rest upon their characters, merely to shield certain Government officers. The symptoms which appear from poisoning by laudanum are generally of a uniform character—giddiness, drowsiness, stupor. The expression of the countenance is ghastly pale. Not unfrequently there are vomiting and diarrhœa; and if these take place freely, before the more severe symptoms of narcotism set in, there is great hope of recovery. Nausea and vomiting frequently follow on recovery. Nature, therefore, assisted the Duke de Praslin to shake off the first dose, which was laudanum without arsenic, more than the doctors with their energetic doses of ice and wine.

It was evident by the 22nd that, if the criminal was to escape the hands of the public executioner, something more must be done, and under the very nose of M. Allard and his lynx-eyed agents, and in the Prison of the Luxembourg, another poison is taken—arsenic—which produced the wished-for result within twenty-four hours. The evacuations on being analyzed by M. Chevalier, now gave unequivocal proofs of a large quantity of this deadly mineral being taken, and Dr. Rouget thereupon changed his treatment by administering to the patient certain emollients.

Now we admit, as some of the French papers have stated, that the effects of arsenic are known to vary in different persons; and that, while it often kills immediately, its fatal effects may sometimes be delayed for several days. When this is the case, however, there are not those anomalies which occurred in the case now under consideration. Large doses of arsenic usually prove fatal in from eighteen hours to three days; but the average time at which death takes place is generally about twenty-four hours. In the present instance there is no doubt the fatal results occurred within that period, whatever the members of the Government or the newspaper agents may say to the contrary. The culprit's suicide was willingly sanctioned by the officers of state, in order that a peer of France might not expiate his crimes by the scaffold, in sight of a taunting world. But what surprises us most is, that the first physicians of the kingdom should, with the eyes of Europe upon them, permit their honour and science to become prostrate before a proud aristocracy. Orfila, Andral, and Louis are stated to have been unable to form a correct diagnosis in a palpable case, and to have contented themselves with administering iced wines and simple emollients, when symptoms indicated the employment of the most energetic measures.

We deeply sympathize with the medical profession in France for this unfortunate occurrence; while we tremble for the fate of a great and powerful kingdom, when there are such indications of a low state of morals, which, if not corrected, must eventually be subversive of established institutions.

CORONERS AND MEDICAL WITNESSES.

[To the Editor of the Medical Times.]

Sir,—As I consider an act of injustice, involving a principle of impartial justice important to every medical man, has been done me this day under the following facts, may I request the favour of their insertion in your journal? Here they are, with all possible brevity, and the strictest adherence to truth:—

On Saturday last, about twenty minutes past four o'clock P.M., a person in a state of breathless haste desired me to run to Mr. Farley's, No. 5 in this street, as his servant had cut her throat. I lost not a moment's time in reaching the presence of the unhappy victim, whom I found dead, with her throat cut, and both carotid arteries divided. I was the first medical man who saw this state of things, and was full ten or fifteen minutes with the deceased, when the medical man, who attended her the day preceding, as he said, for a febrile attack accompanied with slight headache, arrived. Yesterday (Monday) I received a summons commanding me not to fail "at my peril" to attend the coroner's inquest, to be held at two o'clock this day, at the Ship, Little Tower-street. I accordingly attended. The second witness examined was the medical man above alluded to, who, deposed to what I have already stated. Upon this, Mr. Payne, the coroner, observed, my testimony was not required, my services could be dispensed with. I rose and stated that I was the first medical man who attended; that I was summoned to appear before him; and that I, therefore, felt I was entitled to my fee. I, moreover, added that I always understood it was his principle to give the fee to the medical man who first reached the spot, as a reward for his attention and activity in cases of such momentous emergency. This last observation I dwelt upon, because this very principle was enunciated by Mr. Payne himself to me in a conversation held between us both some two years ago, on our return from an inquest held within the Tower. This same principle I have never before seen trampled upon, though I have very many times given medical testimony before Mr. Payne. My case, however, was emphatically overruled, and that, too, in a spirit of uncourteous authority and marked want of urbanity.

Now, may I ask, on what principle of justice am I to be served with a peremptory command "at my peril" some twenty-four hours before hand to appear before him at a certain time and place, and not to receive any remuneration, save the indignity of an uncivil *dictum*, and the sneering mockery of an inquest-room?

Such peremptory commands may or may not be attended with the most serious inconvenience to me. On public grounds—on the grounds of "fiat justitia, cœlum ruat," towards the members of my profession—I address this letter to you, as my case is an illustration of unfair play, and demonstrative of a violated principle of justice: because, if I be wrong in this my condemnation, in all cases of sudden death, when perhaps half a dozen medical men hasten to the spot, the coroner may give the remuneration to any one he pleases, though the object of his preference might be the very last to deserve it.

I remain, your obedient servant,
Wm. Mayling, M.R.C.S.L. and L.A.C.L
3, Little Tower-street, Aug. 31.

POOR-LAW MEDICAL RELIEF.

[To the Editor of the Medical Times.]

Sir,—Nothing will contribute more towards the attainment of proper, adequate, and just remuneration to those who have the medical charge of large and extensive populations than the upholding constantly before the public the gross absurdities of the present system, carried on under the name of poor-law medical relief. I think it behoves every one who feels the burden of his position to raise his voice, and add a mite to the clamour against the iniquity perpetrated on the poor, the community in general, and themselves in particular. With this view, I proceed to represent to you my grievances, and I guarantee the correctness of my statements by privately forwarding to you my name, for I am unwilling to call down the wrathful indignation of those who have, at my own solicitation, confided a large district to my care. In the remarks which I make, I do not blame the guardians at all: their duty is to give to the poor the rates in proportion to their immediate wants; their duty is to provide cheaply every article of necessity, and physic falls unfortunately amongst the items: the law and the commissioners are at fault.

Now, to my case. My district contains eight parishes; an acreage amounting to 14,000; a population of 8000, three-fourths of which are on the verge of pauperism from the long-continued depression in trade. To show to what an extent pauper medical orders are given, I may mention that my quarterly returns for the year ending the 25th of June, 1847, give 750 orders, and these, with about fifty, attended gratuitously, make 800 patients attended annually, and for what? the great sum of £50 per annum. The extensive range of the district compels me to keep one horse entirely for the service of the poor; now the lowest sum for which this can be kept is £20, and, £5 for wear and tear being allowed, one half of the salary alone is swallowed up. No one can supply the above number of paupers with proper medicaments and appliances under £30; I can most positively affirm, for I can prove from my bills, that such has been the cost to me for the relief, in leeches, medicines, &c., I have given. Thus, in one year, when reduced to figures, I calculate I lose £5 by giving my services to the Board of Guardians.

What is the amount of personal exertion this one year's work has cost me? I have ridden over not *hundreds* but *thousands* of miles, I calculate about 2700. Day and night has been all the same—a vast, distressed, dejected population, is my charge; their ailments are not to be lightly treated; a sacrifice of ease and comfort is necessary to the fulfilments of the duty properly—that sacrifice I have voluntary made, and, making it, I have gained, what?—a positive loss. Contrast my district with one not under the new poor-law—the parish of St. George's, Hanover-square—compare the salary of both, and we find there some approximation to justice towards the medical men: they receive £100 per annum each for the district, and £85 for the workhouse, and yet the paupers do not extend over a square mile, and in a year the number of cases seldom exceeds the number I have. Must not a manifest injustice exist in the medical relief granted by the poor-law commissioners, for they sanction the paltry pittances we get from boards of guardians? If a population, collected together in, as it were, a small compass, requires no more than the exertions of one person, without carriage or horse, to visit them in their diseases, it must be manifest that a country practitioner should have a salary far above the town one, because the expense of a horse must be incurred; and why should he be a loser, after devoting his time, his health, and comfort to the benefit of the poor? The more this subject is considered, the more we look into the circumstances of the case, the greater the unravelling it undergoes, the more do we feel the unequal burden with which we are burdened; and not until the whole system is rectified—not until equal justice is dealt out to the poor and the medical attendant equally—should we rest satisfied. A district like mine, and unfortunately there are numbers, should have a salary of at least £200 per annum attached to it, and the state ought to take this particular department to itself. The posts we fill are honourable, but they have been made dishonourable to us; the high feelings we may possess when we canvass for the appointment are soon broken down by the thought that, do what we may, we cannot do well to the poor and ourselves too. The fault I find with the present state of things is, the discrepancy which exists between the

salaries of different medical officers. This week I see advertised a population of 3650, and small acreage, at £85, with extras. Now, for little more than half this sum I have to attend 8000, some of whom live seven miles from my residence. Can such things be without the keen-sighted commissioners taking immediate steps to rectify the absurdity? They have talked and talked of looking into this subject, year after year, but we see no result follow; each medical man is the patient ass—the load is on his back, they are careless to remove it from him. Our cry is not the cry of a mercenary class of men, eager to enrich themselves; we call aloud for the whole subject to be taken up by a commission and thoroughly investigated and placed upon a reasonable footing; we demand a salary which will pay for our horses, our drugs, our personal risk and danger, and we demand for the poor a more extended system of medical relief.

I remain, Sir, your obedient servant,

A Poor Union Surgeon.

POOR-LAW RELIEF.

[To the Editor of the Medical Times.]

Sir,—On perusing your report of Aug. 28, of the coroner's inquest, held at the Holborn Union, I was forcibly impressed with the coroner's charge to the jury, as I feel very much instructed by it how to proceed in case of necessity, having the medical charge of an extensive union district, namely, the Woolton District of the Prescot Union. Mr. —— (the coroner) observes, that the law empowers medical officers to administer to the sick whatever they may judge proper, at the cost of the union. A few weeks ago I was attending a poor man, and his wife and seven children, all ill of typhus fever; and on visiting them one evening I found them penniless, and in great distress and actual want, and not a morsel of any kind of food in the house. I was shocked at their destitution, and immediately procured them some mutton and rice, and oatmeal, to make some soup and gruel; and the next day, on making their destitution known, a subscription was quickly procured for their relief. A few days afterwards the relieving officer, who lives five miles off, came to the village, where he attends once a week, and I applied to him for the sum of 4s.—3s. for the food for this family, and 1s. for another man's removal. His reply was, that he would lay it before the board, which met the following day. He did so, with some observations of his own, as to its being an infringement of his duties; and the board have refused to allow the same, observing, I believe, that if I chose to turn relieving officer, I must do so at my own cost. This family, I again declare, were starving, and not a person to attend to them. Therefore, under these circumstances, I shall feel obliged by your insertion in your valuable publication, of which I am a constant reader, this most shameful fact, and at the same time, to say that I shall feel particularly obliged by your informing me how I must in future proceed, should I again be similarly situated. Perhaps you will favour me with the law. Am I, when I see poor objects starving and in want, to relieve them, and not have it returned? or am I to refuse them, and, in case they die, make myself, as the coroner observes, liable to a charge of manslaughter? The poor are hardly dealt with in this district (as well as in many others), to the great annoyance of the clergy, gentlemen, and ratepayers. I am, Sir, your most obliged,

J. Armitage Pearson, M.R.C.S.L.

Much Woolton, near Liverpool, Sept. 1.

*** The inhumanity and injustice of the guardians is here placed beyond question; but Mr. Pearson in future cases may learn from this verdict that when his humanity extends beyond what the law provides for, he must consider himself as conferring private charity. Medical men at present have *no legal* duty in respect to such cases of destitution as he has described, except that of *ordering* the parochial authorities to give that kind of medicine and sustenance the parties may require. The guardians disobey the order at their peril.—Ed.

GENERAL MEDICAL ANNUITY FUND.

[To the Editor of the Medical Times.]

Sir,—The lamentable cases of Dr. Lynch of London, of Mr. Walker of Manchester, and of other members of the profession, latterly, induce me to bring before the notice of your readers the "General Medical Annuity Fund," established at Northampton in 1845. This fund was founded by Mr. Daniell, of Newport Pagnell, a gentleman well known to your readers by his numerous contributions on the subject; it is now regularly organized, under the presidency of Dr. Robertson, of Northampton, with trustees, directors, and numerous local secretaries in different parts of the country; and is receiving the cordial support of the profession. The object of the Institution is to provide annuities for superannuated or permanently disabled members of the medical profession, and for the widows and orphans of medical men.

The annual subscription is one guinea, and every one hundred subscribers will enable the directors to grant four annuities of twenty-five pounds each. It will be perceived that this society offers to each of its members the advantages of the benefit-society system, *with the addition of an annuity to the widow or orphans after his decease.*

It behoves every member of the profession to promote the benevolent objects of some such society as this one. Should his life and health be spared, he will by this means assist his less fortunate fellow-member; but should he be cut off in the midst of his career of usefulness, and before he shall have made provision for his family, his wife and children will not be left entirely destitute and dependent upon the sympathy of the public generally.

By allowing me thus very briefly to draw the attention of your readers to a society which promises to be particularly useful to our profession, you will oblige, Sir, your obedient servant, T. Herbert Barker, M.B.

Bedford, Aug. 27.

DR. HICKMAN, THE ORIGINAL DISCOVERER OF INHALATION AS A MEANS OF PERFORMING PAINLESS OPERATIONS.

[To the Editor of the Medical Times.]

Sir,—In your letter of July 31 I remark an allusion to Dr. Hickman's invention, of performing operations under the influence of inhalation; and I am happy to observe that you appear to recognise the justice of his claim as the first inventor of the principle in question. You are right in your surmise, but he is no more. He died soon after this discovery, and before he had time to prosecute his inquiries. Had he still lived, I have no doubt he would have brought his experiments to a satisfactory conclusion.

I can put you in possession of a copy of the memorial which he addressed to the French King Charles X.; and I think, in justice to his memory, that his claim ought to be recognised by the scientific world. His widow is still living, and, as may be supposed, is most anxious for the claim of her late husband to be substantiated. Some time ago I addressed two letters to the *Lancet*, which were inserted in that publication, but no further notice has been taken of the matter.

The memorial is dated 1828, but I believe there are claims on behalf of parties prior to that period, but I know not on what evidence they are founded.

As a friend of Dr. Hickman's family, I have endeavoured to support his claim to this discovery—so far, at least, as the year 1828. As your appear to consider his claim to be founded on justice, I trust you will use your influence to secure for the benefit of his widow any advantages that may result from the invention.

I am, yours,

Thomas Dudley.

THE MEDICAL REPRESENTATIVE.

Sir Coroner,—I write to you neither in sorrow nor in anger. I am not going to be virtuously indignant. I am not even about to pity you. There are walking things, flying things, and crawling things. Why should I be angry with, or compassionate—either one or t'other? Every animal after its kind. Providence, no doubt, had some wise purpose in creating you, just as it had when it gave birth to caterpillars, earwigs, and other vermin. Therefore, Mr. Wakley, I am not about to blame you for what you said upon Finsbury hustings, touching literature and novelists. You no doubt spoke what you felt: and there is a natural deformity of mind, which it would be as cruel to attack as a natural deformity of body. If your soul be crooked and blind, I do not blame you. Heaven help us—you are as God made you. Any one of us might have been similarly afflicted—might have been born with a leper's hide, or a Wakley's feelings. And, therefore, Mr. Coroner, I merely mean to remark upon as a fact—not impute to you as a fault—your late notice of Mr. Warren and his books—and your general tone, when speaking of imaginative literature in general.

I am, Mr. Wakley, like yourself, an advocate of popular progress—unlike yourself, I am a real Liberal. And yet, when I read the sentiments you uttered, touching literature and literary men—when I remembered that the disgraceful words before me were spoken by a popular leader, and, worse still, when I heard of the burst of cheering with which a popular assembly received your vulgar diatribe—then, Mr. Wakley, I did feel how it was that so many great minds have held the masses in contempt. I did feel the force, the awful unhappy force of such words as the "rabble," the "unwashed," the "swinish multitude," and tried not to experience this feeling. I struggled to shut it out. I said to myself, the people are improving, schools are rising, institutes are springing up, there is good hope of a summer time coming—but even as I so murmured, the mental echo of the popular voice of Finsbury came ringing in my ears, and I felt—yes, felt in spite of myself—that such creatures as speaker and applauders were never meant by God to govern this—his world!

Oh, how often has my blood boiled when I read tales of popular sufferings—of feudal tyranny—of more modern persecutions—of the packed jury and the unjust judge. And these were wholesome feelings good to nurture and to cherish. 'Tis you, and such as you, who help to dispel them. If I despise you, how much more do I despise your disciples—if I pity the idol, how much more do I pity the worshippers. Yes, credit me, Mr. Wakley, there are hundreds of ingenuous minds opening and budding into fragrant thought—minds which worship at the shrine of imaginative genius as in the temple of a mighty God—minds, too, which would as naturally embrace the popular cause as the plants shoot upwards—but minds which, when they hear of such speeches as your late one, when they hear of the applause which followed it, will turn from the people, the masses, as a polluted and unwholesome thing—unworthy and incapable of being moulded by the hand of Genius into glorious proportions and exquisite outline, and fitted only to be dealt with by the coarse fingers of demagogues—to be fashioned into nauseous and corrupting forms—as ingenious but grovelling children love to make dirt pies.

Take care, Mr. Wakley. This is not your first escapade. Remember your estimate of Wordsworth. Not that in that instance you were so far from the truth—but the bias of your mind is evident—you despise art and literature. You think a brilliant novel beneath a clap-trap

speech on a hustings. You rate the painter or the sculptor as inferior to the Brummagem patriot, who raves in the meeting about the parish pump.

These things hurt. These things damage the great cause of progression. I am one of its warmest if not of its loudest advocates. I would see the people governed by themselves—taxed by themselves—strong in themselves, relying on themselves. But to be liberal it is not necessary to be illiterate. To be a politician it is not necessary to talk of literature like a drunken coal-heaver. To win the confidence of a popular constituency, it is not, at least we trust so, requisite to show about as much appreciation of imaginative genius as one would look for in an Ojibbaway or a Bosjesman. Not that you, Mr. Wakley, are one whit above the savages in this respect. But, as I said before, I say again, I do not blame you. I do not write this letter with any hope of reforming you, because I would not set up a manufactory intended to convert sows' ears into silk purses. But there is one thing you can and may do. You may be silent when you cannot be sensible. You cannot alter the brains which Heaven has given you—but you can hold the tongue—and thus prevent young minds from believing that a man may be a Radical, and yet a scholar and a gentleman—a conclusion at which the frequent perusal of your speeches would certainly prevent the most sanguine from arriving.

THE MAN IN THE MOON.

GOSSIP OF THE WEEK.

LONDON UNIVERSITY.

FACULTY OF MEDICINE.

The prizes for the summer term have lately been announced as follows:—

PATHOLOGICAL ANATOMY.
Professor Walshe, M.D.

Gold Medal and First Certificate.—Mr. William Filliter, of Wareham, Dorset.

BOTANY.
Professor Lindley, Ph. D.

Gold Medal and First Certificate.—Mr. Archibald P. Childs, of Bungay.

Silver Medal and Second Certificate.—Mr. William Bayldon, of Royston.

MEDICAL JURISPRUDENCE.
Professor Thomson, M.D.

Prize and First Certificate.—Mr. J. G. Thompson, of London.

The Fellowes Clinical Gold Medal has been awarded to Mr. S. F. Stratham, of Cranford, Middlesex.

QUEEN'S COLLEGE, BIRMINGHAM.

The annual meeting of the friends of Queen's College, in this town, was held August 25th, at the College. Lord Lyttelton, the Principal of the College, presided; and there were also present the Hon. and Rev. G. M. Yorke, C N. Newdegate, Esq., M.P., J. E. Piercy, Esq., George Attwood, Esq., Rev. G. S. Bull, Rev. J. Allport, Mr. E. T. Cox, Mr. E. Armfield, Dr. James Johnstone. Dr. Birt Davies, Aldermen Van Wart and Room, Mr. W. H. Osborn, Professors Knowles, Shaw, &c. Mr. W. S. Cox, the Dean of Faculty, read the report. The following students have obtained prizes:—

Junior Department.—Classics: Fryer, Coleford.—Mathematics: Wall, Stratford-upon-Avon.—Chemistry: Edney, Kilmarnock.—Theological Prize: Fryer.—Mathematical Tutor's Prize: Fryer.—Medical Tutor's Prize: Fryer.

Especial thanks are due to the examiners, the Rev. Wm. M. Lawson, M.A., and the Rev. W. B. Smith, M.A., who kindly assisted the Vice-Principal in the examinations of the junior department.

Senior Department.—Anatomy: Bird, London.—Surgery: Paterson, Stourbridge.—Medicine: Bird, London.—Materia Medica: Moore, Hales Owen.—Midwifery: Whittell, Leamington. ... : Lowe.—Forensic Medicine: Whittell. Lane, Grosmont, Monmouth.—Demonstrations: Hodges, Ludlow, and Bird, Æq.; Certificates to Brown and Barratt.

Thanks are especially due to Bransby Cooper, Esq., for the careful and satisfactory award made by him of the surgical prize.

NAVAL PROMOTIONS.—Assistant-Surgeon John M'Whinnie (1838), to the rank of Surgeon.

NAVAL APPOINTMENTS.—Deputy Medical Inspectors: John G. Stewart, to Jamaica Hospital; Dr. James W. Johnston, to the Vindictive.—Surgeons: David Geddes, to the Poictiers; Dr. John Dunlop, to the San Josef; Dr. Charles O'Brien, to the Cambrian.

WAR-OFFICE, Aug. 27.—14th Regiment of Foot: Assistant-Surgeon William Lloyd has been allowed to resign his commission.—Hospital Staff: John Thomas Clarke, M.D., to be Assist.-Surg to the Forces, vice Batley, appointed to the 5th Foot.

APOTHECARIES' HALL.—Gentlemen admitted members August 26: Thomas Morris Ward, Patrick Downey, William Hand, George Alfred Rhodes, Sherand Freeman Statham, and William Emerson.

UNIVERSITY COLLEGE, OXFORD.—By the decease of George Joseph Bell, M.B., of this college, who died on his way from Persia in May last, one of Dr. Radcliffe's Travelling Fellowships is now vacant. Mr. Bell was elected in 1842, and the fellowship is held for ten years. Dr. Radcliffe, by his will, charged his estate in Yorkshire with the payment of £600 per annum to "two persons, to be chosen out of the University of Oxford, when they are masters of arts, and entered on the physic line, for the maintenance of the said two persons, for the space of ten years, and no longer, the half of which time at least they are to travel in parts beyond the sea, for their better improvement." Chambers are assigned in University College to the two Fellows. The electors are the Archbishop of Canterbury, the Lord Chancellor, the Chancellor of the University, the Bishops of London and Winchester, the two Principal Secretaries of State, the two Chief Justices, and the Master of the Rolls, or the major part of them.

DANGERS OF MEDICAL MEN IN THE FIELD OF BATTLE.—"On the morning of the 21st," says Dr. Jarvis, United States army, "the whole division was thrown forward towards the city, with a view, as we supposed at the time, of making a diversion in favour of the 2nd division, under General Worth, which was moving on the western side of the city by the Saltillo road. Few of us supposed, as we silently marched along, occasionally passing through corn fields, and by the side of hedges, or whatever could conceal our movements from the enemy in their batteries, that we should so shortly be engaged in a fierce and deadly strife. As soon as, or in fact before, we emerged from under cover, the batteries from either end of the city opened their fire upon us, completely sweeping the plain in every direction, and enfilading the advancing columns of our troops, now rapidly marching towards the suburbs. The engineer officer having reported the practicability of attacking with success the rear of some of their forts, the 1st, 3rd, and 4th Infantry were ordered to advance rapidly by separate roads; and now it was my professional labours commenced. The nearest and only shelter that presented itself to me for the wounded, falling every moment under a most destructive fire, was a quarry pit, four or five feet in depth, and the same in breadth. Several of these were contiguous, and to them I directed the wounded to be carried. By stooping we were protected from the shots, which, however, became every moment thicker, owing to the fact that our troops had by this time advanced within range of the enemy's fire, and the moment they perceived a party of men bringing the wounded to us, they directed all their guns upon it. I had already performed one amputation, and was preparing for a second, when two or three fugitives rushed into the pit, falling over the wounded that lay there crowded together, saying that a large body of lancers were approaching. So little credit did I attach to their report, which I ascribed rather to their fears than the actual presence of this dreadful description of troops, that I never raised my eyes to observe them; which circumstance doubtless saved us all. Had I been discovered, all would have been massacred, as, in their headlong fury, they would neither have delayed to ascertain our character or profession, nor have paid much respect to our patients. Several soldiers who had sought an adjoining pit with an officer were slain. They were soon after repulsed by a regiment of Ohio and Mississippi volunteers, marching to reinforce those already in the town, and their retreat was further quickened by a shower of grape opened upon them by our artillery.

Desirous of seeing a correct Medical Directory, we readily accede to the wish of the editor, and direct the attention of our readers to the advertisement on our wrapper, which promises great improvements in this important annual. The spirit and energy of its proprietor should be responded to. There will be little need of reviving the question of the Medical Registration Bill, and disturbing, to no purpose, the profession to its centre, if this book become what it professes to be and ought to be.

MR. G. HUXLEY'S CAOUTCHOUC STOCKING.—This is another of those mechanical inventions to which surgery is so much indebted. The adaptation of indiarubber to the purposes of compression for varicose veins, &c., is correct in principle, and the form which the principle here takes is more than unexceptionable: it is admirable. For the equal diffusion and permanent maintenance of pressure we have seen nothing which with more pleasure we can recommend to professional cognizance than the invention submitted to us by Mr. Huxley.

OBITUARY.—On the 26th inst., at Oxford, deeply regretted, John Wootten, Esq., M.D., of Balliol College, and one of the physicians of the Radcliffe Infirmary, in the 48th year of his age.—On the 1st inst., in Gloucester-place, after a long and painful illness, Sir Richard Dobson, M.D., F.R.S., &c., Inspector of Hospitals and Fleets, aged 74.

MORTALITY TABLE.

For the Week ending Saturday, August 28, 1847,

Causes of Death.	Total.	Average of 5 Summers.
ALL CAUSES........	1084	940
SPECIFIED CAUSES...	1082	935
Zymotic (or Epidemic, Endemic, and Contagious) Diseases..............	366	226
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat...........	135	108
Diseases of the Brain, Spinal Marrow, Nerves, and Senses................	134	157
Diseases of the Lungs, and of the other Organs of Respiration	195	226
Diseases of the Heart and Blood-vessels...........	30	25
Diseases of the Stomach, Liver, and other organs of Digestion	105	94
Diseases of the Kidneys, &c.	8	8
Childbirth, Diseases of the Uterus, &c.	15	10
Rheumatism, Diseases of the Bones, Joints, &c. ...	10	7
Diseases of the Skin, Cellular Tissue, &c.	2	2
Old Age..................	55	50
Violence, Privation, Cold, and Intemperance........	27	26

SUGGESTIONS

FOR A MORE SIMPLE ARRANGEMENT OF THE

MATERIA MEDICA,

BASED ON ITS PHARMACEUTICAL AND THERAPEUTICAL RELATIONS.

By GEORGE LEITH ROUPELL, M.D.

Cantab., F.R.S., Fellow of the Royal College of Physicians, Physician to St. Bartholomew's Hospital, Lecturer on Materia Medica at the College of St. Bartholomew' Hospita..

(Continued from p. 524.)

LECTURE VIII.

I here to-day briefly glance at the second class of bitters, which is composed of such as are amorphous in shape, or not, at any rate, regularly crystalline: these are absinthine, cetrarine, lupuline, lactucine, pareirine, and cathartine.

25. Absinthine is the bitter principle of the artemisia absinthium. The botanical name absinthium, and the trivial one of this plant, wormwood, are expressive of some of its qualities and supposed effects—the one being indicative of the nauseousness of its taste, and the other of its efficacy as a vermifuge.

Wormwood is powerfully tonic, to some extent febrifugal and anthelmintic. It is now comparatively rarely used, though formerly a remedy of great celebrity. It has long been famous as a corrective of dyspepsia, especially of that form which is induced by habits of intemperance; and there is no question of its utility in hypochondriasis, hysteria, and debility. Haller tells us that in his own case he found it efficacious when labouring under gout.

The flesh and secretions of animals fed upon wormwood acquire its bitter taste.

26. Cetrarine is described by M. Herberger as a white powder like magnesia, undergoing no change on exposure to the air; inodorous, but of a strong bitter taste; little soluble in water, hot or cold, but readily soluble in alcohol, ether, and alkalis. This is the active medicinal principle of the cetraria islandica, which is a useful tonic in cases of debility, and is especially indicated when accompanied by emaciation, as, besides cetrarine, it contains a nutritive principle—starch.

Dr. Müller found cetrarine an effectual remedy in ague when exhibited in doses of two or three grains.

27. Lupuline, or rather lupulite, is the bitter principle of the hop. It appears in the form of a yellow, uncrystallizable matter, neutral in its reaction; slightly soluble in water, more readily in alcohol.

A very useful combination of properties is found in the hop, which is tonic, aromatic, and, in the opinion of the public, narcotic.

An infusion, a tincture, and an extract are the officinal preparations.

28. Lactucine is the entire bitter principle of the lettuce. It is neutral, and obscurely crystalline.

The lettuce is calmative and anodyne, and may advantageously be exhibited when other sedatives disagree or produce unpleasant effects.

The officinal preparation, the extract, if carefully made, is a good form for its exhibition.

29. Pareirine. Under this head I shall treat of the cissampelos pareira, applying this term to the yellow bitter matter with which the crystallizable substance cissampeline is combined. Pareira brava, introduced into practice as a cure for calculus, is decidedly serviceable in some cases of irritation of the mucous membrane of the bladder. It appears almost a specific for such forms of inflammation of that viscus as are characterized by copious discharges of a ropy secretion.

The infusion and extract of pareira are the formulæ at present in use. A stronger decoction is, however, required.

30. Cathartine, discovered by M. Lassaigne in the leaves, and by M. Feneulle in the pods, of the senna plant, is a red, uncrystallizable, non-azotized substance, of a bitter and nauseous taste. It is the efficient portion of the senna, proving actively purgative (and not without griping, according to the experience of M. Feneulle) in doses of two or three grains. Cathartine is soluble in water and alcohol, but not in ether.

Senna, the produce of different varieties of cassia, is the most certain of our purgatives, stimulating rather than depressing the system. Its preparations are the compound infusion, the compound mixture, the confection, and the syrup.

III. Bitter Principle in the Form of Extract.

In this division several drugs will be treated of the active principle of which is yet doubtful. In some it exists no doubt, variously combined, chemistry having yet failed to exhibit it to us in a distinct and separate form. As good an example of this order as can be found is—

31. Aloesin. This is a reddish-brown substance, translucent in thin layers, soluble in water and weak spirit, insoluble in alcohol and ether, intensely bitter to the taste, and actively cathartic in its effects. It exists in the proportion of from 50 to 80 per cent. in the various descriptions of aloes.

Aloes is a bitter tonic and an aperient. Its laxative effect is chiefly occasioned by its stimulating the large intestines, the explanation of which peculiarity has recently been sought in the solvent property of the secretion from this portion of the alimentary canal.

The officinal preparations of aloes are numerous, the empirical ones endless. It is one of the best means of obviating the tendency to constipation, as it acts simply by increasing the peristaltic movement of the intestines. It is the best substitute for bile when deficient, as it more resembles bile than any other known substance.

Its well-known tendency to irritate the rectum and neighbouring parts has led to its employment as an emmenagogue, and its prohibition in cases of hemorrhoids or in pregnancy.

An extract, three formulæ for pills, a wine, a decoction, a simple and a compound tincture, are preparations of aloes to be found in the London Pharmacopœia.

32. Colocynthine is a pale yellow matter, brittle, transparent, soluble in water and alcohol, intensely bitter, and violently cathartic. It exists in the proportion of fourteen per cent. in colocynth, and is its efficient portion. Colocynth itself is rarely used, but the simple and compound exract form our ordinary aperient pills, a mode of exhibition especially suited to this drug from its extreme bitterness.

33. Rhamnine appears in various forms, according to M. Henry—in light scales or small grains, or even in arborescent crystallizations. It is of a yellow colour, of a bitter taste, though not very strongly marked.

Rhamnine is the active principle of the rhamnus catharticus, the berries of which are powerfully cathartic. The fresh juice boiled with ginger and pimenta berries, with the addition of sugar, forms the syrup of buckthorn, an old and efficient remedy for dropsy, though one which has yielded to other hydragogues less apt to produce nausea and griping.

34. Taraxacine must be classed amongst neutral, non-azotized substances, and is bitter, with some acridity. According to M. Pollex, it appears in the form of stellated crystals.

Taraxacum is useful in hepatic obstruction, acting as a diuretic and gentle aperient; it is supposed to increase the secretion of bile.

It is most commonly employed in the form of an extract.

35. Diosmine is the bitter extractive matter which, in combination with the essential oil of bucku, renders it a valuable remedy in urinary diseases. It acts as a tonic, diuretic, and stimulant, checking the secretion of mucus poured out from the membranes when in a state of chronic inflammation, and allaying excessive irritability of the bladder.

36. Ergotine. This principle, discovered in the spurred rye by M. Wiggers, is thought by him to be the active principle of the secale cornutum. He describes it as narcotic and poisonous, appearing as a brown powder, bitter to the taste. M. Bonjean thinks it, when loosely applied, a very powerful styptic; and, when taken internally, he has always found it successful in uterine hemorrhage.

The chief use of the ergot of rye is to promote the contraction of the uterus either before or after delivery, and to restrain hemorrhage from various parts.

The powder is generally employed.

37. Serpentarine is the bitter extractive matter of the sermentary, to which, with an essential oil, its efficacy is to be referred.

Serpentary is tonic, diaphoretic, and stimulant; hence is useful in the advanced periods of low fever.

The tincture and the infusion are the officinal preparations.

38. Cascarilline is the last of this order to which I shall allude.

It is not yet decided whether or no cascarilla contains an alkaloid; for the present we must consider its bitter extractive matter, with its acrid resin and essential oil, as together constituting the efficient components of this bark.

Cascarilla, from the combination of aromatic with tonic properties, is useful in some forms of dyspepsia, in chronic diarrhœa, and dysentery. On the Continent it is esteemed as a febrifuge, and it may be, at any rate, usefully combined with cinchona when that remedy disturbs the stomach.

An infusion, a tincture, and a mixture, are directed to be prepared by the Pharmacopœia.

Neither time nor space permit me to dilate further on this class of drugs: it is one which will obviously require much modification, and is one which calls for additional researches on the part as well of the analytic chemist as of the medical practitioner and physiologist.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), M.B.S., Physician to the Royal Infirmary for Children, &c.

(Continued from p. 505.)

To-day, gentlemen, I shall conclude what I have to say upon the treatment of *tuberculous meningitis*.

In the first place I shall read you the notes of one or two cases which will illustrate both the utility and inutility of the practice I recommended you to follow in endeavouring to arrest the progress of this very fatal disease.

The first is a case in which the disease was arrested after some stupor had supervened.

Dec. 9, 1845.—Richard Vere, of Christchurch, in his eighth month, is attacked with vomiting and constipation; his brow is knitted, and he sleeps very much. His mother says, "the head hangs about, and he is very heavy;" his face is pale, fontanelle tense and convex; he is scrofulous-looking. Tuberculous meningitis is to be feared.

Ordered to have his head shaved, and a blister placed upon the scalp, a mustard cataplasm between the shoulder blades; castor-oil ℥i., oil of turpentine ʒij., to be injected. To be placed up to the chest in warm water.

10. His mother states that soon after I saw him he passed into a state of stupor, but has been much relieved since the applications and injections were resorted to. Bowels relieved four times. There is much heaviness; breathing rather laborious; nervous system oppressed; pupils contracted. Ordered a blister behind each ear, and repetitions of mustard poultices to nape of neck. Repeat the injections, increasing the turpentine by ʒj.

11. Decidedly better; bowels relieved three times; breathing yet laborious, but not so much so as yesterday; blister discharging. Ordered to repeat the mustard poultices to neck, to take four grains of cathartic powder, and have the injections repeated.

12. Head symptoms very greatly relieved, and blisters behind the ears well open. Ordered to have the injections repeated, and ʒij. of the following mixture every two hours:—Sodæ desquicarb, ʒss.; aquæ carui, ℥ij. M. To have the iodine ointment applied to the head.

14. Head symptoms gone; tongue rather foul; motions very pale. Ordered mercury with chalk gr. j., soda gr. viij., at bedtime; and chlorate of potash gr. iij., infusion of gentian ℥ss., every three hours, mixed with a small quantity of sugar.

January. Discharged convalescent.

The next is a fatal case. June 23, 1844. David Perryman, Lambeth, in his thirteenth month, is attacked with vomiting and constipation. The fontanelle is tense, and the head seems heavy to the child, although it is comparatively lively. Child strumous-looking, small, and delicate; mother strumous; her first child; tuberculous meningitis is to be feared. Ordered to have the head shaved and the comp. iodine ointment applied; a blister behind each ear; aloes and sulphate of potash, each two grains, directly; an hour after, two drachms of castor-oil, to be repeated every three hours until the bowels are relieved.

24. Liveliness gone; child dull and heavy; sleeps much; face warm, but pale; bowels have been relieved; case altogether much worse. Ordered to have the powders and oil repeated as before, a blister to the nape of the neck for four hours, and afterwards a poultice. To take iodide of potash gr. ij., iodine gr. 1-10th, distilled water ʒij., every two hours, mixed with sugar at the time of taking it.

25. Stupor, but the child can be roused, and when aroused swallows; bowels not relieved. Case worse. Ordered, powder of elaterium gr. 1-16th, sugar gr. iij., directly. If need be, castor-oil to be given in the evening. Repeat the iodine mixture.

26. Has been better since the elaterium operated well. Ordered to have the elaterium as before. Go on with the iodine.

27. Has relapsed again, and is now much worse; lies mostly in a calm stupor, but now and then grinds the teeth, and moves about his arms; the mother says he has been slightly convulsed. Ordered to have the elaterium and mixture of iodine as before. To have the whole scalp blistered.

28. Took the powder, but could not be got to swallow the mixture. The mother refused to have the head blistered. Bowels have been well moved; child breathing unequally, irregularly; lies constantly on its back; eyes begin to be gluey. Case much worse. Told the parent it was dying.

29. Cold all over except the chest; dying.

30. Died half an hour after I last saw it.

Post-mortem.—A tuberculous cyst exists, the inferior part of which is imbedded in the superficies of lower part of left hemisphere, uniting, as it were, membranes, brain, and skull altogether by adhesions at that point. The outer wall, as it may be called, of the cyst forming adhesions with the membranes, and these again being strongly adherent to the inner wall of skull. Another cyst exists between the pons and cerebellum. The membranes at the base inflamed; granular deposition of tuberculous matter there. Slight effusion into the ventricles; no softening of central parts.

The next is a very interesting case, and formed the basis of a discussion one night at the London Medical Society.

Mary Shanks, aged ten years, nearly two weeks ago complained to her mother of pain in her head, especially when at school. The girl getting worse, unable to be sent to school, and the bowels being rather relaxed, advice was sought; the patient was said to have fever, but which would soon be better, and was ordered "fever medicine." The treatment was continued for a week, but at the end of it, as the child did not improve, she was brought to me at the infirmary. She now presents the following symptoms:—Complains of great pain at the top of the head, which is often intense; pain also along the neck, at epigastrium and at the left side. She is constantly sighing; her hands hang listlessly at her side; every now and then she is taken with great trembling; is thirsty; there has been vomiting; the bowels are now constipated, and the tongue is very foul. The cutaneous capillary development is very great, and the child is emaciated. She seems low; the pulse is feeble; speaks in a sort of moaning tone, interrupted by the tremors which frequently come on. Ordered to have the head shaved directly, a blister placed behind each ear, and to be dry-cupped at the nape; to have the comp. iodine ointment rubbed over the scalp night and morning; to have eight grains of aloes and four of sulphate of potash night and morning; one-fifth of a grain of iodine, two grains of the iodide of potash, every four hours.

17. Child worse; in bed; all the signs of brain affection increasing, the pain and tremor being very great. Ordered to continue as before. Apply a blister to the nape of the neck.

For three or four days the child seemed truly much better, but on the 21st the fever increased, and she was ordered the blisters behind the ears, and the following:—

℞. Potass nitratis, gr. v.; ant. pot. tart., 1-12th; liq. ammon. acet., ʒij.; mist. camph., ʒvj.; 4ta quaque horâ.

The child remained much in the same way until the 23rd, when the following is my note to the house-surgeon upon her paper—Rept. ut xxj.:—"Dear Sir, be so good as to see this patient this afternoon, and if coma has supervened blister the scalp; I am rather at fault this morning: I cannot clearly make out whether the child is only *very sleepy*, or that coma is foreshadowed."

It was not thought necessary, however, to alter the treatment or apply the blister until the 26th, when it did not rise, on the 27th another was applied which rose well, and the patient again rallied. A cathartic powder and the saline mixture just mentioned were continued.

29. Complete coma has supervened; pupils dilated; ordered to have the scalp dressed with the tart. antim. ointment. Injections of turpentine and castor-oil to be given.

31. Child getting worse. Injections not given by the mother, who substituted castor-oil by the mouth.

Little was done after this; in two or three days the child died. I may remark that this child was the tenth who had died out of a family of fifteen; and that the father was then subject to epilepsy.

Post-mortem Twenty-four Hours after Death.—Skull unsymmetrically developed; slight congestion of veins and sinuses of dura mater; very evident flattening of convolutions, and raising of sulci; on pressure the brain seems very firm. Along the edges of the convexities of the hemispheres is lymph deposited, with numerous yellow granulations. In one or two places the hemispheres adhere by the falx. No increased vascularity or congestion of the arachnoid, &c., or of the cerebral substance itself. In the white substance of each hemisphere is a cretaceous mass, about the size of a pea, apparently the cretaciform state of tubercle. Ventricles much distended by about 8℥ of fluid; no softening of central parts. At the base of the brain, from the junction of the medulla with the pons to the commissure of the optic nerves, is a great amount of gelatiniform exudation, and at one spot many yellow granules.

The points in this case to which I would direct your attention are the following:—The liability to have mistaken this case at its commencement for simple fever; even when I first saw it, had it not been for the great trembling and sighing respiration I should have so regarded it. The headache being at the vertex and not frontal. In the agreement of the fact of relaxation of the bowels being put an end to by the super-

vention of the meningitis, with the like fact observed by Gerrhard, Piet, and Green. The peculiar trembling and sighing, &c., just alluded to. In the agreement with the observation of Rilliet and Barthez, that tubercles of the brain are more frequently met with in the hemispheres, and that gelatiniform serosity is more common at the base. Lastly, the inutility of any kind of treatment in such a case, though at the same time proving the value of the severe counter-irritation in temporarily rousing the vital powers.

I told you I should make a few observations before concluding the subject upon the different methods of treatment advised by others. This I shall now do, because, in relation to so important a malady, it is but right you should be acquainted with the different kinds of weapons which have been used against the disease.

Of the purely *antiphlogistic* plan I need say little, for you will have learned that it is not applicable to our present disorder, and experience proves this, since, although it has been vigorously employed in all stages of the malady, it has no effect in warding off the fatal termination, on the contrary, in many instances it will *hasten* the event. Although, then, we cannot hope, like Dr. Maxwell, to cure sixty out of ninety cases of acute hydrocephalus by placing the child in the horizontal position, opening the jugular vein, and continuing the bleeding until the pulse is imperceptible, yet we may hope to relieve somewhat the local congestion or increased vascular action which so frequently accompanies the early periods of the malady by applying a few leeches behind the ears, or cupping at the neck, as I have told you, and, therefore, need not dilate more upon the point here, simply enforcing on your attention the fact that in tuberculous meningitis the inflammatory action, when present, is not of that description which is *materially* benefited by the loss of the circulating fluid, however, and to what extent, it may be brought about.

In Mr. Field's "Veterinary Records" you will find two cases of hydrocephalus, related as occurring in the horse, and which, on dissection, showed the ventricles distended with water, &c. These horses were freely bled, and rapidly became worse, and died. Mr. Field remarks that "an animal, under such circumstances, cannot bear the loss of blood, extreme restlessness, &c., supervening."

With respect to the *mercurial* plan, I might say a little more in its favour, and others you will find who place great hopes upon it. But even here all that I look for, is the value of the mercurials exhibited in producing continued action on the bowels, and exciting more biliary secretion from the liver. As to the specific power of mercury in stopping the progress of the disorder I have no belief, or in its supposed virtue of hindering the ventricular effusion, as is rested upon by some. Many in this disease have given enormous quantities of calomel: one case is on record in which 310 grains were given, and an abundant salivation was produced, and the child is said to have recovered. Dressing the blistered surfaces with the mercurial ointment along with the internal exhibition of some one or other form of the metal has commonly been adopted. You will find that many of the cases of averred recovery from acute hydrocephalus have been treated by this plan; and, says Dr. Bennett, "weighty and varied testimony in favour of calomel might be adduced from numerous authors who have written especially on this subject, from Dr. Dobson down to the present day."

The next general plan which has been by some adopted is that of powerful and constant *purgation*, and I am myself inclined to lean to it more than to any other, when adopted in combination with counter-irritation. I think Rilliet and Barthez do not bestow by any means the credit upon this method which it deserves. Whytt and Rush strongly recommended it, Abercrombie gave croton oil, and Clutterbuck and Elliotson elaterium. The latter I have administered myself. I prefer, however, keeping up purgation by means of aloes and sulphate of potash, and injections of castor and turpentine oils.

Of *counter-irritation* and *derivation* by means of mustard cataplasms, blisters, and dry cupping, &c., I have a high opinion—so far, at least, as I can have in this disease of anything applied as a means of cure. Many persons of repute have recommended them, often differing, however, where and when they should be employed. Some blister the scalp, others the neck, or the mastoid processes; whilst others advise the epigastrium or lower extremities to be attacked. "Hot-water moxas" on the posterior portion of the nape, and the common moxa to the occiput and behind the ears, have also been recommended. Myself, I prefer, on the whole, blistering behind the ears, and repeating mustard poultices to the nape of the neck, whilst iodine ointment is applied to the shaven scalp, and pediluvia of hot water containing salt or mustard are had recourse to in the earlier stages of the malady; afterwards a blister to the whole scalp, kept open by an irritating ointment.

Some have given largely *narcotics* and *sedatives*; and a few agents, like digitalis and opium, have received high encomiums, especially the former. I must refer you to Dr. Bennett's book for information upon this method, however, as I know nothing about it myself, never having witnessed any one symptom, viewed in relation to the generally observed *post-mortem* appearances met with in this disorder, which appeared to authorize me in adopting it. Yet it has great names in its favour.

I advised you, you will recollect, to give *iodine* internally, and use it externally as well; and you must know that this agent has lately been very strongly recommended both by some of us and the continental practitioners. I am disposed to place much more reliance on it than on mercury, viewed as a specific agent in controlling scrofulous inflammation and its effects; as, also, over those aberrations of simple nutrition so characteristic of the scrofulous constitution, and which I have already fully touched upon, it has more power than anything else. In practice, I have seen decided benefit from its use. With regard to its mode, administration, &c., I have spoken to you before. Some few have more strongly recommended the combination of iodine with mercury in the form both of the proto and deuto-ioduret of mercury, and each has been said to have produced cures. I gave the latter in two cases which proved fatal. I followed the formula quoted by Bennett from Schmidt's "Jahrbücher":—

℞. Calomel, gr. viij.; iodini, gr. j.; sacchari albi, gr. lxxx.; M. fiat pulv. et divide in partes xvj. æquales. Sumat j. 4ta quaque horâ.

In preparing the deuto-ioduret, the calomel should be first rubbed with the iodine, and afterwards with the sugar.

Excitants and cordials have been rightly recommended in the later stages of the disorder, and I have seen a temporary rousing of the powers from their use; but at this period, whatever is done, the child always dies.

Certain special agents or *empirical* means have been, of course, recommended—such as musk, oxide of zinc, phosphorus, and quina. Nor has the tincture of cantharides been fogotten, or colchicum, or enemas of tobacco!

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.

By Professor MATTEUCCI, of Pisa.

Part XIV.

MUSCULAR CONTRACTION—ANIMAL MECHANISM.

Muscular contraction, and the locomotion resulting from it, are effects of the nervous force.

The will—mechanical actions—heat—electricity—determine muscular contraction by their action upon the nerves; the integrity of the nerves is indispensable to produce this effect. It is evident that a force (the nervous force) travels along the nervous filament, and arrives thus at the muscular fibre. On the other hand, we are obliged to admit that this fibre possesses the property of contracting under the action of the nervous force; and we can hardly account for the strange pertinacity with which physiologists have so long insisted, and continue still to insist, upon the correctness of certain exclusive theories which would ascribe muscular contraction to the action of the nervous force alone, denying the contractile property of the muscular fibres, or to the latter independently of the nervous force. The velocity with which the nervous force is propagated is undoubtedly very great, and may be compared to that of light and electricity. We must, however, without denying the correctness of the latter supposition, observe that experiments in support of it are still wanting: the distances which the nervous force has to traverse are exceedingly short, and we need not be so very much surprised, therefore, at the velocity with which it travels. If we observe a muscle at the moment of its contraction, we perceive that its longitudinal fibres are shortened, whilst their diameter, on the other hand, appears of increased size. Numerous observations and experiments made by Fodéra, Edwards, Weber, and others, have clearly demonstrated that the volume of a muscle does not appreciably change during contraction.

From recent microscopic observations it would appear that the muscular fibre is composed of a very great number of cells or globules, arranged in longitudinal piles, which, by their union, constitute the muscular fasciculi: it would accordingly appear that a muscle is susceptible of a species of cleaving, both longitudinally and transversely. This structure presents also a great analogy to that of the electric organ of electric fishes, and we have already had occasion to observe that the same laws preside in the main over the discharge of the latter, and over muscular contraction. During the contraction of a muscle, the globules, or, more correctly speaking, the transverse striæ of the muscular fibres approach closer to one another, the intervals between them diminish, and the bulk of the fibres increases; whence it results that the volume of the muscle undergoes no appreciable change. According to Bowman, the elementary muscular fibre does not contract simultaneously throughout the whole of its mass, but the contraction is propagated from point to point, of course, with great velocity, yet, notwithstanding, at appreciable intervals of time; a fibre in contraction would, accordingly, constantly present some points in a state of rest, and others in a state of mutual motion towards one another.

Schwann has made some important researches concerning the variations of the muscular force in the divers stages of the contraction of a muscle. We will here simply give the principal result arrived at by this philosopher. The force displayed by a muscle during contraction is invariably proportional to its respective length in the divers instants of the contraction: accordingly this force, very considerable at the commencement of the contraction, diminishes in proportion to the shortening of the muscle, and becomes finally *null* when the contraction is at its maximum. A muscle in contraction may consequently be compared to an elastic thread drawn out by a weight, and which, upon the removal of the latter, resumes its original length with a force invariably proportional to the weight which it had to support, and to the elastic elongation which it had suffered. This result shows the fallacy of the notion which would ascribe muscular contraction to the reciprocal attraction of the globules or elementary particles composing the muscular fibre. Were this the case, the force displayed by the muscle ought to augment during its contraction. The result arrived at by Schwann, on the contrary, might be explained upon the assumption that the contraction is produced by the instantaneous cessation of a repulsion supposed to exist between the discs, and excited the instant immediately preceding its cessation.

The author offers the following hypothesis upon this subject, which he considers based upon well-founded analogies and supported by numerous facts;—The contraction of a muscle

consists in a repulsion between the elementary particles of the muscular fibre immediately succeeded by the return of the fibre to its original state, which return is effected by its inherent elasticity. Accordingly, the nervous action would thus cause the repulsion between the elementary particles of the muscular fibre, which would then, by the dispersion or instantaneous loss of the nervous force, be succeeded by contraction. Imagine to yourself a chaplet formed of globules or discs, kept fixed by springs interposed between them: an electric charge communicated to this system produces, in the first place, repulsion between the globules or discs (supposing these alone susceptible of being electrified); this repulsion will go on increasing in proportion as the electric charge proceeds to the two extremities of the chaplet; the moment the electricity is dissipated, the globules will resume their natural position, after having first passed through an intermediate state of closer proximity to one another resulting from the action of the springs interposed between them.

After these brief generalities on the mechanism of muscular contraction, we have to say a few words on the locomotion of animals.

The locomotive organs of animals may be looked upon as a system of levers of various kinds, of which the length, resistance, and weight, are suitably combined, and to which muscular fasciculi are applied in different ways. The air, the water, the earth, are the mediums in which the movements of animals are executed, and which supply the necessary points of support, or fulcra, for these movements. The theories on the composition of forces, centre of gravity, levers, and resistance of mediums, apply, accordingly, equally to animal machines as to any machine employed in arts or trades.

The brothers Weber have demonstrated by numerous experiments that the inferior extremities of man, when put in motion, oscillate round the trunk, in the manner of a pendulum, by the action of gravity. The experiments were made both upon living individuals and corpses; the duration of the oscillations proved invariably proportional to the square root of the length of the oscillating limb. These movements are thus accomplished independently of the will, which explains the perfect regularity with which steps succeed one another, in children as well as in adults, in idiots as in individuals of great intellectual powers and determined will. The action of the muscles in the execution of these movements is accordingly null, or, at all events, exceedingly limited; the leg raised and left to itself accomplishes the step by the simple action of gravity. The head of the femur has to bear only a very slight friction in turning in the cotyloid cavity, where it is retained by atmospheric pressure, which thus assists in the performance of these movements. The limb does not press with its whole weight against the walls of the coxo-femoral articulation; the head of the femur remains fixed to this cavity by the pressure of the atmosphere, which neutralizes the effect of the action of gravity upon the limb. This action of the atmospheric pressure was likewise revealed by the researches of the brothers Weber. These distinguished philosophers suspended a corpse from a beam, and severed subsequently the muscles which unite the thigh to the trunk: the position of the limb remained unchanged; the cotyloid cavity was then perforated, whereupon the limb immediately fell to the ground; being replaced in the cavity, it was found that it might be made to fall or to retain its place in the cavity by simply opening or closing the aperture which had been made in the latter.

The passive organs of locomotion present, like all other parts of the human machine, a constant application of mechanical principles for the attainment of a very complicated result. If an engineer were told to construct a movable column, composed of a certain number of cylindrical pieces, of unequal length, joined together by their respective extremities; the column to be capable to support a considerable weight, and to resist lateral shocks; the extremities of the divers pieces of the column to terminate in a manner to permit the ready application of the forces which are to put them in motion; the column, finally, to be susceptible of executing a great number of partial movements without its simplicity and elegance being impaired: he would surely declare the task to be, if not *absolutely* impossible, yet exceedingly difficult.

The bones are composed of a mixture of gelatine and phosphate and carbonate of lime, in different proportions. Changes in these proportions are attended with changes in the degree of tenacity and elasticity of the bones.

The weight and resistance of the bones are also influenced and modified by the respective dimensions and structure of these organs. All the bones of the human frame are constructed in a manner to offer the requisite resistance without excessive increase of weight.

Our knowledge of the muscular power has not much advanced since Borelli's time, about a century ago. The disposition of the muscles is arranged and combined in a manner to obtain the greatest possible celerity and extent of motion, without impairing the simplicity, harmony, and elegance of the divers parts of the human frame. To attain this result, we find the following conditions united in all possible cases:—

1. The muscular fibres are inserted obliquely on the tendon.

2. The direction of the tendon is oblique to the axis on which it is supported and intended to act.

3. The points of insertion of the tendon are near the articulations of the bones, which serve as points of support.

The following are the principles established by Borelli (and generally admitted up to the present day) to calculate the respective force of the divers muscles of an animal:—

1. Two muscles, composed of an equal number of fibrils, and consequently of equal thickness, raise a given weight to heights proportional to their respective length, or, in other terms, they raise to a given height, weights proportional to their respective length.

2. Two muscles of equal length raise to a given height weights proportional to their respective thickness.

We may express these two propositions in more general terms as follows:—The mechanical labour of which a muscle is susceptible varies in the combined ratio of its bulk and length. Of course, in this calculation we are compelled to omit an important element, which is not susceptible of measurement *à priori*, viz., the intensity of the nervous force, which varies under the influence and dominion of the will.

It is easy to understand how the extent of the movement of a bone depends upon the degree of obliquity with which the muscular fibrils are inserted on the tendon, and how this extent increases with the degree of the obliquity.

The obliquity of insertion of the muscular fibrils causes a loss of muscular force, varying with its degree. Such is the general disposition and arrangement of all the motory organs of animals; the reason of this arrangement will be readily understood when we consider that the body of man and animals would present a most monstrous shape, were the muscles made to act *normally* upon the bones.

To diminish the loss of muscular force consequent upon the obliquity of the insertion of the muscles on the bones, the extremities of the latter are made to terminate in spherical knobs and processes over which the tendons glide and attach themselves lower down on the bone.

We have finally to remark that on the relative disposition of the points of support and of those of application of the resistance and of the power in the levers of the animal economy depend the well-known relations between the spaces traversed by the power, the resistance, and the absolute forces representing them. In general the levers of the human body are of the third class, so that the lever arm of the resistance exceeds that of the power. The forearm affords an instance of a lever of the third class, having its point of support in the articulation of the elbow; for resistance the weight of the arm, which is supposed to be applied at the middle of the forearm, and for power the flexor muscles attached to the extremity of the bones of the forearm. To find the numbers expressing the relations of the movements of the power and of the resistance as supplied by theory, it suffices to compare between them the relative distances of the points of application of the power and of the resistance from the point of support. The extremity of the forearm traverses a much greater arc than that described by the flexor muscles; the extremity of the forearm accomplishes its motion with a velocity of 974 millimètres per second, whilst the flexor muscles accomplish theirs with a velocity of only 810 illimètres per second.

In cases where it is necessary to counterbalance a greater force by means of a less considerable force, a lever of the second class is employed; the instance of an individual standing on one leg and supporting on that leg the whole weight of the body, may serve to illustrate this.

Borelli has endeavoured to evaluate the respective force of a great number of muscles. From the numbers resulting from his experiments, he deduced the respective amount of force sacrificed in the majority of muscular movements for the purpose of acquiring velocity. It will suffice here to give one of the cases studied by Borelli. The weight of the forearm of an adult is about two kilogrammes, which may be considered applied at its middle, or, what comes to the same point, may be looked upon as one kilogramme applied at double the distance from the point of support, which simply means placed in the hand. Now, we know that a man is capable of bearing a weight of about thirteen kilogrammes with extended arm; the total resistance to be overcome amounts consequently to fourteen kilogrammes. On the other hand, the lever arm of the muscular power is in length about the twentieth part of the length of the forearm.

Then,

$$14 \times 20 = 280;$$

which means that to carry a weight of fourteen kilogrammes with one hand requires an effort, on the part of the flexor muscles, measured by 280 kilogrammes.

DUMAS ON ORGANIC CHEMISTRY.

No. XXIX.

(Continued from page 528.)

THE BONES.

The bones are resistent organs, destined to sustain and protect the soft parts of the organism. They are essentially composed of two elements: of an inorganic, earthy part, which gives them the solidity which their functions require; and of an organic tissue, formed of a cartilaginous substance, and of the vessels and nerves which we meet with in all organs endowed with vitality. Exteriorly, they are covered by a very vascular membrane, which is named the *periosteum*; sometimes, and especially in long bones, their central part is hollowed into a canal, which contains the marrow. The external surface of the bone is ordinarily very compact; its tissue is more dense than in the interior, where we find, especially in flat bones, osseous cells formed by thin layers or prolongations, constituting a structure which is named the *diploë*.

M. Gahn, the Swedish chemist, was the first to point out the fact, that the inorganic part of the bone is principally formed of phosphate of lime; it, moreover, contains some carbonate of lime, a little fluoride of calcium, magnesia probably in the state of phosphate, and some traces of oxides of iron and manganese. Nothing is more easy than to isolate this inorganic part of the bone. We have merely to calcinate the bone strongly, in contact with the air, to destroy

entirely all the organic substances, and thus procure a perfectly white earthy residue, which ordinarily preserves the original form of the bone. If we perform this calcination in closed the organic matters, in place of burning, merely carbonized, and we obtain a residue which serves for the preparation ivory-black.

It is easy to extract from the earthy matter of the bone all the inorganic materials of which it is composed. We are already acquainted the mode by which we are enabled to its phosphorus. The composition of the ate of lime, contained in the bone, may represented, according to Berzelius, by the mula: $3P^2 O^5 8Ca O$. But, as M. Mitscher- has remarked, it may readily happen that salt will contain a little more lime, when its composition will be represented by the more simple formula: $P^2 O^5 3Ca O$, and which, moreover, will be found more in harmony with the general constitution of the phosphates. To demonstrate in the calcined bones the presence of magnesia, we should dissolve them in nitric acid; to this we add ammonia, until the liquor begins to grow cloudy, and then precipitate the phosphoric acid by means of acetate of lead; having filtered the liquid, we separate the lime, by the aid of oxalate of ammonia, and, after renewed filtration, we thus obtain a solution which, when evaporated and subjected to calcination, furnishes a residue of magnesia, mixed with some traces of oxides of iron and manganese.

As to the fluoride of calcium, we may assure ourselves of its presence by decomposing a certain quantity of calcined and pulverized bones, by sulphuric acid, in a platinum capsule. The vapours which escape, on the application of heat, are capable of corroding glass.

We find in bones, when calcined to a state of whiteness, a small quantity of sulphate of lime, which did not exist there before calcination. The sulphuric acid is, in this case, no doubt formed by the oxidation of the sulphur, which is contained in the animal matters with which the bone is impregnated.

We may completely extract the earthy substances of the bone by digesting it in cold dilute hydrochloric acid; the inorganic salts are dissolved, and the cartilaginous matter and the vessels remain under the form of a soft, flexible, and transparent mass, which, by ebullition with water, is almost entirely resolved into gelatine. Strong hydrochloric acid, even when cold, removes along with the inorganic salts a portion of the animal matter. If we wish, therefore, to determine with exactitude the relation of the inorganic elements as compared with that of the organic principles of the bone, we must employ a very dilute acid; or, better still, we may have recourse to pure and simple calcination. During the action of hydrochloric acid on fresh bone, we remark a disengagement of carbonic acid—an evident proof that this acid is not the product of calcination alone.

The first analyses which were made on bones, in the normal state, are due to M. Berzelius. The following are the results he obtained:—

	Bone of	Bone of
Cartilage completely soluble in water	32·17	33·30
Vascular tissue	1·13	
Basic phosphate of lime, with a little fluoride of calcium ..	53·04	57·35
Carbonate of lime	11·30	3·85
Phosphate of magnesia ..	1·16	2·05
Soda with a very little chloride of sodium	1·20	3·45
	100·00	100·00

Before subjecting them to analysis, the bones had been carefully freed of their periosteum, fatty matters, &c.

M. Marchand found in the femur of a man, thirty years of age, the following substances:—

Cartilage insoluble in hydrochloric acid ..	27·23
Cartilage soluble in hydrochloric acid ..	5·02
Vascular tissue	1·01
Basic phosphate of lime	52·26
Fluoride of calcium	1·00
Carbonate of lime	10·21
Phosphate of magnesia	1·05
Soda	0·92
Chloride of sodium	0·25
Oxide of iron, oxide of manganese, and loss	1·05
	100·00

Annexed are some analyses of human bones made by M. Valentin:—

	I. Cortical substance of the tibia of a man.	II. Medullary substance of the same bone.	III. External condyle of the femur of a young girl.	IV Head of the tibia.
Cartilages, vessels, &c.	38·02	41·16	41·18	48·56
Inorganic materials ..	61·98	58·84	44·82	51·44
Basic phosphate of lime	52 93	49·02	37·01	41·77
Carbonate of lime ..	7·66	7·76	5·04	7 11
Phosphate of magnesia	0 25	1·54	0·87	0·88
Chloride of sodium ..	0·91	0·44	0·65	1·67
Carbonate of soda ..	0·28	0·07	1·43	

By comparing these with the foregoing analyses, we find them distinguished by a less considerable proportion of inorganic materials—a result which is probably owing to their less perfect desiccation. We may, however, perceive that the relation between the organic elements and the inorganic parts of the bone is far from being constant, and that it varies according to the nature of the bone and the age of the individual. Dr. Rees has made some careful experiments, for the purpose of elucidating this part of the subject, with the bones of an adult man, and with those of a stillborn child at the full term

	Bones of an adult man. Inorganic materials.	Organic materials.	Bones of a stillborn child. Inorganic materials.	Organic materials
Tibia ..	60·01	39·99	56·52	43·48
Femur ..	62 49	37·51	57·51	42·49
Humerus	63·02	36·98	58·08	41·92
Fibula ..	60·02	39·98	56·00	44·00
Ulna ..	60 50	39·50	57·59	42·41
Radius ..	60·51	39·49	56·50	43·50
Temporal bone	63·50	36·50	55·90	44·10
Vertebra	57·42	42·58	—	—
Rib ..	57·49	42·51	53·75	46·25
Clavicle	57·52	42·48	56·75	43·25
Ilium ..	58·79	41·21	58·50	41·50
Scapula	54·51	45·49	56·60	43·40
Sternum	56·00	44·00		
Metatarsus	66·53	33·47		

These analyses, like those of M. Valentin, present an excess of organic matters which we must probably attribute to the causes already pointed out. Such as they are, however, they give ground for some interesting remarks. They show, for instance, that the bones of the cranium are richer than most others in earthy salts. The long bones, which, by the nature of their functions, also require great solidity, very nearly approximate the cranial bones in their proportion of phosphates. As to the ribs, the vertebræ, the clavicle, the scapula, and the sternum, they present a composition analogous to that of the bones of infants, being comparatively soft and vascular, and of which some become hard only at an advanced stage of life.

The quantity of earthy substances in the bone augments in proportion as the individual advances in age; such, at least, would appear to be the case from the following analyses, performed by M. Schreger:—

	Bones of the infant,	Of the adult,	Of the old man.
Organic matters	47·20	30·18	12·2
Earthy substances	48·48	64·84	84·1
	95·68	95·02	96·3

We possess but very incomplete data as to the composition of the bones in animals. M. Barros has made some comparative analyses on this subject, so as to determine the relative proportions of phosphate and of carbonate of lime. The following are the results which he obtained:—

	Phosphate of lime.		Carbonate of lime.
Bones of the lion	95·0	..	2·5
„ sheep	80·0	..	19·3
„ fowl	88·9	..	10·4
„ frog	95·2	..	2·4
„ fish	91·9	..	5·3

From these imperfect analyses it would appear, that the bones of the *herbivora* and of the *granivora* are richer in carbonates than are those of other animals.

M. Chevreul has given us an analysis of the cranial bones of the codfish. He found in them:—

Animal matter and moisture ..	43·94
Phosphate of lime	47·96
Carbonate of lime ..	5·50
Phosphate of magnesia	2·20
Salts of soda	0·60
	100·20

M. Dumenil found in the bones of the pike:—

Animal matter	37·36
Phosphate of lime	55·26
Carbonate of lime	6·15
Soda, chlorides, phosphates, and loss ..	1·23
	100·00

The bones of these fish present, as we see, a composition analogous to that of the bones of the mammiferæ. But there exists a class of fish of which the osseous system offers a totally different composition: these are the cartilaginous fish. M. Chevreul, who analyzed the bones of an individual of the species called *squalus peregrinus*, found in them but a very small quantity of inorganic matters. The cartilaginous substance forming them is transparent, of a bluish colour, flexible, and easily divisible into very thin layers. It gradually swells up when placed in hot water, at the same time preserving a perfect transparency; it requires for its solution 1000 times its weight of boiling water. This solution is not precipitated by tannin, nor does it become converted into a jelly by evaporation. Alcohol renders it of a firmer consistence, and partly destroys its transparency. Hydrochloric acid dissolves it, and this solution is precipitated by tannin. We thus see that this matter differs in its properties from albumen and gelatine, and that it somewhat resembles mucus.

The analyses of M. Marchand would seem to indicate, in the bones of the cartilaginous fish, a rather large proportion of earthy salts. The following are the results obtained by this chemist:—

	Vertebra of a *squalus cornubicus*.
Organic matter	57·07
Phosphate of lime	32·46
Sulphate of lime	1·87
Carbonate of lime	2·57
Phosphate of magnesia	1·03
Sulphate of soda	0·80
Soda and chloride of sodium	3·00
Fluoride of calcium, silica, alumina, oxide of iron, and loss	1·20
	100·00

	Bones of the head of a *squalus peregrinus*.
Organic matter	78·46
Phosphate of lime	14·20
Carbonate of lime	2·61
Sulphate of lime	0·83
Sulphate of soda	0·70
Chloride of sodium..	2·46
Fluoride of calcium, phosphate of magnesia, and loss	0·74
	100·00

It is probable that the sulphates, which M. Marchand has pointed out in these bones, are formed solely during incineration: a remark which he has himself made elsewhere.

When the bones are abandoned for a length of time to the action of the air, the organic tissues gradually disappear, and there eventually remain but the earthy substances. This decomposition is effected in a very gradual manner; and, should the bone be buried deep in the

earth, we may readily comprehend that it may last for several ages. We often meet with fossil bones which still contain a large proportion of organic matters—a fact which is proved by the annexed analyses. Stokes and Apjohn found, in a rib of the *cervus megaceros* of Ireland:—

Animal matter	42·87
Carbonate of lime	9·14
Phosphate of lime with fluoride of calcium	43·45
Silica	1·14
Oxide of iron	1·02
Water and loss	2·38

M. Marchand analyzed two fossil bones of the bear, the one of which had been found on the surface of the soil, whilst the other had been dug from a considerable depth. The following are the results he obtained:—

	I.	II.
Animal matter	4·20	16·24
Phosphate of lime	62·11	56·01
Carbonate of lime	13·24	13·12
Sulphate of lime	12·25	7·14
Fluoride of calcium	2·12	1·96
Phosphate of magnesia	0·50	0·30
Silica	2·12	2·15
Oxides of iron and of manganese	2·12	2·00
Soda and loss	1·34	1·08
	100·00	100·00

We thus see that the bone found near the surface of the soil, and which, consequently, had been subjected to the more direct action of oxygen, had undergone a greater degree of decomposition than the other. But the influence of position on the composition of fossil bones is not confined to the mere hindering or favouring of the action of the air. We can readily understand how various foreign mineral matters may, by a slow but continuous process of infiltration, penetrate gradually into the very substance of the bone. It is in this way that we are enabled to explain the large proportion of sulphate and carbonate of lime, as well as of silica and oxide of iron, which the foregoing analyses indicate in fossil bones. M. Liebig has found in some cranial bones, which have been exposed during the excavations that have taken place at Pompeii, a greater proportion of fluoride of calcium than in ordinary bones. The excess of this salt must, in like manner, be attributed to the cause of which we have just been speaking, unless we admit, and this indeed seems a very unlikely supposition, that the crania of the ancient Romans were richer in fluoride of calcium than are our own.

The influence of infiltration upon the composition of fossil bones is shown in a very clear manner by the analysis made by Vauquelin upon the fossil bones of Montmartre, which contain a large quantity of sulphate of lime, evidently drawn from the soil which holds them; he there found—

Carbonate of lime	7
Sulphate of lime	28
Phosphate of lime	65
Water and traces of animal matter	10

Composition of Diseased Bones.—When we place in contact the fragments of a broken bone, the two ends secrete a cartilaginous substance, in which is gradually deposited phosphate of lime, for the purpose of soldering the fracture. It is to this mass that the name of *callus* has been given. M. Lassaigne has respectively analyzed this callus and the bone upon which it was formed. The following are the results which he obtained:—

	Callus. Exterior.	Callus. Interior.	Bone.
Organic matter	48·5	50·0	40
Phosphate of lime	32·5	33·0	40
Carbonate of lime	6·2	5·7	7
Soluble salts	12·8	11·3	12

The callus was thus found to be less rich in earthy matter than the bone itself.

According to MM. Lassaigne and Valentin, exostoses present an analogous composition to that of callus, and, like it, contain less phosphate of lime than does the sound bone. Annexed are some comparative analyses made by M. Lassaigne:—

	Fresh bone.	Condensed bone.	Exostoses.
Organic matter	41·8	43·0	46
Phosphate of lime	41·6	36·3	30
Carbonate of lime	8·2	6·5	14
Soluble salts	8·4	14·2	10

Rachitism is frequently manifested by a peculiar alteration of the bones, known under the name of *ostiomalacia*. In this disease, these organs lose a part of their phosphate of lime, thus becoming soft, and sinking under the weight of the body. Bostock and Proesch have analyzed the bones in this altered condition, when they found:—

	Bostock. Vertebra.	Proesch. Vertebra.	Proesch. Rib.
Cartilage	79·75	74·64	49·77
Phosphate of lime	13·60	13·25	33·60
Ditto of magnesia	0·82	—	—
Carbonate of lime	1·13	5·95	4·60
Sulphate of lime and phosphate of soda (?)	4·70	0·90	0·40
Fatty matter	—	5·26	11·63

ORIGINAL CONTRIBUTIONS.

ON THE PHYSIOLOGICAL AND PATHOLOGICAL CAUSES OF SUDDEN DEATH IN CONNECTION WITH THE NERVOUS SYSTEM.

By M. W. HILLES, Esq.

(Concluded from p. 493.)

The fatality attendant upon diseases and injuries of the nervous system, then, depends upon the peculiar part affected, and the special function implicated; the suddenness or rapidity of the fatal termination being in proportion to the connection which this function maintains in, and the influence which it exercises upon, the animal economy.

The simplest office of the nervous system is that of endowing the muscles with the degree of nervous energy which is necessary to *motion*: thus, for example, it confers on the muscles of the extremities their powers of contraction, as also upon the muscles of the eye, &c.

If that portion of the nervous system which endows these muscles with mobility be destroyed, either by disease or accident, the result is loss of motion; but as this is not, in most instances, essential to life, death does not supervene: the extremities may be paralyzed, or the eye lose the power of motion, without serious injury to the vitality of the individual.

In some instances, the simple loss of motion is followed by rapidly fatal consequences, as, for example, in those cases of injury to the spine and spinal marrow, in which the nervous structure is destroyed, above the origins of the respiratory nerves. Here, the mechanical act of respiration cannot be performed, and, therefore, this action—one of those on which life depends—being suspended, death immediately results.

The rapidly fatal effect of loss of the nervous muscular energy, on the organs essential to the organic life, is still more evident where the sympathetic nerves are affected, as these preside over the heart and circulation, and create a material influence in all the vital functions.

The diseases of the sympathetic have been so little studied, and are, as yet, so imperfectly known to us, that we can draw but few conclusions from the morbid condition of this system, but accidents afford us numerous instances, which all furnish us with sufficient evidence of the correctness of these remarks.

I allude now to blows or injuries upon the epigastric region, immediately over the solar plexus of nerves. Many cases of slight blows in this situation are recorded in which death took place instantaneously; one of the most remarkable occurred a few years since in the neighbourhood of the London Docks. A porter was endeavouring, but without avail, to raise some heavy substance; one of his comrades approached and in a jocular manner said, "Stand aside and give way to abler men," at the same time striking him gently over the epigastric region; the poor man instantly fell dead. On a *post-mortem* examination no organic lesion could be detected.

How are we to explain this suddenly fatal termination? I would say, by referring death to the concussion of the solar plexus. We must regard the solar plexus as the centre of the sympathetic nervous system, as the brain is the centre of the nervous system of animal life, and that, in these cases of blows or injuries, it suffers a degree of concussion similar to that endured occasionally by the brain; and that this concussion so disturbs, impairs, or destroys the nervous energy of the organs of organic life, supplied by the sympathetic system, as to cause the suspension of their functions, and, as a necessary consequence, the destruction of the vital functions and life of the individual.

Blows on the epigastric region frequently prove fatal, by causing a rupture of one or more of the viscera; these, however, do not belong to our present subject, as they are seldom productive of *sudden death*, some days usually elapsing between the receipt of the injury and the fatal termination.

Some few of these injuries are immediately fatal, from their great violence, or from the rupture of the stomach or liver, or some of the large blood-vessels in the abdomen; the immediate cause of death in such instances is sufficiently obvious.

Lesions, then, may occur in any portion of the nervous system without compromising the life of the individual, so long as they do not extend to those portions which control the animal and, still more especially, the organic life.

Sense and *sensibility* may be wholly destroyed, and yet life may be preserved for a considerable length of time. *Motion*, that is, voluntary motion, may be extinguished without a fatal result; the organs which sustain organic life, namely, the heart, lungs, and digestive viscera, maintaining their action, life is sustained.

In this condition man appears to be reduced to a state, as it were, of vegetative existence: all the qualities which distinguish him as a superior being have been effaced, and he lives only as the meanest vegetable, imbibing nutrition from the various elements introduced into contact with his digestive viscera, and elaborating life, such as it is, from these and the other viscera of organic existence.

It is difficult to say how long a human being may continue in this condition. Sir A. Cooper relates the case of a sailor who remained for upwards of twelve months in a state of unconsciousness, the result of an injury to the cranium; in which condition he continued to take nourishment, and perform all the functions of organic existence, although all other functions seemed to be perfectly suspended. In this case there was no lesion of any portion of the nervous system; the symptoms were wholly induced by a portion of bone which, being depressed, caused a compression of the brain and a suspension of all its functions.

It is evident that the sympathetic system was unaffected in this case.

An operation having been performed, the patient recovered all his faculties in a few days, and was restored to perfect health.

Injuries to, or lesions of, the nervous system of animal life are more fatal than those which affect the intellectual existence. This is evident from the fact, so frequently observed by all writers, of the greater fatality attendant upon injuries of the cerebellum than of the cerebrum.

But in what manner is the animal life, or are the animal instincts, of the individual more closely connected with the organic life, that it should suffer more immediately, when they are injured or destroyed, than in cases where the intellectual functions are impaired?

Anatomy does not disclose a more intimate connection between the animal and organic than between the intellectual and organic functions; the sympathetic system is connected with the cerebrum by means of the sixth nerve, but is not

directly connected with the cerebellum by any more special nervous filaments. The indirect connection, however, is greater by means of the anastomosis which is established between the sympathetic and the branches of the eighth pair of nerves, and, in particular, the pneumo-gastric, the mode of origin of which associates it with the functions of the cerebellum.

The phenomena observed in connection with the diseases of idiocy and insanity support these views, and establish the little relation which ... lives.

principle depends; the unfortunate individual, in such instances, possesses but the animal and organic functions, and lives in a condition but little, if at all, removed from the brute creation.

Shall we pause here to inquire as to the state or condition of the soul in such persons? How can they who support the opinion that the mind and soul are one, reconcile the existence of the latter, in cases where the former is evidently destroyed, or, perhaps, has never existed?

Man is evidently composed of three great functions, the *organic* or *vegetative*, the *animal*, and the *intellectual*. The first sustains the living principle, and maintains the body in its healthy condition, precisely as the vegetable kingdom is sustained by its organs; the second furnishes him with those instincts and passions peculiar to the animal, and which we must suppose to be wanting in the vegetable; the third raises him in the scale of creation, and places him, by its superiority, above all other earthly beings.

Of these three, the organic is the most, the intellectual, the least essential to *life*.

Part II.

On Cases of Sudden Death produced by Impressions made on the Nervous System, or some part thereof, without Lesion or Morbid Alteration.

Under this head we shall consider some of those extraordinary cases of sudden death which occur occasionally, and present no trace after death of the immediate cause of the loss of life.

These cases occur more frequently than is generally imagined, and may be found recorded in most medical writings: the following is an instance which fell under my own observation:—

One of the nurses in the Westminster Hospital, about forty years of age, in the enjoyment of apparently perfect health, and whilst engaged in the discharge of her duties, dropped suddenly dead.

A careful examination of the body was made, but all the organs were perfectly healthy, and no trace of organic lesion could be found to explain the immediate cause of death.

It is extremely difficult in such cases to account for the cessation of the vital actions, as we do not see any reason why any one of the great vital functions should spontaneously cease its action. We must refer death to some derangement of the nervous system, the intimate nature of which is beyond our investigation: it may be that the secretion of the nervous influence is, from some peculiar cause, suspended, or, if secreted, is interrupted in its passage through the cerebral mass, or along the nerves; but these are conjectures which afford but little satisfaction to the inquirer.

It is not likely that death is caused by any suspension of the respiratory or circulatory functions, as these are mechanical actions which must proceed so long as the muscular agents engaged continue in healthy ... serious departure, also, from the healthy state in the structure of the blood-vessels or lungs is easily observed and recognised: it is otherwise in the nervous system, in which the actions are of too complex a character to be fully understood by us at present, either in the healthy or morbid state.

Of a somewhat similar nature are those of sudden death which occur from sudden and violent mental impressions, such as fear, anger, &c.; here there can be little question that the nervous system is the structure primarily affected, the injury to which leads to a total suspension of the vital actions.

We may include under this head, also, those cases of sudden death which occasionally occur from discharges of the electric fluid during thunder-storms. In the majority of these cases the fatal impression is exerted on the nervous system, this being especially acted upon by electricity. Some cases present traces of combustion having occurred from the electric fluid; but in such this can have had little effect in producing death, as the shock to the nervous system is sufficient, *per se*, to destroy life. The combustion, in all probability, occurs after life is extinguished.

As the nervous system presides over all the actions of the animal economy, and regulates the various offices of the intellectual, animal, and organic lives of the individual, we need not be surprised that injurious impressions made upon any important portion of it should lead to serious consequences, or that one or other of these should suffer.

It is not necessary that organic lesion should exist, or be found, in these cases after death; there is a functional as well as an organic derangement of the nervous system which interferes with, or may destroy altogether, the healthy condition, and lead to a fatal termination.

How many instances of this present themselves in practice! Epilepsy, hysteria, and the class of affections usually termed nervous, are generally functional derangements of some portion of the nervous system, presenting symptoms, we may be assured, in accordance with the peculiar part affected, although our present knowledge of the intimate structure and functions of the nervous system is not sufficient to ascertain with precision the part originally disordered.

How much remains to be done! What vast discoveries are yet open to the diligent inquirer!

Who shall discover the precise nature of the nervous fluid?—who reveal its mode of action in the animal economy? Who shall unfold the mystery that still attaches to the optic thalami, the corpora striata, the corpora albicantia, and the various other bodies, large and small, of every size and shape, of which the brain is composed?

We may rest assured that each one of these bodies has its office or use, and that each contributes to the production of some one of those manifestations of nervous power which equally delight and surprise us.

Each of the feelings, passions, or propensities of humankind has its resting-place in the brain: this body gives to the man the passions of the beast, that raises his fellow to the dignity of the philosopher or the statesman.

We are but creatures composed of an assemblage of atoms, exposed to the impulse of passion, the violence of feeling, the anguish of disease. Left to these, we were truly miserable; but, endowed with reason, man stands forth as a being that should be superior to the animal propensities which so often divert him from the true, the legitimate object of his creation.

What strength and what weakness, what beauty and what deformity, does he not combine within him! How noble a creature when in pursuit of all that tends to the perfection of nature and the happiness of his species!—how contemptible when enlisted in the cause of degradation and destruction!

At one moment in the enjoyment, apparently, of the most perfect health, he sinks the next to the earth, a mass of pestilence and disease.

Man being indebted for his existence to the three great vital functions—namely, respiration, circulation, and that of the nervous system, all and each of which are necessarily in constant action to sustain life—it follows that, any one of these being arrested, death follows rapidly, if not immediately; hence, in all cases of sudden death we may feel confident that one or other of these functions has been destroyed, and that all agents which are rapidly destructive of life operate upon one of these.

In the more gradual decay of the human powers, which we observe to take place in old age, death is produced equally by the suspension of the vital functions. The respiration is embarrassed, the circulation is languid and imperfect, the nervous energy impaired. By degrees, these become more imperfect, until man is reduced to a state of vegetative existence, in which the higher functions of the nervous system, viz., intellectuality and animal instinct, are nearly extinguished, and those offices only remain which minister to the support of the physical wants of the animal; these gradually cease to exist, and man returns to the elements from whence he derived his corporeal existence.

This gradual extinction of the human being is strikingly analogous to his original growth—at first, enjoying but a vegetative existence in the mother's womb, he progresses until the higher qualities of the species become superadded, and man becomes the perfect animal, the lord of the creation.

What an interest attaches, painful though it be, to even the decay of our frames, the progressive destruction of our existence! Man, by this gradual loss of the intellectual powers and animal instincts, feels but little interest in secondary objects, at one time so dear to him, and perhaps less regret that he is so soon to part from them; he is thus *weaned*, as it were, from the things of this world, and enters without reluctance, if not with joy, upon the life to come.

Death, if not premature, should not therefore be a cause of grief: we might as reasonably lament the melting of the iceberg, or the dropping of the ripened fruit, or the fall of the autumn leaf. They are all equally the result of natural laws, to which man must yield, even as the insensate mineral.

It is difficult, however, so to chasten the mind as not to feel regret at the decay of one, perhaps dear to us, and particularly so when that discloses itself in the production of a *sudden death*. In such cases many circumstances combine to impress the human mind with painful sensations.

This concludes the series of papers on the "Physiological and Pathological Phenomena of Sudden Death." I propose, at some future period, to enter upon the Phenomena of Sudden Death produced by Poisonous Substances.

Medical Appointments. — W. Dashwood Kingdon, M.D., has been elected Resident Medical Superintendent to the St. Thomas's Hospital for Lunatics, near Exeter, in the room of Luke Ponsford, Esq., resigned.

Apothecaries' Hall.—Gentlemen admitted members September 2: William Charles Homfray, and John Lucas Worship.

Improvements in Gun-Cotton.—Mr. Costhupe recently forwarded to the Chemical Society two specimens of gun-cotton, with a view to illustrate the greatly increased explosive effects that are to be derived from a subsequent immersion of the gun-cotton, when properly prepared in the ordinary way, in a saturated solution of chlorate of potash. "Having experimented with solutions of nitrate of ammonia, nitrate of potash, nitrate of soda, bichromate of potash, &c., for the purpose of increasing the explosive properties of this interesting substance, I can affirm that none of the results will bear the slightest comparison with those obtained from the solution of chlorate of potash, either in rapidity of ignition or in intensity of flame. The process adopted for preparing the enclosed specimens was as follows—viz.: into a mixture of equal measures of strong nitrous acid, and of oil of vitroil, spec. grav. 1·845, the cotton was immersed and stirred with a glass rod during about three minutes; it was then well washed in many waters and dried; a portion of it was then soaked for a few minutes in a saturated solution of chlorate of potash, well squeezed and dried."

THE PHYSIOGNOMY OF DISEASES OR SEMEIOTICS IN THEIR ASSIMILATIVE CHARACTERS.

By GEORGE CORFE (Author of " A Popular Treatise on the Kidney," &c.), of the Middlesex Hospital.

[Illustrated by Portraits of Cases.]

(Continued from p. 551.)

Thus that wonderfully penetrating organ, the eye, is the grand instrument employed in primarily searching out the patient's real state, as he presents himself to the medical man. Having caught his glance, if he is able to raise the lid, you have an amazing volume of mute expression conveyed to your mind for research.

It is related of a Moslem prince that he did but plunge his head into a vessel full of water, remain a few seconds, and come out again, when the adventures of seven years filled his mind. What are the ideas which fill our mind when we deliberately fix our eye upon the eye of another mortal, whether he be in or out of health? Even Lavater has not exhausted the subject. It is, therefore, vain to attempt to enlarge upon it. This only need be said, that every man is influenced by physiognomy, and that, whether he acknowledges it or not, he cannot but be so, for it is in his very nature to be thus wrought upon; and the structure of the human face, compared with that of the highest order of brutes, at once exhibits the human countenance to be endowed with powers of expression which are in vain sought for amongst the lower animal creation.

"The inner extremity of the eyebrow and angle of the mouth are most moveable, and in these we should expect to find the muscles of expression peculiar to man. This superiority of expression in man depends on the action of muscles peculiar to him, and the sole destination of which seems to be limited to this greater aptitude of expression. The systematic provision for that mode of communication, and that natural language which is to be read in the changes of the countenance, are to be found in this peculiarity of muscles. There is no emotion in the mind of man which has not its appropriate signs, and these muscles in the human face can have no other use assigned to them than to serve as the organs of this language. On the other hand, there is in the lower animals no range of expression which is not fairly referable, as a mere accessary, to the voluntary or needful actions of the animal; and this accessory expression does not appear to be, in any degree, commensurate to the variety and extent of the animal passions. These muscles indicate emotions and sympathies of which the lower animals are not susceptible; and, as they are peculiar to the human face, they may be considered as the index of mental energy in opposition to mere animal expression."(a).

"It is related of an eminent physician that on approaching a patient, even whilst asleep, he would express his sentiments respecting the nature of the affection and condition of the patient, the justice of which time and the events have verified. This circumstance proved that there was something in the general aspect and appearance of diseases on which the experienced physician forms a diagnosis, and which it would be of the greatest utility to analyze and describe."(b).

In all serious diseases which involve vital organs there are particular features depicted on the countenance, the meaning of which cannot escape the attention of an observant medical physiognomist. But the grand secret in this most valuable and too much neglected study is to simplify, to abstract, and to separate the main features, with which it is of importance to be acquainted. This is not the work of a day, nor is it to be attained by mental study, but solely by careful, persevering, and attentive observation in the wards of a large hospital, where diversity of disease and consequent varieties in physiognomy, are constantly presented to the eye of the medical student. It is of the utmost importance that the pupil should accustom himself to learn first to recognise the disease of the patient, before he interrogates him as to his sufferings, ailments, or the history of his illness; and he cannot accomplish this desirable end by any other means than by the study of the physiognomy, attitude, general appearance, gait, and form, &c. &c., of his patient. He should, therefore, strive to seize promptly, and to impress powerfully on his mind, the essential traits of the varied diseases which he is studying, as they are portrayed in the countenance, aspect, and carriage of the patient. Let him first run his eye over the face, and get that by heart, so to speak. Let him then endeavour to pick out, in his mind, the positive features in the face which are characteristic of positive changes in the internal organs. Thus, if a countenance is inanimate, the eye dull, the cheeks of a dusky red, the eyelid drooping, the brow overhanging; the lips dry, herpetic, and of a claret colour; the chest passive, but the abdomen active in respiration, the breathing hurried, and the skin hot and dry, the physiognomist almost instinctively decides in his own mind, before he has addressed himself to the patient, that pneumonia is raging within; whilst, on the other hand, he passes on to a further bed and views a pale face, an anxious and distressed eye, a puffy blanched lid, alæ nasi actively engaged in respiration, the angles of the mouth slightly drawn down, the lips separated, the cheeks somewhat bloated and greasy, the jugulars distended, the carotids oscillating, the præcordial region full and more rounded than its opposite, he, moreover, recognises acute rheu[illegible]ism in the smaller joints, and instantly his mind fastens upon the pericardium as the seat of a mortal disease. His ear further instructs him in both instances, by developing to his mind some of the sounds peculiar to active pneumonia, or to inflammation of the heart and its investing membrane. Now, it may be affirmed that, whenever the principal features of a disease are thus portrayed in the countenance, the accessory traits of the disease will be equally as significant and striking. It would be superfluous almost to add that, when auscultation is brought to bear upon the foregoing and other diseases of the chest, the physician is as certain of the actual morbid changes, and of the varied stages of those changes, that are going on in his patient as if they were laid out before his eye in the dead body; and assuredly he must be better acquainted with the phenomena of these morbid processes than he can be of those changes in organs which he can neither see, nor feel, nor hear.

But to return to the expression of the eye under disease in some vital organ. Who can delineate the variations, the shadows, the languor, the lethargy, the imploring look for help, the impatience, the terror, the anxiety, the havoc which disease is making, and the stamp of which is pictured in the eye, its brow, and its lid? The intimate communications of the fifth pair and seventh, or nerve of expression, with the sympathetic, through the medium of the ciliary, ottic, and Meckel's ganglions, would be alone sufficient to expect that this organ of sense should readily exhibit in its altered appearances, the derangement of internal and vital organs. This expressive, though silent organ, may be bright or dull, heavy or clear, half shut or unnaturally opened, sunken or protruded, fixed or oscillating, straight or distorted, staring or twinkling, fiery or lethargic, anxious or distressed; it may be watery or dry, of a pale blue, or its white turned yellow, or its white blood supplanted with red blood. Its vibrations and changes often cannot be numbered, they are so evanescent and so sudden. The pupils may be minutely contracted or widely dilated; insensible to, or intolerant of, light; oscillating or otherwise; unequal in their sizes, and deflected from their clearness. Then we view the brow, that wonderful appendage of expression in a human face; this, too, has its silent language: it may be overhanging, corrugated, raised, or depressed (a), whilst the lid exhibits its alternations of puffiness or hollowness, of smoothness or unevenness, of darkness or paleness, of sallow or brown, of white or purple. Lines intersect the region, and the varied tints are perpetually giving new colour, new feature, new expression, by their shadows. Such is the eye, with its brow and lid. Here, then, is the region we enter on. Let the pencil which can best portray take up what the keenest eye can give, and yet is the outline but feeble. So much for mortal power.

Nor is the mouth inferior in expression to the eye. As the greatest portion of the beauty of a face resides in the mouth, so is this department of physiognomy most significant in nearly all those internal diseases which fall upon organs essential to life. "If the angle of the mouth is depressed, it gives an air of despondence and languor to the countenance. Wh[illegible] the corrugator supercilii co-operates with it, there is mingled in the expression something of pain. If the frontal muscle joins its operation, an acute turn upwards is given to the inner part of the eyebrow, very different from the effect of the general action of the frontal muscle, and decidedly characteristic of an aguish, debilitating pain, or of discontent, according to the prevailing cast of the rest of the countenance."(b)

"Every passion of the human frame runs throughout the lips to tell its tale. We may call the mouth eloquent in its silence, and speaking, though it be shut. Like the bursting bud, it parts for a smile; it expands for laughter; contracts in rage; curls for disdain; and opens for fright. In its every movement it works with the nostril. Here is union, sympathy, and help. Both assist in producing lineage, and both stamp a joint meaning and cause. In all the depressing influences which act upon the mind, the eyebrow, eyelid, nostril, and angle of the mouth are depressed, whilst these parts of the face are raised in the emotions of joy, laughter, &c. &c. Who cannot read a harassed state of mind in the upward inversion of the eyebrow, with a depression of the angle of the mouth? Here, then, is another region not so vast as that above, but full of interest, grandeur, variety, and use, to him who studies the beauty, the deformities, the virtues or the vices, the health or the diseases, of his fellow-man."

We may now make an attempt to catch some of the points just hinted at, and will enter upon the consideration of the disease called

APOPLEXY.

Apoplexy, or in other words, sanguineous effusion into or upon the substance of the brain, is the result of a blow, but more frequently the effects of a ruptured blood-vessel in the cerebral arteries, and occurs usually after forty years of age. Allied to this, there is also ramollissement, or softening, of some portion of the brain; and this ordinarily occurs in the upper or inferior surfaces of the brain, but rarely so in its substance. It is a disease, also, of advanced life. With the former disease there is seldom hemiplegia: if the blood has escaped into the lateral ventricles, crura cerebri, or pons varolii, insensibility is complete, and death is speedy. On the other hand, if the blood has only escaped into one corpus striatum, or thalamus optici, or one of the walls of the lateral ventricles, hemiplegia is then an early evidence of such an effusion; insensibility is not quite so complete as in the former case, and death is more protracted.

(a) From Sir Charles Bell's admirable and scientific essays on the Anatomy of Expression.

(b) "On Diagnosis," by Dr. M. Hall. 8vo. 1817.

(a) "In smooth, unruffled countenances, the fou[illegible]cles peculiar to the human face are poi[illegible]d counteract each other. In drunkenness, which often produces a temporary paralysis, the eyebrows are sometimes unequally elevated. It is an unusual exertion of the frontal muscle to counteract the heaviness of the eyelids, which produces the elevation of the eyebrows. This web of muscular fibres, which is expanded on the forehead in man, is reflected off from the skull to the ear in lower animals."—*Sir C. Bell's "Anatomy of Expression,"* 4to.

(b) Sir C. Bell, *oper. cit.*

. In ramollissement, however, the paralysis, though present, is not an early indication of this disease: consciousness is not altogether gone, and the sufferer lingers on to a much more protracted stage than in the former two states of cerebral lesion.

The following instances exemplify this complete and partial insensibility in apoplexy.

Susan Cole, forty-five, a short bulky woman, brought in by the police, senseless. She was found, an hour before her admission, on the pavement, in the dark. No account could be obtained of her previous condition. No one saw her fall, or heard her speak. Her state was as follows: — Countenance tranquil, just like a person in a deep sleep; veins of the neck not turgid; mouth open; tongue protruded and swollen; eyes closed, pupils reduced to a small pin's head in size; breathing natural. A brandy bottle was found on her, empty. Pulse 86 and full. We had a suspicion that she had taken opium in some spirituous liquid, and therefore washed out the stomach, with some difficulty, by the stomach-pump, but no traces of any narcotic fluid could be detected. She felt when pinched. There was no paralysis. A drop of croton oil was placed on the tongue, the head was shaved and covered with a blister. She was bled to a small amount, as the vein would yield but little. A turpentine enema was administered; the bladder emptied of a quart of high-coloured urine. Pulse became slower and feebler, and she lingered fifteen hours from the attack.

Autopsy Twenty-four Hours after Death.—Chest conoid; heart enlarged; fluid blood in both its ventricles: left much hypertrophied; capacity natural; a few atheromatous deposits on the aorta, above the sigmoid valves. Stomach healthy, but mucous lining softish. *Head.*—Turgescence of all the cerebral veins; lateral ventricles filled with a sero-sanguineous fluid, and a clot of blood floating in it. On raising the fornix the walls of the third and fourth ventricles were lacerated, laid open, and filled with blood, both fluid and coagulated, which ran as far as the extremity of the fourth ventricle; the adjacent parts were softened; no appearance of adhesion of the coagula; there was a small spot of blood in one thalamus optici; corpora striata healthy; sinuses of the dura mater gorged with blood.

An instance of sanguineous effusion without the ventricle occurred recently. Mary Bignon, aged sixty-eight, a tall and powerful woman, was found in bed unusually late on the morning of May 9, and, on being roused, complained of headache; was rational in her answers; but, as she continued to sleep through the following day, she was brought here by her relatives on the morning of the 11th. Her symptoms on admission were as follows:—Countenance dusky, and void of expression; eyelids closed; no distortion of the features; answers questions readily when spoken to in a loud and sharp tone of voice, but relapses into a lethargic sleep; hemiplegia of the left side; pupils sluggish to the light, unequal in their size; pulse 84, small. She was actively treated by repeated doses of calomel and colocynth, and purgative salines.(a) The head was shaved, and the course of the longitudinal sinus repeatedly blistered; cupping behind the right ear; turpentine enemata administered; and in the course of six days she was so far rallied as to promise to do well, apparently. Her back now sloughed from incontinence of urine, which supervened upon this temporary improvement, and she gradually sunk without a; tional comatose symptoms, and died on exactly a fortnight after the attack.

Autopsy Eighteen Hours after Death.—The right hemisphere of the brain was flattened, the sulci small; there was a cavity capable of containing four or five ounces of fluid outside the right ventricle, the internal wall of which was formed by the external wall of the right lateral ventricle; this cavity was full of semi-coagulated blood; much of the coagula adhered to the walls of this cavity by firm bands of semi-organized substance; the lateral ventricles contained a little clear serum; there was only slight disease of the arterial circle of Willis. All the other organs of the body were tolerably healthy, considering the age of the patient.

(a) This patient's body emitted the strong smell of mice so repeatedly noticed in cerebral diseases.

The following example of *ramollissement* at an early age elucidates the features of this cerebral lesion very well:—

Jas. Chaloner, twenty-six, labourer, admitted Feb. 17, with the following symptoms:—Countenance pale; a staring, vacant, and rather inanimate eye; features pinched; knitted brows; slight conjunctivitis of the *left* eye; on walking into the room it was observed that he dragged the right leg after him; when interrogated, he spoke in a slow manner, and with few words; does not feel when pinched in the right leg. Acknowledges that he has pain over the *right* eye; some cough and expectoration; pulse 96, full.

It was stated that he had suffered from a cough for three weeks past, which had brought on pain in the head. A week ago, on attempting to rise from his chair, he found he could not use the right leg; since which he has kept his bed.

Auscultation.—Dulness on percussion, and feeble respiration under both clavicles, but respiratory murmur healthy, as the ear descends to the lower lobes. C. c. ad ℥xvj. nuchæ; hydr. c. cret. x., n. et m. Emp. canth. capiti.

The following note was made on the 21st.:—

"Hemiphlegia on the right side complete; lies in a drowsy, half-comatose state; acute conjunctivitis of the left eye, with purulent discharge; countenance quite inanimate, and more like a person in a narcotized sleep; irides act with a strong light; pulse 70, with some power; urine dribbles from him, ammoniacal; stomach rejects everything; respirations natural; sloughing of the nates; bowels confined two days. V. s. ad ℥xvj. Emp. cantharidis; h. sen. co, ℥jss.; c. tr. jalap., ʒj.; dec. aloes co., ℥ss. Enema tereb. vespere.

22. The serum of the blood was greenish, the crassamentum much buffed and cupped. Is now sensible, so as to put out his tongue. Pulse rose in frequency, but sunk in power after the bleeding. He rapidly sunk, and died on the morning of the 23rd, profusely sweating.

Autopsy Twenty-four Hours after Death.—Head.—On stripping off the dura mater from the left hemisphere, a mass of small points, supposed to be, from their resemblance, the Pacchionian glands, was exposed over the edge and middle of this portion of the brain. On more minute inspection, however, this appearance turned out to be a series of small tubercles, which were beautifully seen when the arachnoid was carefully stripped off. They were opaque, and beneath them, and in their immediate neighbourhood, there was a debris or softening of the grey matter, but which was very vascular. The medullary substance did not appear to have suffered. In various parts, and around this spot especially, there were numerous points of tubercular deposition upon the arachnoid, or pia mater, and they were in various stages of softening; they had produced corresponding points of ulceration in the cineritious substance. Those that were softer than others had evidently involved to a farther extent the cerebral matter beneath it. The arachnoid in the median fissure, where it lies in contact with the falx, appeared of a straw colour, presenting the appearance of purulent matter beneath its surface; but this proved to be a series of the same tuberculous points, which were studded about this portion of the right hemisphere. In this half they had no where involved the cerebral substance. The general structure of the brain was otherwise very healthy and firm. *Chest.*—Lungs studded with tubercles, some of them being very advanced in the suppurative stage; they were general in both lungs, and the upper lobes were solid from the aggregation of several masses. The heart was natural in size, but the right ventricle composed more than one half of the organ; the left ventricle was twice its natural thickness, but its capacity diminished. There was found a scrofulous tubercle in the posterior part of the right spermatic chord, and there was omental hernia on this side.

The next instance of ramollissement cerebri that I would add is unlike the preceding, inasmuch as it is not one arising from morbid deposition on the cerebral surface, but rather the result of an undue nutrition of the brain, in consequence of disease of the arterial system, and which was the immediate cause of death.

Eliza Robinson, aged sixty-five, admitted on February 26. Countenance dull and stupid; some expression of suffering in the knitted brows and slightly pinched features; iris of left eye more dilated than the right; answers incoherently; and it is evident that her statements must be taken with some caution. However, she owns that she has pain over the occiput, and numbness of the right arm and leg; can only lie on the right side for palpitation of the heart; deglutition impaired; the first sound of the heart is diminished, but there is great increase in the impulse.

States that she has been more or less subject to headache for three weeks past; but that three days ago, whilst at breakfast, was attacked with loss of consciousness, and on recovery found herself in bed with the above symptoms.

March 6. Was going on favourably; but this evening at eleven was suddenly attacked with convulsions and coma, and remained insensible until the 9th, when she died.

Autopsy Twenty-one Hours.—Head.—Veins turgid; on the upper part of each hemisphere, and especially on the right, there was distinct extravasation of blood beneath the arachnoid, from the vessels of the pia mater. This ecchymosis was of a purple colour, but, on exposure to the air, became, in half an hour, of a bright red; ventricles full of serum; hydatiform condition of the plexus chorides; the lower portions of the cerebellum were so soft that they broke down in the mere attempt to raise it: this pulpy substance was minutely studded with red points, and gave the whole structure the exact appearance of a melange of mashed raspberries and cream.

Thorax.—The pericardium, to which externally was appended much fat, was filled with a firm coagulum of blood, which enveloped the whole heart, and slightly adhered to the auricles; it was taken out in one mass, of a bag-like form, and perfectly moulded. There was a small coagulum protruded into the layers of the pericardium, through a slit-like rent of the serous membrane, just at its point of reflection. It was supposed that the blood found its way from the aorta through this opening. This proved not to be the case. The walls of the left ventricle were thicker than natural, and on the edge of the mitral valve were a few hard, short excrescences. The aorta throughout was full of opaque, thickened, yellowish spots, some of them were distinctly bony; it was dilated in its coats. On its upper or convex part, and just before the primary branches are given off, there was a transverse crack or rent, upwards of one inch long, with clean edges, like a cut produced by a sharp knife. Rather lower down (and perhaps originally before the parts were pressed out of their natural position, *just opposite*) was seen the opening into the pericardium, as just mentioned. Between the two inner coats of the aorta and its outer or cellular coat, there was a large coagulum of blood; the small projecting clot formed a portion of a small coagulum lying between the serous and fibrous coats of the pericardium, and seemed to have got thither from the bag of the pericardium.

Naval Appointments.—Surgeon: William M'Crea, to the Banana Islands Hospital.—Assistant-Surgeons: Robert Hastings, to the Cambrian; Henry F. Williams and Henry Slade, to the Banana Islands Hospital; J. W. Bradshaw, to the Fury; C. A. Robinson and J. M. Holman, to the Asia.

ON THE CAUSES OF FATALITY AFTER SEVERE SURGICAL OPERATIONS.

By HENRY SMITH, Esq., Surgeon,
Late House-Surgeon to King's College Hospital.

We are told that the use of the knife is one of the opprobria of surgery, and a proof of the insufficiency of the art of the surgeon. To a certain extent this is true; but, at the same time, the due and successful use of the knife, for the relief of those suffering from the incurable injuries and diseases to which the human frame is liable, proves how much can be effected by the skill of the surgeon, when rightly applied. It certainly is his highest privilege and consolation to be able to cure disease and relieve suffering by means afforded by his art, without having recourse to the formidable and hazardous use of the knife, and in many instances he can do this; but, when all his ordinary means have failed him, he still has a consolation in knowing that there is some other remedy in his power which he may employ for the salvation or relief of his patient, who, with destruction staring him in the face, is glad to submit to any measure which may afford him life or limb. What a consolation is it to feel that he can release from his sufferings one tortured by the agonies of stone in the bladder! What a gratification to know that he can relieve by a simple operation the poor wretch who is writhing under the dreadful agonies of a strangulated hernia, which, unless relieved, would lead him to a speedy and miserable death!

Bringing these things, then, before our minds, we cannot surely estimate too highly the operative department of surgery, and we cannot too highly prize those means (although as a last resource) we have in our power to apply for the benefit of our fellow-creatures. But, notwithstanding the value and efficacy of these means, we cannot shut our eyes to the fact that their employment is necessarily attended with much danger—in some instances with greater danger than that from which we are attempting to rescue the patient.

Every severe wound, whether accidentally produced or purposely made by the knife of the surgeon, is followed by more or less constitutional disturbance; and this is in proportion to the severity of the operation, and is much influenced by the constitution of the patient, and the particular circumstances under which he is placed. It is impossible for a surgeon to calculate previous to an operation all the subsequent effects it may produce, although he is aware that a certain amount of disturbance must follow.

A person undergoing a severe operation suffers in two ways—mentally and bodily. The anticipation of severe physical suffering, conjoined with a doubtful knowledge of the ultimate success of the operation, has a powerful influence on the minds of most persons: this consequently affects the body, and renders it more susceptible of painful impressions.

The employment of ether in surgical operations has, however, for the most part done away with the first anticipation; and its efficacy in preventing the sensation of pain, made known to the patient, removes from his mind that fear of suffering intense pain which is inseparable from the boldest of mankind; but, at the same time, it cannot cause his mind to be divested of a considerable amount of anxiety as to the termination of a severe and dangerous operation.

The effects of a severe operation will differ in different individuals in proportion to the state of health at the time, and the mental and physical endowments of their system. In some persons the constitutional symptoms will be correct in each of their stages to a great extent; in others we shall find hardly the least trace of severe constitutional disturbance: although in each case the operation may have been equally severe. This circumstance depends upon many circumstances over which the surgeon has little control. But yet, by a proper acquaintance with the causes which influence the results of severe operations, their fatality may be undoubtedly lessened; and this is being done day by day, and has been done from centuries past: for who that knows the history of surgery will not say that vast improvement has been effected since the days when limbs were amputated with red-hot knives? Who can now see lithotomy performed without feeling that the palmy days of surgery have arrived, when he recollects the random thrusts of Frère Jacques? Even in later days what improvement has taken place in the treatment of aneurism! It must be admitted that all the various improvements in the manner of performing operations have a great share in modifying their subsequent effects, independent of a knowledge of the other causes which bring about unfavourable results. The influence of the mind has undoubtedly a great deal to do with the result of an operation. There are few persons about to undergo a severe and dangerous operation who can so command their minds as not to feel some dread. This is felt when it is known that pain alone will be the effect; but when it is known that the result may be attended with death, it requires the greatest philosophy for an ordinary mind so to screw itself up as not to feel some apprehension.

Fear is a depressing passion, and not only fear but that which is akin to it—an unhealthy concentration of the mind upon some disagreeable subject. These depressing influences exert themselves upon the heart, which becomes weakened in its action, also upon the functions of digestion and assimilation. If they last only a short time, their effects are merely transient and cause little mischief, but when they are constant the vital powers become powerfully affected. Thus a person who has been brooding over an anticipated operation for some days or weeks, gets into such a state of mind that he becomes as it were a monomaniac, and will either not allow it to be performed when the time arrives, or will express a conviction that it will be fatal; and this so depresses the physical powers that that salutary reaction which follows upon a severe operation does not take place, and he dies the victim of his own mental uneasiness. Every one who has watched the minutiæ of his profession must have noticed that an intense anxiety on the part of the patient, or a conviction that his illness will be fatal, is really a bad and fatal sign. The following is a good example of this kind: I quote it from Mr. Travers's work on "Constitutional Irritation":—"A lady, who concurring, as a point of duty, with the advice of her surgeons, reluctantly submitted to the removal of a small tumour in her breast, unexpectedly, and without any apparent cause, died on the following morning of the operation. It was then for the first time ascertained that she had prognosticated her death; and the impression that she should not survive had taken so strong a possession of her mind, that her minutest household arrangements were preconcerted, as appeared by the papers found in her cabinet."

It may be presumed, then, that an uneasy and anxious state of the mind has considerable influence over the result of an operation.

On the other hand, a firm and quiet state of mind has the effect of keeping the vital powers in healthy action, and thus greatly favours a safe termination. There are many who possess this firm state of mind, and a total carelessness about the pain of operation. I have known a man to make ludicrous gestures during an amputation of the leg, and I have seen a tumour weighing seven or eight pounds dissected from a man's back without the least wincing or evidence of pain.

The state of bodily health has a great influence on the result of an operation. Thus, we find that those who are in a moderate state of health suffer least. If the patient has been labouring under a long and painful disease which has lowered his constitutional powers, there will be less chance of his recovery than if the disease had existed only a short time, and had made less inroads on his frame. But, on the other hand, if he is in a state of rude health prior to the injury which may require an operation, he will be in an unfavourable condition to undergo an operation. John Hunter has remarked, that "those who live above par are extremely liable to sink when attacked by disease or injury, for, as they are habitually at the full stretch of living, their powers cannot be exerted further to meet any casual emergency." There are some states of the system which, although to a casual observer may appear to be healthy, are not so in reality; I allude to those unnatural conditions which are produced by taking large quantities of malt liquor and spirits, examples of which are seen in brewers and coalheavers. These persons look robust and healthy, but they are the very worst subjects for an injury or operation. A stout healthy-looking man was brought into King's College Hospital, he having received a lacerated wound of the integuments near the knee. He was intoxicated when admitted. Notwithstanding extreme care, an immense amount of constitutional disturbance arose, with extreme exhaustion. The wound was attacked with frightful inflammation and sloughing, and soon involved the joint, and ultimately caused dislocation of the femur; and the patient, from being a stout man, was, in a short time, reduced to a skeleton, and was only kept alive by a large amount of his ordinary stimuli. This poor fellow told me he was in the habit of taking daily two or three gallons of beer. Such cases as this are particularly unfavourable for an operation, and especially for recent injuries, such as compound fractures.

If organic disease exists to any extent in any of the viscera, the chances of a patient doing well after an operation are much lessened; in fact, as a general rule (to which, of course, there are exceptions), operations should not be performed in such cases; but sometimes the symptoms of the disease which has lain dormant before, and has not excited the attention of the surgeon, have rapidly developed themselves after the operation has been performed, and quickly carried him off.

A nervous and irritable state of body is unfavourable: there is fear of tetanus or traumatic delirium arising. I have lately seen one or two instances, which I shall more particularly mention, where death appeared to be owing chiefly to this irritable state of the system.

The state of the atmosphere is another cause which must greatly influence the results of surgical operations. Thus it is known that operations are less fatal in provincial hospitals than in the hospitals of large cities, where they are more crowded and less better ventilated, and, consequently, the air more tainted. When the air is close and impure, erysipelas, local inflammations, and irritative fever are more likely to show themselves after operations.

These are the chief circumstances which affect the results of operations. It is necessary for the surgeon to be well acquainted with these circumstances, although he is not able to control all of them, yet he may do so in a great measure; and here he will show his skill in his art, for it must be borne in mind that the good operative surgeon shines not only in using the knife well, but in knowing when to operate, and in being able to understand those particular circumstances which have so much influence over his patients, and to bring them under his control. To quote the words of Mr. Travers, "The habits of long indisposition are fully as important to be known as the habits of health, perhaps, more so. It is impossible for an operating surgeon to do justice to his patient or himself, who is indifferent to particulars, of which his ignorance may be disadvantageous. As the most successful artists are studious of opportunities to become familiar with the expression they are about to portray, a surgeon should apply himself to the character of the individual who is to be the subject of an important operation. Such a method of proceeding will not only enable him to exercise a sound discretion in the selection of his cases, and the time and mode of his operation, but will bring him to the bedside of his patient, at its conclusion, on the vantage-ground of mutual confidence. The practice of performing a serious operation, and leaving the after-treatment to

others, has, in my knowledge, repeatedly proved disastrous. The medical treatment—a duty not less responsible than the operation—belongs to the surgeon; and, indeed, to be employed merely as a handicraftsman conveys an imputation at which the dignity of a scientific mind revolts."

We shall proceed now to consider more particularly the causes which render operations so fatal; for that they do prove very fatal nobody who has seen much of them can deny. He who has taken the trouble to look over the records of operative surgery, both at home and abroad, in civil and military practice, is well aware how often the best efforts of the surgeon have been baffled by unfortunate accidents. I shall select for consideration some of the most serious operations the surgeon has to perform; and shall confine myself almost entirely to those cases which I have witnessed, occasionally borrowing from other sources, as I think suited to the subject.

Out of sixty-one cases—all of which were capital operations, or operations of a very severe nature, and most of which I witnessed, or assisted at, both during the operation and in the after treatment—I find that the deaths amounted to twenty, exactly one-third of the whole number. The mortality would appear to a careless observer at first sight large, but it is not so large in reality, when we consider that these operations were all of a very severe nature, and of a mixed character. Thus, these sixty-one comprise the following:—Five ligature of large arteries; sixteen cases of lithotomy; nineteen amputations; ten cases of hernia; six excisions of large bones and joints; five cases of extirpation of the mamma. The mortality in each case was as follows:—Of the five cases of ligature of arteries, four died; in the sixteen cases of lithotomy there were four deaths; of the nineteen amputations six proved fatal; six out of ten cases of hernia died; one of the five who had the mamma removed died; the six cases of excisions were successful.

Now, let us inquire into the cause of death in each case, and we will begin with the operations on arteries. The first on my list was a case of ligature of the first part of the subclavian, for aneurism. The operation was performed by Mr. Partridge, and, as I understand from eyewitnesses, in a manner which reflected great credit on the knowledge of anatomy which my late distinguished teacher is known to possess. This patient, immediately after the operation, had symptoms referrible to the stomach; he felt sick and vomited; soon afterwards lost some blood from a divided vein; pain at the stomach then became a prominent symptom, in addition to this, a distressing sense of thirst was felt. With these symptoms continuing upon him, the organs of respiration became embarrassed, and he sank on the fourth day. On a *post-mortem* examination some pleurisy was found to exist. The particulars of this case will be found in the *Lancet* for 1841.

The second fatal case was one in which Mr. Fergusson placed a ligature on the carotid, for aneurism of the innominata, according to the method advised by Brasdor and Wardrop. This patient lived for several days, but finally sank, with symptoms referrible to the respiratory organs, which, after death, were found gorged and inflamed. The case was published in "The Edinburgh Monthly Medical Journal" for 1841.

The third case was ligature of the external iliac, for aneurism. This patient was in a bad state of health at the time he was operated upon. He did not suffer more than usual from the operation, but irritative fever produced by an unhealthy and hidden erysipelatous attack carried him off on the sixth day. Some slight signs of peritonitis were found; the peritoneum had been opened unintentionally during the operation.

The fourth case was one in which a ligature was placed on the external iliac, for secondary hemorrhage from the femoral artery. The patient lived for many days after the operation, but hemorrhage again occurred, and finally gangrene of the limb below, which caused death.

Here are four fatal cases; and let us examine more closely the causes of death in these, and in cases generally, where arteries are tied.

In the two first, death was mainly owing to causes dependent upon the site of the operation. The first patient suffered chiefly from irritation of the stomach, and then the pulmonary apparatus.

The second died with symptoms of inflammation of the lungs. Are these symptoms similar to what are usually noticed after ligature of arteries in the neck; and if so, how are they caused?

It has been noticed frequently, that operations upon arteries in the neck have been followed by symptoms of inflammation of the chest, and irritation of the stomach. Professor Miller, of Edinburgh, has written a paper, some few years since, in which he shows that most of these operations prove fatal in consequence of supervening inflammation of the chest; and the fact can be easily explained. In operations upon the subclavian and carotid arteries, the large nerves which supply the breathing apparatus and the stomach can scarcely ever, from their proximity to these vessels, escape some injury more or less severe; and we have reason to apprehend that irritation of a nerve may cause irritation and subsequent inflammation in the parts to which it is distributed. Again, the pleura is in close contact with the subclavian, so that it is liable to be injured, or at all events it is exposed to a participation in the inflammation which is set up in the wound.

It is highly probable that the first of these patients died from irritation of the pneumogastric nerve, which irritation was propagated to the stomach and lungs, causing vomiting, pain, and difficulty of breathing. In the second patient the lungs alone were affected. In very many of the unsuccessful cases of ligature of arteries in the neck, these symptoms have preceded the fatal event. In Mr. Colles's case of ligature of the first part of the subclavian, the patient died on the tenth day, with symptoms of strangling and pain about the heart; here the pleura was wounded during the operation, but this probably had nothing to do with the death of the patient. The sensation of strangling and pain about the heart was probably due to irritation of the phrenic nerve, which is liable to injury in this hazardous and, as yet, totally unsuccessful operation.

(To be continued.)

PRACTICAL OBSERVATIONS RELATIVE TO THE MANAGEMENT OF THE INSANE.

By WILLIAM SMITH, M.R.C.S.E.,
Formerly House-Surgeon to the Lincoln Lunatic Asylum, and afterwards to the County Hospital at Lincoln.

The rapid increase of insanity, and the number of new lunatic hospitals demanded within the last few years (some of them now in course of erection in different counties in England), are strong proofs of the importance of this branch of medical science.

If our large public asylums were capable of containing all the unfortunate persons labouring under mental derangement, their condition and management need not occasion much anxiety. The Governors of the Lincoln Asylum, in their Fifth Report, have truly remarked, "It may, indeed, be laid down as a principle in human nature, which experience will amply confirm, that no institution of this sort can be considered safe in its management, where the managers are not subject to some eye unconnected with the government of the institution itself. The public eye and public opinion have in all cases been found the most efficient; and the original rules of this institution, wisely and humanely acting upon this principle, court and avow a system of public inspection under due regulation."

As regards the public lunatic hospitals of England, the principle is undoubtedly carried out; and to this free admission of the public eye, I mainly attribute their superiority over the licensed houses or private madhouses.

And yet, how many thousands of our fellow-creatures are at the present moment immured in these private asylums! That there are many gentlemen, of extensive acquirements and strict integrity, engaged in the management of the insane, I will most cheerfully admit; but that numbers of persons in the neighbourhood of London (of no education or next to none) are speculating in the infirmities of their fellow-creatures, the numerous private licensed houses will abundantly demonstrate.

The strongest recommendation in favour of public asylums (or, as we may very properly term them, hospitals for the insane) is the free admission of the public eye; and, if we consider the position of the lunatic, we must admit this to be a powerful safeguard against abuse. The Fourteenth Report of the Glasgow Lunatic Asylum has some very sound remarks on this subject:—"The regulations of a lunatic asylum, while they prohibit unnecessary publicity, ought most strictly to guard against improper concealments. The condition of lunatics in an asylum differs widely, in regard to some important circumstances, from that of persons placed in any other public institution, for cure or confinement. The lunatic is an incompetent person of what passes around him; he is often insensible of his own degradations and sufferings; he is not believed even when he complains on just grounds; and his report is least of all to be credited when his uncleanly habits, bewilderment, and fury render him most liable to suffer from neglect and cruelty; or when, perhaps, sinking under the extreme violence of his lamentable malady, his case demands the utmost tenderness and care. He may be regularly visited by the physician, and occasionally by affectionate relatives; but, during by far the greater part of his time, his treatment can be known only to two individuals —the keeper who executes, and the person whose duty it is to superintend, the treatment. Let a compact once be formed between these two persons, and an impenetrable veil may be thrown over the grossest abuses." Now, that these remarks are based upon truth, any person at all conversant with the interior of a lunatic establishment must at once admit; if, however, they are applicable to a public lunatic hospital, by how much is the evil increased in the case of a private asylum! Here, the proprietor (frequently not a medical man) has every control over the attendants: he pays them their wages, and can discharge them at a minute's warning; the lunatic in the private asylum is also deprived of another great source of protection from abuse—I mean the free admission of the public eye. The learned commissioners in lunacy certainly make their visits half-yearly; but when we recollect that nearly one half of that body are barristers very learned in the law, whilst the doctors (excepting, perhaps, Dr. Prochard) are none of them practically acquainted with the management of a lunatic hospital, we cannot imagine them to be very skilful at discovering abuses; in truth, we have one lamentable instance of their puerile conduct or gross apathy, in the case of the ever-memorable Haydock-lodge Asylum, where, under the humane control of an ex-assistant poor-law commissioner (Mr. Charles Mott), the mortality actually reached thirty per cent.! So much for the zeal and diligence of the learned commissioners. But, if I am not mistaken in my estimate of human nature, lunatics will still continue to suffer from gross neglect and the brutal tyranny of uneducated keepers, until private licensed houses are placed under different management; the lunacy commission, to be effective, must be entirely remodelled; in place of physicians verging towards second childhood, we must have men in the prime of life, with their intellects in a vigorous state; they must be selected from men who have ruled over such establishments as Hanwell, Lancaster, Glasgow, or Northampton. The present commission, as a means of detecting abuse, is little better than a

a solemn mockery, and its public acts convey the impression of an incipient dementia.

In place of originating grand improvements in the management of the insane, the whole efforts of the commissioners hitherto have had a contrary tendency: witness their puerile and impotent attacks upon the management of Hanwell and Lincoln—attacks which have been gallantly resisted by the governors of those establishments; their exertions in retarding the efforts of scien-""s individuals remind one of the break occanally applied to check the velocity of a railway carriage.

In the case of the "abolition of mechanical restraint," one of the greatest boons ever yet conferred upon the lunatic, these zealous individuals, with a perseverence "worthy of a better cause," threw all their influence into the adverse scale, and joined heart and soul with the advocates of mechanical restraint—the keepers of the private madhouses, *et hoc genus omne*. That my assertion is correct, I need only refer my readers to their solitary official report to the Lord Chancellor, wherein every argument that could be adduced is brought to bear against "the humane system." And yet these are the men whom Dr. Wintle, of the Warneford Asylum, is bespattering with praise: "an Anthony worthy of such a Cæsar"!

The battle of non-restraint has been fairly fought, and, notwithstanding all the exertions of its opponents (backed by those who had a sordid interest in opposing its onward progress), it has triumphed in every institution which has given it a fair trial. Probably, in no place were its merits more severely tested than at Lincoln—its original birthplace. Like all great improvements, whether in medical science or the arts, it had to encounter numerous difficulties; parties, jealous that others should know something more than themselves, fiercely denounced it as a Utopian scheme; others adopted the practice, but, strangely enough, contested the theory. To Dr. Conolly undoubtedly belongs the merit of having successfully carried out the system in one of the largest lunatic hospitals in the world. Much mischief, however, may undoubtedly occur if the non-restraint system be adopted without first securing proper means of occupation and amusement for the patients; and on this score, viz., employment, I am of opinion that Lincoln is behind Wakefield, Nottingham, and other places, where restraint (to a small extent) is still employed. The General Report of the Royal Hospital of Bethlem for 1844, page 49, in speaking of restraint, contains the following remarks:—

"Personal restraint has been reduced to one-tenth of what it was six years ago; and it is most gratifying to be able to state, that it has been reduced to one-half of what it was in 1843. The following returns show the average weekly number of patients in restraint during the last six years:—1839, 11 33-52; 1840, 13 20-52; 1841, 9; 1842, 3; 1843, 8 4-52; 1844, 1 35-52.

"It is almost unnecessary to say that restraint has diminished just as the means of occupation and amusement have been increased, and that without such means and appliances it would be injudicious to attempt to dispense with mechanical restraint; and, in judging of other institutions, this ought to be carefully borne in mind, to prevent a hasty and, unintentionally, unjust conclusion."—King-street, Belper, Aug. 26.

ON THE CONSTRUCTION OF HOUSES FOR THE RECEPTION OF THE DEAD; AND ON THE MEANS TO BE USED FOR THE RECOVERY OF THOSE WHO ARE ONLY IN TRANCES OR FITS, OR IN WHOM LIFE IS ONLY IMPASSIVE.

By ROBERT BRANDON, Esq., Great Russell-street, Bloomsbury.

DUBITÆ VITÆ REFUGIUM; OR, ASYLUM FOR DOUBTFUL LIFE.

The building should be large enough to provide means for resuscitation, and room enough for the deposition of bodies when epidemics are prevalent. There should be hot-baths, for these are alone often enough to recal the vital spark; and a kitchen there should be, to prepare nourishment for those who are recovered, and for the porter and other officers who would live on the building. The room for the deposit of the bodies should communicate with the porter's room by means of a glass door, and every body should have a wire fixed to the feet and hands, in communication with a bell, which bell must ring in the porter's room, in order to warn him, should there be any motion in those thought to be dead. There should be men and women on the premises to use friction, a galvanic machine, and the implements necessary for transfusion and artificial respiration. As the usual and accepted signs of death are not signs to be relied on, so is decomposition a true sign, and none should be buried until this be present; but as the presence of decomposed animal matter would be injurious not only to the inmates of houses, but to the surrounding inhabitants, and as it is inconvenient to the poor man who has but one room to keep a body in that room where he and his family eat, drink, and sleep, asylums for the reception of those thought to be dead should be constructed, and are absolutely necessary. Nor is it enough to wait for decomposition, but we should endeavour to prevent this by endeavouring to restore vitality by means of hot-baths, external heat, artificial respiration, galvanism, or transfusion—the first of these is oftentimes enough. Now, I think it probable that many persons would be recovered, thought to be dead, for, out of a certain number of those reputed dead, a certain number have recovered—some by the sticking of the pins into them which fixed the shrouds, some under the surgeon's knife, some from delays in the burial, and others from the accidental overturning of the coffins, as we learn from a paper published some time since, on premature burials. Some time since a woman was kept above ground for a considerable time, as medical men could not decide if she were dead or no; and at Constantinople a sailor, the other day, was attacked with apoplexy, and a vein was opened in his arm; no blood came, and the man was thought to be dead, but on the road to the grave, blood began to flow, and the supposed dead man recovered. There is now living, in Brussels, a man who escaped from the grave; and another built a house at Cologne to commemorate his escape. These cases will be enough to show that we have no certain sign of death but decomposition; and, if this be true, we must have asylums for the reception of bodies previous to decomposition, and for the application of means which can do no harm, and may do much good, such as those before indicated. Medical men think that the absence of respiration, and want of heart's action, with loss of motion and sensation, are signs of death; but this is not the case, for many bodies which have been drowned have all these signs present, and yet recover. Again, infants are often born without any action of the heart or lungs, and yet are recovered by very simple means, such as the *hot-bath*; and I myself have recovered persons by *stimulants* who were thought to be dead. Many may be recovered by transfusion (first introduced into this country by the celebrated Dr. Blundell) when the heart still palpitates, but the brain is insensible; or by stimulants given at that period; or by hot-bath, and the external application of heat by galvanism, where other means have failed, and these can do no harm. Since the brain is insensible there can be no suffering; and many lives will be saved by perseverance, and the skilful application of means which have succeeded in isolated cases. Buildings for the reception of those thought to be dead should be placed in cemeteries. I divide life into and active and passive. Life is active when man is in the enjoyment of all his faculties, intellectual and moral; when the various organs necessary for circulation and respiration are in play; when there is sensation, perception, and motion; and when the sphincters are not relaxed. Passive life is that state hitherto called death; but, according to me, death is decomposition. Nor should we despair at any period previous to this, since we can give motion by galvanism; blood by transfusion; respiration by artificial respiration; heat by this and the external application of caloric; and by stimulants we can keep up that action which has been excited by other means. Nor must we despair if we do not at once succeed in our endeavours to recal life, for perseverance often accomplishes that which at first sight seems impossible. Men have recovered from simulated death after being in the sea twenty minutes, and I see no reason why after disease men may not also be recovered from a state resembling death. Many are only in fainting fits, some are in trances, who are left as dead; and graves have been opened when the buried man has been found to have eaten portions of his own flesh, which, of course, he could not have done unless recovery had taken place. How horrible to think that we may awake up in our graves tormented with the pangs of hunger, unable scarce to breathe, and, finding all escape from our narrow cell impossible, the prisoner in his grave has nought to do but to commend his soul afresh to his Maker, and lay himself down to die! May not much of this be prevented by asylums for doubtful life, by the application of reagents, and by building vaults in our cemeteries instead of graves? I earnestly hope that the day has arrived when we see these things in the proper light; when our churchyards will be no longer overloaded with the remains of those who, perhaps, might have lived had they been left a little longer above ground—had they been transfused, or even buried in vaults instead of graves, with a guardian to watch over their mortal remains! In order to make myself more clearly understood, and to explain my own peculiar views, I will state that we cannot give life, but we can supply electricity to human and animal bodies, and by it produce many of the phenomena of life; neither can we make electricity, but only render that evident which was before latent, as in a piece of sealing-wax the electricity may be made evident by friction, and attraction and repulsion may be thus produced. The causes of friction in the human body are the various motions which take place between the different organs, between these and their containing cavities, and between the organs and the blood contained within them; between the veins and their blood, between the arteries and the blood, and between these and the muscles. In order to recal life in doubtful cases, you must apply electricity, and thus recal the natural action of organs necessary for rendering that life active which was, may be, only passive. Thus, life may exist but not be evident; but the non-evidence of life is no proof of death, as many have been recovered in whom life was only latent—in whom there was no action of the heart, no respiration, no motion, no sensation. This has happened after drowning, in infants born asphyxiated, in women after flooding, and would happen much more often were the proper means applied in all cases to recal life, and to ascertain those who may be recoverable. Simple inspection is not enough to decide if a man be dead or not, because persons are often only in trances or fainting fits when they are thought to be dead; and I wish to insist on the fact that there is no sign of death but decomposition, and that, therefore, none should be buried until this sign be present, nor until an attestation of the presence of decomposition be given by some surgeon. I believe that most lives would be saved, in approaching death, when the heart has not yet ceased to palpitate, but the brain is insensible; it is at this moment that transfusion would be a very powerful means of cure; and, in order to satisfy ourselves on this point, we have only to read a description of the effects of the injection of blood into the veins of animals. Many persons are predisposed to death by too active treatment, by the loss of blood, by the careless administration of drastric purgatives; and to these transfusion would offer great means for recovery. Dr. Blundell should ever live in the hearts of his countrymen, for he has introduced into this country a remedy the usefulness of which is not sufficiently known, and which, I think, would be of use not only in approaching dissolution and in flooding, but also in typhus and many diseases of debility.

PROGRESS OF MEDICAL SCIENCE

ACADEMY OF SCIENCES.

Meeting of Aug. 30; M. BRONGNIART in the Chair.

ETHEREAL INHALATIONS.—M. Sédillot, of Strasbourg, forwarded to the academy the detailed account of fifty important operations performed by him during the insensibility produced by ether. These cases confirmed the observations previously made by M. Sédillot, that no subjects were refractory to the influence of the inhalation, although the period necessary for the establishment of loss of consciousness varied with each subject. In some of his operations, by intermittent inhalations, M. Sédillot caused insensibility to last as much as one hour and a half.

ACADEMY OF MEDICINE.

Meeting of Aug. 31; M. BEGIN in the Chair.

M. Hamont read a paper relative to an epidemic of typhus, which decimated the cattle in Egypt during the years 1841-42-43. The disease was brought into Egypt by a packet, which imported from Caramania two hundred oxen. The neglect of proper measures of quarantine, according to Dr. Hamont, caused the disease to be propagated on shore, and in less than three years destroyed 350,000 oxen.

LITHOTRITY AND CYSTOMY.—(Adjourned Debate).—M. Velpeau acknowledged that he hardly knew how the present discussion had originated. He had endeavoured to ascertain how far lithotrity had been useful to humanity, and had found that question very difficult to solve. It would be necessary, in order to come to some positive conclusion, to be in possession of two or three thousand cases of calculus treated by cystotomy, and of an equal number operated by lithotrity. Even if such a statistical table could be brought forward, it would be insufficient, because lithotrity was not applicable to all concretions; the cases must be chosen once; hence the impossibility of comparing fairly the results of the two methods. Examining M. Civiale's own tables, M. Velpeau found in a first series 282 cases, 70 of which terminated fatally. In a second, out of 83 patients, 30 only were alive at the end of one year. These were frightful results, which M. Velpeau could not reconcile with the assertion made by M. Civiale, that he cured 98 out of 100 cases. M. Civiale's method of establishing his statistical tables was the only explanation of these fabulous results. When one of his operated patients died of peritonitis, of cystitis, of pleurisy, M. Civiale asserted that death had not been the consequence of the operation, and struck the case off his list. This was not a fair manner of proceeding, neither was it just, although it might be convenient to M. Civiale, to assert, as frequently as he did, that he (M. Civiale) alone knew how to perform lithontriptic operations with proper ability, and that the occasional failure of his method was always to be referred to the incapacity of the operator. All this was not right, and, in order to carry conviction into inquiring minds, it was necessary that M. Civiale should permit a close and searching examination of his cases: this M. Velpeau intended to do at the next meeting of the academy.—Adjourned at five o'clock.

HEMORRHAGE FROM THE UMBILICUS.

In a former communication we reported a case of hemorrhage from the umbilicus, which, various methods having failed, was arrested by ligature. (See vol. 16, page 116.) We find in the "Journal des Connoissances Médico-Chirurgicales," a case of a similar nature, and, as the accident is a comparatively rare one, we extract from that journal the following details:—

"On June 17, 1847, Dr. Jeunin was summoned to attend an infant, aged seven days, who was suffering from umbilical hemorrhage. The funis had fallen away during the preceding night, and in the morning no loss of blood had been noticed, but when towards noon the child was undressed, it was found bathing in its blood. Various anti-hemorrhagic remedies, such as vinegar and water, tinder, &c., were at once employed, but without success. Dr. Jeunin again tried the vinegar, compression, &c., and the hemorrhage continuing, was induced to cauterize the scar with nitrate of silver. Still the blood continued to flow abundantly. Cauterization with the actual cautery was resorted to, and failed signally in arresting the hemorrhage, although two red-hot rods of iron were extinguished in the wound. At last ligature was thought of: a common sewing needle was passed through the tubercle, and a circular ligature placed beneath it. The discharge of blood immediately ceased: the needle fell away four days afterwards, and the child recovered.

NITRATE OF SILVER IN HOOPING-COUGH.—In hooping-cough, Professor Trousseau recommends the exhibition of nitrate of silver. It seems to diminish considerably the violence and frequency of the paroxysms, but does not appear to shorten materially the duration of the disease. To a child, aged fifteen months, Professor Trousseau gives the medicine in the following shape:—℞. Aq. destill., ℥j.; syrupi, ℥ss.; argenti nitratis, gr. 1-5th. Capiat cochleare unum min. q.q. horâ.

VAGINITIS. BY DRS. BOYS DE LOURY AND COSTILHES.

The principal symptoms of vaginitis in its acute state are pruritus and heat of the affected part, tumefaction of the sexual organs, a sensation of stricture of the vagina, redness of its folds, and occasional erosions of the mucous membrane. The pus is at first very fetid, but soon loses its offensive odour. When inflammation occupies the superior part, or the entire cavity of the vagina, the os tincæ acquires a brownish hue, and becomes very painful. Chronic discharges are frequently not contagious, but may become so under the influence of stimulants, or rather the fresh irritation which stimulants produce. As to granular vaginitis, which deserves more properly the name of papillar vaginitis, it is met with during pregnancy in nineteen cases out of twenty, and is characterized by small round elevations of a dark red colour, and perfectly indolent; the discharge is white or yellowish, and tolerably abundant. This disease, observable during the last months of gestation, resists all methods of treatment, but yields spontaneously after parturition. M. Boys de Loury asserts that vaginitis is common in young persons, and even in children of six or seven years; and that this circumstance should induce surgeons to be on their guard when called upon to decide before a magistrate upon the nature of a discharge existing in a child. It appears that little girls, of eight or ten, are not unfrequently tutored to play the part of victims, and that a mistake would readily be committed if this fact was lost sight of. The symptoms by which this form of infantile vaginitis may be distinguished from the effects of violence are the integrity of the hymeneal membranes, and the absence of dilatation of the vagina; the parts are red and inflamed, and the purulent discharge is, in reality, much more abundant than in the inflammation which follows violence.

The treatment which the authors recommend in vaginitis consists of antiphlogistic measures at first, almost entirely of a local nature, and of astringent injections when the disease has lost its first violence. They agree with Dr. Ricord in the inutility of cubebs or of the balsam of copaiba for the treatment of the gonorrhœa of women. These two substances, says Dr. Ricord, relieve gonorrhœal discharges by their local action on the urethra, an assertion which is supported by the following interesting case:—A man was admitted into the Hôpital du Midi labouring under gonorrhœa during the year 1841. He presented a fistula of the urethra at two inches from the meatus; this accidental orifice was the result of gangrene of the part, produced at the age of seven by a ligature placed by himself around the penis in order to prevent involuntary emission of urine during the night, an occurrence which exposed the child to a severe whipping in the morning. When the patient was received in hospital a double discharge existed, from the meatus and from the fistular orifice, through which all the urine was emitted. The disease was treated by the exhibition of cubeb-pepper, and the discharge of the fistular passage alone was arrested. Injections of nitrate of silver were afterwards necessary for the cure of the running from the meatus.

CONVULSIONS OF CHILDREN, BY M. GUERSANT, SEN.—Convulsions may be divided into three varieties: idiopathic, symptomatic, and sympathetic. The first form occurs suddenly, and attacks the infant in the most flourishing state of health; and disappears suddenly, leaving no other trace of its existence than slight and temporary exhaustion. The convulsions, which are symptomatic of a more or less considerable alteration of the nervous centres, are preceded by disturbances of the functions of innervation, headache, increased sensibility, and often febrile excitement. When the convulsions appear the head is hot and painful, the cry is violent, and vomiting is observed. These attacks persist for several hours or days, with remissions, during which the intensity of spasmodic contraction diminishes; the child not recovering, however, completely, the exercise of its cerebral functions. Sympathetic convulsions are always connected with disturbance of an important organ, and more particularly of the stomach. M. Guersant has seen convulsions last for several days, and yield only to the rejection from the stomach after that period of undigested food. For the treatment of convulsions M. Guersant is of opinion that antiphlogistics have been praised beyond their deserts. If, however, the child is vigorous, the countenance injected, or asphyxia imminent, leeches may be applied with advantage. Compression of the carotid arteries—a remedy recomended by Professor Trousseau—is principally applicable to the congestive form, and to those convulsions which occupy only one side of the body. The artery of the side which is not convulsed is that which should be pressed upon, with the thumb or the index and medius fingers united, the palm of the hand being placed in such a manner as to avoid any pressure on the trachea. The result is often instantaneous, but if after a few minutes the convulsions are not arrested, the method must be abandoned. Blistering and mustard poultices on various parts of the skin, purgatives internally—calomel and julap, for instance—are very generally recommended; but M. Guersant has not much confidence in their efficacy. Cold applications to the head, on the contrary, are most efficient, and amongst the more advantageous we may mention cold affusions and irrigations, particularly upon the fontanelle in very young children. Sometimes, however, convulsions are accompanied with a refrigeration of the surface of the body, by which cold irrigations would be rendered a highly dangerous plan of treatment. Amongst antispasmodics, M. Guersant prefers the oxide of zinc, alone or combined with hyosciamus; musk, ether, valerian, and assafœtida have also been used, the two latter in injections, on account of their taste and odour, which cause them to be taken with difficulty, particularly by children. The oxide of zinc M. Guersant exhibits in doses, gradually increasing, of from one to twenty grains daily, in powders with sugar, or in a single draught.

The executioner at Bourges has been recently condemned for illegal practice of medicine. The executioner of Nantes, also, not satisfied with the proceeds of his art, and doubtless considering himself qualified for the practice of surgery, had for several years derived a handsome competence from the exercise of medicine. The tribunal of Nantes condemned the aspiring headsman to fifteen francs fine!

D. M'CARTHY, D.M.P.

Treatment of Fissures of the Anus.—M. Diday recommends the patient to apply to the anus,

night and morning, with the end of the finger, a portion of ointment, about the size of a cherry-stone, composed as follows:—Axungiæ 15 grammes, tannin 1 gramme, increasing the portion of tannin gradually to three grammes or more, according to its effect on the sensibility of the part. To apply it efficiently, the patient should push his finger as far as possible without forcing the sphincter, and there leave the ointment. Where fissures are situated higher, a solution of tannin may be injected into the rectum with a small syringe. The quantity of liquid introduced should be as small possible, in order that it may be retained for some time. In both cases the patient should experience some degree of heat, and smarting continues for some time after the application.

Aneurism by Anastomosis in the Anterior Naris Cured by the Actual Cautery.—The patient was a woman, thirty years of age, admitted into Stevens's Hospital under Dr. Wilmot. When ten years of age, after leaping from a height she was seized with a profuse discharge of blood from the left nostril, which occurred several times for a week, and was then stopped. About four years and a half afterwards a tumour, the size of a pea, was observed on the inside of the left ala nasi. It was attended with pain which extended over the left side of the nose, with a sense of fulness about the side of the head, the tumour increasing so as to attract attention. When admitted into the hospital it was about the size of a small olive, attached to the inner surface of the ala of the left nostril. It was of a dark blue colour, soft, smooth, and equal on its surface: and upon pressing it an obscure pulsation could be felt. The coronal artery of the lip and the lateralis nasi pulsated strongly, and appeared to feed the tumour. She remained in the hospital but a short time, but returned in four months, during which time the tumour had increased in size, and the pulsation was now very evident. It was at first punctured with a cataract needle, and through the punctures a small probe was introduced coated with nitrate of silver. A rapid flow of blood followed each operation, but was stopped by pressure. The caustic was then applied three or four times, and during the intervals astringent lotions and pressure were employed. This produced a temporary reduction of the tumour, which, however, eventually appeared to become larger, and there was, with headache, a throbbing over the left side of the face. She again left the hospital for half a year, when, on her return the tumour had considerably increased, and had assumed a round form, filling the anterior cavity of the left nostril, and extending a little beyond its margin. All the circumjacent arteries were enlarged, the lateralis nasi to the size of a crow quill, and pressure on this and the coronary artery commanded the pulsation in the tumour. It was now resolved to perforate it with the actual cautery. The operation consisted in penetrating the sack in two distinct places with a nail-shaped iron cautery. This was repeated six times, at intervals of fourteen days. After each application the tumour swelled, became painful, and in about three days pus was observed to escape through the openings. At the end of three months she was discharged from the hospital quite well, there being no trace of the tumour, the lateralis nasi artery could not be felt, and the other arteries were restored to their natural size.

Carcinoma of the External Surface of the Stomach.—"Deposit of cancerous matter," observes Dr. Alderson, "may take place either beneath or upon the serous membrane covering the stomach, and may vary in consistence. As the deposit increases it gives rise to inflammatory products, by which the contiguous viscera are glued together, and at length the stomach, liver, pancreas, omentum, and more or less of the intestines, are united in a mixed mass of cancerous deposit and inflammatory products. In the latter stages of the disease ulceration finds its way into the duodenum, colon, or stomach; jaundice is sometimes a symptom, and the liver is generally affected by secondary deposit. Among the earliest symptoms there is constipation, with some amount of pain. The tongue is clean, appetite moderate, with thirst. In subsequent stages there is tumefaction in the epigastrium; vomiting, hiccough, aphthous tongue, bloody stools, and death succeeds from exhaustion."

Acute Simple Dysentery.—Dr. Baly says that mild aperients have been found most useful, perhaps, in the majority of cases, but especially in those where the lower part of the large intestines was the seat of the disease, and where the fæces were retained, so that the evacuations consisted almost entirely of mucus tinged with blood. In these cases the administration of one, two, or three drachms of castor-oil has produced free feculent evacuations, and has afforded great relief to the symptoms. The beneficial effect produced by the action of this mild aperient medicine has often been very remarkable; while evil seems always to result from allowing more than twelve hours to pass without obtaining a free feculent evacuation, if the frequent discharge of bloody mucus and other signs still indicate the persistence of inflammation. In many cases, however, no aperients whatever were required, free discharge of the feculent contents of the bowels taking place spontaneously. Indeed, where the cæcum and ascending colon were the seat of the disease, the active stage of the inflammation was almost always attended with copious discharges of liquid fæces, and the subsidence of the inflammation was in great measure evidenced by the less frequent occurrence of these discharges, and their less liquid character. In some instances, owing to the irritable state of the stomach, small doses of saline purgatives have been substituted for the castor-oil; but whenever they have acted with much violence they have seemed to do harm.

Statistical Results of the Operation for Cataract.—Between the years 1827 and 1844, Professor Jäger (quoted in the "Monthly Journal") operated on 1011 cases of cataract, of which 764 were lenticular, 207 capsulo-lenticular, and 40 capsular. The kinds of operations to which he had recourse were as follows:—

	Cases.
Extraction by the superior section, in	728
" by the inferior "	9
Partial extraction	58
Depression	129
Breaking down the lens	87
	1011

Of the above number 63 lost their sight; and it will be seen by the subjoined table what were the processes employed which gave the worst results:—

Of the 58 operated on by partial extraction	3
" 738 " " by extraction	33
" 87 " " by breaking down the lens	6
" 129 " by depression	21
	63

The proportion of those who lost their sight being, in the operation of extraction, 4½ per cent.; in depression, 16 per cent.; and in breaking down the lens, 8 per cent.

Separation of the Entire Hairy Scalp from Erysipelas.—A man was received into the Hôpital a Charité in April, under M. Velpeau, for a malignant tumour in the parotid region. The operation for the removal of the tumour was performed while the patient was under the influence of ether, and he suffered no pain. For some days after the operation he progressed favourably, but, from some act of imprudence, the side of his face opposite to the wound became affected with erysipelas, which soon extended to the temple and whole scalp, and an abscess formed which covered the entire roof of the cranium; his tongue was dry, the swelling considerable, and the pain severe; he became delirious, yet the pulse remained tranquil, and there appeared to be no fever. Several incisions were made in different parts of the scalp, which gave issue to a large quantity of pus, and the entire of the scalp was found to be unadherent to the bone; it speedily fell into mortification through its whole extent; it separated at the anterior part, and, by sloughing and contraction, exposed the bone to a great extent, leaving the top of the head one wound. There was only one little spot where exfoliation of the cranium took place; granulations soon covered over the bone, and the enormous ulcer quickly and kindly healed. The restored scalp has now a wrinkled appearance, as if it had been too large, and was plaited in to fit the head. After suffering slightly from diarrhœa and night sweats, he was discharged cured.

Submammary Abscess discharged through the Trachea.—The patient was a female, twenty-nine years of age, attended by Dr. Sewell, of Montreal, for a painful affection of one breast, which was treated by frictions of iodide of potassium ointment, ioduretted solution of iodide of potassium. In three weeks she experienced so much relief as to dispense with further attendance. About three weeks afterwards, some uneasiness remaining, and the breast having increased in size, she was again visited, and upon examination there were discovered indications of matter or other fluid behind the gland. From the depth of the abscess, an incision was not made, and the ioduretted frictions were continued. A fortnight afterwards the patient began to expectorate pus in considerable quantities. Every few minutes a tracheal râle was heard, followed by cough and expectoration of pus. The breast was now the size of the other, and the gland moved loosely under the hand, as though detached. Pressure on the breast caused increased expectoration of matter. A compress and bandage was applied over the breast. The expectoration gradually ceased in four or five days, and the patient has since remained in good health. In this case, adhesion of the pleuræ, perforation of the intercostal muscle, pleura and substance of the lung, until a large bronchus was reached, must have taken place. There was no effusion of pus into the pleura, or emphysema of the cellular tissue; but there was a loud mucous râle *à grosses boules* under the abcess.

Treatment of Hooping-Cough.—Dr. J. F. Duncan, in the "Dublin Quarterly," advocates the opinion, that hooping-cough should be classed amongst the exanthemata, and ought to be treated upon principles analogous to those which are found to answer in other members of the same group. The patient should be confined to his room, if not to bed, and put on low diet; gentle aperients and diophoretics exhibited until the affection has had time to run its course; after which, if the disease do not subside of itself, as it probably would in most cases, the remedies of a tonic and antispasmodic nature, which are found so beneficial in chronic cases, ought to be employed. Of course I speak here only of the simple form of hooping-cough. Instead of this, how common is the practice to allow the patient freely out into the open air, especially if the symptoms begin moderately and the weather is mild, thereby interfering with the proper course of the affection, and running the risk of complicating the case by some of the more dangerous forms of pulmonary inflammation. This habit is unfortunately encouraged by the popular opinion, that nothing is so beneficial to hooping-cough as change of air; which leads some persons from the first, and many others at an early period of the complaint, to resort to this expedient; whereas it is well known to competent practitioners, that, however beneficial change of air may be in protracted cases, the premature adoption of the practice is calculated to retard rather than promote recovery. In the same way false notions have led to similar errors, in reference to diet and regimen during the early stage, that would have been avoided had the opinion here advocated been adopted. Because the child has a good appetite, and is not sick, he is allowed by many persons his usual food; and those evacuations which would have the effect of lowering the fever, and making the disease both milder and shorter, are generally neglected. Antispasmodics, too, are frequently administered

the cessation of the fever, and, consequently, do more harm than good. Finally, we can understand how it was that so much benefit used formerly to be obtained by stimulating embrocations to the back, the efficacy of which I can readily attest from several instances in which I have used them, but which, I believe, have fallen into general disuse from the abandonment or overthow of the theories upon which their adoption was recommended. Their utility depended, when judiciously applied, not upon any effect they produced upon the spinal or other nerves, for these were not diseased, but upon the tendency they had to diminish the congestion of the bronchial glands, in the same manner in which similar frictions are used in mumps to reduce the tension and uneasiness of the parotida.

Puerperal Neuritis in the Lower Extremities.—Dr. Simpson directed the attention of the Edinburgh Obstetric Society to this, not unfrequent, but neglected, form of puerperal disease. He had seen several cases mistaken for phlebitis and other forms of phlegmasia dolens. It was characterized often by numbness and tingling of the affected limb; and pain, fixed or remittent, passing along the crural or sciatic nerve down to the knee, calf, or even the foot, increased by pressure along the course of the nerve, and by stretching of the limb, sometimes relieved by strong pressure on the highest portion of the nerves. Sometimes there was no coexistent œdema, or if it were present the pain was in a degree greatly disproportionate to the œdema. It was often very protracted in its course. After local leeching, an elevated position of the limb, the application of belladonna, aconite, &c., greatly relieved the patients.

Puerperal Convulsions connected with Inflammation of the Kidney.—Dr. Simpson pointed out the connection of puerperal convulsions with derangement of the kidney as a very striking fact in obstetric pathology. He had seen *post-mortem* appearances of nephritis in some fatal cases of convulsions. In one case, the patient, a delicate female, was exhausted by the pains of labour, and complaining of severe headache, when convulsions supervened. The child, which was dead, was promptly delivered by turning. The convulsions gradually subsided, but reappeared several times. In the intervals she was comatose, and died forty hours after the first attack. Upon a *post-mortem* examination, when the lateral ventricle was opened, fluid blood escaped. The corpus striatum, and outer part of the optic thalamus, were broken up and mixed with a large quantity of coagulated blood, forming a considerable clot. The fluid blood was found in the opposite lateral, and also in the third and fourth ventricles. The right kidney was converted into numerous cysts of the size of a walnut, containing unhealthy pus, which passed along the ureter, and filled the bladder. The left kidney exhibited an advanced stage of Bright's disease. In another case, in which the labour was natural, and recovery appeared perfect, the patient, seven weeks afterwards, was seized with the most severe convulsions, which proved fatal in three hours, the patient during that time never being perfectly sensible. The pelvis of each kidney was found filled with a whitish-purulent matter, and its mucous lining membrane coated with large patches of adherent coagulable lymph. The ventricles of the brain were filled with serous fluid. No sign of albumen in the urine. In a third case, a convulsive fit came on a month before delivery, and recurred in a severe and fatal form a fortnight after delivery. The urine had presented no traces of albumen. At the autopsy, some whitish turbid fluid was found in the renal pelvis, and could be pressed out abundantly from the renal papillæ. Under the microscope it seemed to contain merely a very large quantity of epithelial cells, and no pus globules.

Calculus from the Stomach of a Llama.—Dr. Schlossberger, professor of chemistry in Tübingen, received from Professor Von Rapp a concretion the size of a horse-bean, which he had removed from one of the numerous cells in the first stomach of the llama; it had a greenish-brown colour, and yielded to ether, when boiled in it, a green pigment, apparently identical with chlorophylle. On being broken in pieces it was found to consist of a grain of corn as a nucleus, coated with numerous thin and differently-coloured layers of earthy salts, manifestly precipitated from the fluids of the stomach and those of the nutritious matters contained in it, upon this organic nucleus thus imprisoned within one of its cells. Undoubtedly this precipitation took place in the cell, which was, consequently, considerably dilated; the opening into it being, however, much too small to admit of the entrance of the calculus, and scarcely large enough for that of the barley-corn, an incision had to be made into the opening of the cell to extract the calculus. The lamellæ of this concretion consisted, in 100 parts, of

46·61 phosphatic earths, with traces of earthy carbonates and chloride of sodium.
14·59 organic matters.
38·80 water.

Auscultation in Labours.—Dr. M'Clintock, in "The Dublin Quarterly," gives the following aphorisms, as embodying the truths which he has ascertained in reference to auscultation in labours:—1. When the fœtus is alive, the sounds of its heart may be always detected at some period of the labour.—2. The precise region of the abdomen in which the fœtal heart is heard affords auxiliary evidence of the position of the child *in utero*, but can never be relied on alone for determining this point, or supersede the necessity for vaginal examination.—3. In presentations of the lower extremities, whether it be breech, foot, or knee, the fœtal heart is usually heard most distinctly in the vicinity of the umbilicus of the mother.—4. Conclusive auricular evidence of the existence of twins *in utero* is only to be drawn from the inequality of the number of the beats of the new fœtal hearts, and not merely from any difference as to their respective positions.—5. If, in the course of a tedious or difficult labour, the fœtal cardiac sounds, from having been distinct and clear, gradually become feeble and obscure, and ultimately inaudible, even with every precaution against deception, their absence is positive evidence of the child's death; but without the previous successive examinations this conclusion would be destitute of any positive character.—6. In cases where ergot of rye has been given to hasten delivery, auscultation is the only certain way of discovering when the medecine is beginning to exert an injurious influence on the child. 7. In cases simulating rupture of the uterus, the persistence of the fœtal heart's sound is a strong proof against the occurrence of the accident, and the more advanced the period at which they are audible after the setting in of bad symptoms, the more conclusive is the evidence that rupture has not taken place; whilst the sudden cessation of the fœtal pulsations, where they had been distinctly audible a short time previously, would corroborate strongly other existing symptoms of laceration of the uterus.—8. After an attack of puerperal convulsions in the seventh or eighth month of pregnancy, when labour has not immediately supervened, if the stethoscope shows that the child is alive there is hope that gestation will go on undisturbed; but, if the child be dead, its expulsion will take place most probably in ten or fourteen days from the date of the convulsive attack.—9. No certain conclusion regarding the state of the fœtus can be drawn from the placental soufflet.—10. In cases of flooding before delivery, the placental bruit may point out the part of the uterus to which the after-birth is attached, and thereby show whether the hemorrhage be accidental or unavoidable.—11. Auscultation of the heart in stillborn children more accurately acquaints us with the state of the child's vital powers, than any other source of information, and is, therefore, well deserving of employment in all such cases.

Mr. J. Marshall has been appointed to the office of Demonstrator at University College, in the room of Mr. Philip Potter, deceased.

RUPTURE OF THE BLADDER.

By ABM. C. SWAYNE, M.R.C.S.E., Carrick.

Patrick Gormly, a labouring man living near this town, had been carting some stones, and when unloading, with the aid of another man, the back shaft struck him rather forcibly in the lower part of the abdomen. He immediately fell down in a syncope, from which he gradually recovered, and then complained of severe pain in the stricken part. He soon after fainted again, in which state he was conveyed home and placed in bed.

At two o'clock P.M., on the following day, I was sent for (eighteen hours after the accident occurred); and, having learned the foregoing particulars, I proceeded to make the necessary examination. I found the hypogastric region exceedingly tense and swollen; the pulse quick, sharp, and wiry; intense thirst; and a tormenting but ineffectual desire to pass water, as evidenced by the constant straining, accompanied with pains shooting down the thighs, somewhat simulating the bearing-down pains of labour. I bled him largely, and, having introduced the catheter, drew off about three pints and a half of high-coloured urine, partaking somewhat of a sanguinolent character. This relieved him of the distressing attempts he made to empty his bladder. The pain, however, in the abdomen still continued up to the time I left him, after having premised perfect quietness, and the application of a dozen leeches over the part, together with a calomel-and-opium pill every two hours. On my next visit (the following morning), I found the whole region of the abdomen greatly swollen, with a very perceptible fulness over the hypogastrium, on placing my hand over which, the poor fellow moaned piteously. His pulse was 140, and very feeble; no urine came away since the employment of the catheter on the previous day; a second introduction brought away about three pints of a very high colour. A few more leeches were now applied; but, notwithstanding all the means tried, he rapidly grew worse, and expired at eight o'clock the same evening.

Post-mortem Appearances.—Upon opening the cavity of the abdomen, the intestines were covered with plastic lymph, and glued together; the bladder lay collapsed, and a large transverse rent was seen at its superior fundus. The urine, escaping from this viscus through the rupture, had accumulated in a cavity immediately above the bladder, formed by the adhesions which tied the small intestines together, and the fluid was thus permitted to accumulate without becoming diffused through the general cavity of the abdomen.

Remarks.—The circumstance last mentioned explains the facility with which the urine had been drawn off by the catheter, inasmuch as the extremity of this instrument could without difficulty pass through the rupture in the opposite fundus into this part of the peritoneum, bounded thus by adhesions. On close examination of the rent, I found it of much greater dimensions through the peritoneal coat than through the muscular and mucous, which would be, I presume, accounted for by the more contractile nature of the latter tissues. I have not heard or read of an instance where rupture of the bladder occurs in any part, save the superior fundus; and I think the best explanation of the fact is that given by Professor Harrison, of Dublin, who accounts for its invariably occurring in that particular part of the viscus by the circumstance of the bladder being always in a distended state when this serious accident occurs; and, rising above the pubis into the hypogastrium, it is subject to be compressed against the sacro-lumbar eminence of the spine, thus throwing the chief pressure of the urine towards the superior fundus. It was quite evident, from the nature of the accident in the present case, that such must have been the cause; and also, from the great extent of the rupture, that the chance of the life of the individual being saved was utterly hopeless.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any ewsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription,* 13*s.; Quarterly,* 6*s.* 6*d.*

Mr. C. Heslop *is thanked for his interesting communication; it shall receive that early attention which its importance demands.*

An Old Sailor.—*The case is one which requires immediate attention, and some respectable medical practitioner should be consulted. We would advise our correspondent not to quack himself, and to keep clear of all advertising harpies.*

S. D.—*It is not an uncommon thing, nor is it ... d derogatory by intelligent individuals, orf ... s to perform surgical operations, even when ... with public institutions. Medicine and Surgery are one and indivisible, and he who disciplines his mind by the most extensive study is the most likely to prove the most successful practitioner.*

An Old Subscriber.—*Physicians, members of the the College of Surgeons, and licentiates of the Apothecaries' Society, in actual practice, are exempt from all parochial offices, and from serving on juries.*

Candidatus.—*The Army Medical Board should be memorialized; it is possible, and very probable, that a name may be placed on the list, and a length of time elapse before an appointment is obtained.*

Chirurgus.—*From the few facts stated we are unable to give our opinion as regards the propriety of an operation. In a case which is represented to be so critical it would be well to have the opinion of some neighbouring practitioners.*

Delta.—*Ung. hyd. fort., or hyd. protochlorid., will effectually destroy the pediculi. One application is often sufficient.*

Caustic.—*We do not insert anonymous attacks upon character. Our correspondent evidently possesses talent, which might be usefully employed on scientific subjects.*

A Reformer.—*By addressing the secretary of the National Institute, Mr. Ross,* 4, *Hanover-squares the desired information may be obtained. The Institute is prospering, though so many attempt have been made to effect its ruin.*

A Union Surgeon.—*We know of no better plan to bring the guardians to their senses, if they have any, than by giving publicity to their conduct. We have a large mass of correspondence which relates to the doings of these worthies in different parts of the kingdom.*

Dr, L. Tinson.—*The parties engaged in publishing the work are bound to fulfil their promises. If our correspondent will send us a communication on the subject adapted for publication it shall appear in our columns.*

A Druggist.—*A person not duly qualified, who visits and prescribes for patients, with a view to profit, is liable to a prosecution under the Apothecaries' Act.*

A Pupil of St. George's Hospital.—"*Cooper's Surgical Dictionary.*"

S. G., Dublin.—*The paper received on Fracture of the Base of the Skull is not complete; the concluding part is missing, which has caused the delay. It was by an oversight that no mention was made of it last week in the Notices to Correspondents.*

A Medical Practitioner, Norwich.—*Mr. Startin was the first to recommend glycyrrhine in certain skin diseases. It is a peculiar uncrystallizable saccharine matter, found in animal fats and oils, or produced during their admixture with alkalis and oxides. It is very abundant in the refuse of the soapmaker.*

A Navy Surgeon, Portsmouth.—*We have not lost sight of the subject, and if our correspondent will furnish us with the facts to which he adverts, they shall receive all due attention.*

Amicus, Liverpool.—*The Government has determined that the act in reference to passenger vessels shall be enforced. There has been sad neglect in times past.*

Mr. Morris.—*Mr. Daniell, of Newport-Pagnell, will furnish the desired information.*

M. D. (A Subscriber).—*The Manual of Dr. Guy.*

An Inquirer.—*Healthy urine contains no albumen: in chronic albuminuria it varies in different cases, and in the same case at different periods of the disease.*

M. F., Guy's Hospital.—*The pay of an assistant-surgeon in the army of less than ten years actual service is* 7*s.* 6*d. a day.*

A Lover of Truth, Bristol.—*A good microscope will cost a considerable sum; such an instrument is requisite, especially to one who is a novice in the science.*

A Graduate (Edinburgh University).—*Foreign medical men can still practise in France under certain regulations.*

A Non-Medical Subscriber, Kingsland.—*The Editor of the* Pharmaceutical Times *will, on application, give our correspondent all desirable information in reference to the best powder for cleansing and preserving the teeth.*

Mr. E. Whitehead, Dakinfield.—*Communication received, and shall have an early insertion.*

Electron.—*Noad's Lectures.*

Paralyticus.—*The parties to whom our correspondent refers are rank quacks, as their advertisements, forwarded to us, prove.*

Filius Agricolæ *will find his questions answered elsewhere.*

In the letter upon "Coroners and Medical Witnesses," inserted last week, the signature should not have been Wm. Mayling, *but* Wm. A. Maybury, 8, Little Tower-street.

Letters and communications have been received from Dr. P. S. Waddy; Dr. Grattan; A Medical Practitioner; A Navy Surgeon, Portsmouth; Amicus, Liverpool; Mr. Morris; M.D., a Subscriber; An Inquirer; M. F., Guy's Hospital; A Lover of Truth, Bristol; A Graduate, Edinburgh University; A Non-Medical Subscriber, Kingsland; Mr. E. Whitehead, Dakinfield; Mr. W. A. Maybury, 3, *Little Tower-street; Electron; Paralyticus; S. G., Dublin; A Pupil of St. George's Hospital; A Druggist; Dr. L. Tinson; A Union Surgeon; A Reformer; Caustic; Delta; Chirurgus; Candidatus; An Old Subscriber; S. D.; An Old Sailor; Mr. C. Heslop; Mr. Shaw, Ashby-de-la-Zouch; Mr. Thetford, Clones; Dr. Allinson, Bridlington; Mr. Chapman, Uttoxeter; Dr. Palmer, Durfanaghy; Mr. Nelson, Isle of Man; Mr. Bridges, St. Albans; Mr. Tiby, Hartford-bridge; Dr. Atkinson, Castlebar; Mr Cowdry, Great Torrington.*

Messrs. Wright, Fletcher, and I'anson, the gentlemen gaining the *Medical Times* Prizes, are informed that the *certificates* are now ready for them, and may be obtained at the office.

THE MEDICAL TIMES.

SATURDAY, SEPTEMBER 11, 1847.

GENERAL CONFERENCE OF POOR-LAW DOCTORS.

We do not know a better moment than the present for a smart agitation of the question of Poor-law Medical Relief. There is a lull of home politics that solicits the grievance into notoriety, and invites it into the noonday of public observation and discussion. We should confer a favour on the dull public by giving it so tough a hardship to grumble at. That great lever of social reform, the *Times*, has shown not a few anxieties to do battle on the subject, and is ready to take the field any day that we supply that generalissimo of public opinion with a fair army of facts and figures to fight with. Besides, the nuisance is itself growing intolerable, and is perking more every day its offensive odour under honest men's noses. The papers teem with records of its baleful influence. We have only, then, to come out strongly, in unison, and with firmness, to create that public impression which alone can—as it one day will—remedy the abuse.

It is an established fact that the union doctors do not receive for their labours one-half as much as they would be entitled to if their services were estimated as those of any journeyman mechanic. They are scarcely paid their expenses out of pocket Here, then, without circumlocution or fine-drawing, lies the root of the whole evil. Thousands of hardworking gentlemen are robbed of their fair wages, and the well-being of the poor in the prime article of health is made to depend on the virtuous, the honest, and self-denying services of defrauded and plundered servants. Everything is made by the State, too, to depend on the fact that the servants are far more honest than those who pay them.

Are the medical men, then, true to their discouraging charge? Do they conscientiously hand over to the State that medicine and those attentions for which they shall never receive payment? Many are thus true and conscientious, and pay the penalty of their probity in a yearly loss of income. We are proud to think that the general rule is virtue under these most trying circumstances; but we must add that our regret is the greater that a State can be found to persecute and injure such deserving subjects, and offer in their persons, when hurried by probity into the workhouse, a public warning to others of the calamitous end that awaits in medicine a conscientious discharge of an honourable public trust.

Follow into the details of private life the union doctor, who thus sacrifices himself to his unwisely assumed responsibility, and we catch a better view of the atrocious wrong of which he is made the victim. Unpaid by anybody, he is everybody's servant. He has masters in dozens of poor-law commissioners—in scores of guardians—in union clerks—relieving officers—and, finally, in the paupers. He can count on no hour of domestic ease uninterrupted—no day of repose undisturbed. By night, by day—in foul weather or in fine—winter, as in summer, his person is always under orders for almost all distances; and, after years thus painfully given to services that know neither of reward nor promotion, he dies, not improbably of fever caught in the discharge of an unremunerated duty, and leaves a wife with children wholly unprovided for. This is neither a rarity nor a romance. Within the last month one district—that of Great Bolton—gives us two such cases! Mr. Richard Robinson perished in this way a few weeks ago; and only a few days since was followed by Mr. Henry Hutton, the medical officer of the same district!

But if many are thus honest and self-sacrificing even unto death—it is not what the State has any reason or any justice in counting on. We know enough of human nature to be assured that there are exceptions—not unfrequent—men who, applying to their medical performances the same rule as butchers and bakers to their commodities, will give nothing for nothing. The State pays them but for bad drugs and poor attendance; and bad drugs and poor attendance is all they will give the State in return. There must be no misunderstanding about this matter. There

are some men who will not victimize themselves for a parsimonious union, and the result is that the paupers suffer. *This low—this infamously low—system of payment coolly and deliberately contemplates and sanctions one of two results—the robbery of the honest medical man, or, in a modified form, the assassination of the pauper!*

It is right that these facts should be kept incessantly under the public eye, and it is with great complacency we notice in the *Times* of this day (Thursday) an able letter from its clerical correspondent, S. G. O., securing general censure to the *principle* on which these extraordinary injustices are perpetrated. The following extract will be welcomed as a friend by many a union doctor:—

"Union doctors are not paid in proportion to what is expected of them so well as veterinary surgeons; they could not live except by the addition of what they get from private patients in their rounds. We expect the farrier to do his utmost for our horses or cows because he is paid for what he does, or professes to do; it is folly to expect the union surgeon to give all the attention and appliances to a pauper that he must feel the said pauper ought to have, because we know his salary scarce finds him in the expenses of his journeys. We don't in reality profess to pay him for what he is to do for the pauper. If he don't take what we offer, we know some young or some bankrupt practitioner will bid against him, on the principle of getting on the ground anyhow, in hopes that he may pick up at last a living out of private patients. Thus, from one end of the country to another, are the interests of the poor, when pauperized, dealt with. It is a principle not merely applicable to lunatic asylums and union M.D's.; again and again do we hear of the neglect of relieving-officers and other paid officials. But, sir, how are these men selected?' Let a board have a humane and active chairman, for nine weeks out of ten the whole burden of the business, with all its odious detail, is thrown on him, and, perhaps, one or two other guardians, who think it right to attend to help him. A relieving-officer dies, resigns, or is dismissed; at once there is a stir in the market; whom shall the great *we* elect becomes the question: for in the rural districts the magnates of the market are the great dispensers of union patronage. 'Us and them' mean the tenantry and their landlords; if the latter will support them, all very well; if not, 'us' won't be beat. A place of trust, requiring a man of undoubted respectability to give his whole time to it, is open—the salary, perhaps, from £70 to £90 a year; 'us' looks about us; some jolly good fellow who may have failed in business, or be next to a pauper because he never would attend to anything, is immediately singled out as the favoured object of market favour; 'us' determines to return him against all opposition; at the appointed day the chairman finds the board-room crammed to suffocation; in vain are testimonials of ability and respectability produced by other candidates, the pet of the market receives a support that bears down all opposition, he receives only one piece of advice from his backers—*i. e.*, 'to keep the rates down;' and thus, again and again, has it and will it happen, that all regard for the poor themselves, all respect to those who take the labouring oar of the union, are shelved, that the great 'us' may show their importance, their sense of the value of these offices as refuges for the destitute of their friends."

Now, it is time that we tell the guardians, in a fashion not to be contemned, that we are no longer to be either victims ourselves or agents in the victimisation of others—just "to keep down the rates." How, then, is the change to be effected? BY AN IMMEDIATE CONFERENCE IN LONDON OF UNION DOCTORS. Let a correspondence be immediately commenced: let arrangements be forthwith settled for a meeting: let every union doctor be invited: let a permanent organisation be agreed on: and in less than twelve months we must have a thorough reformation. The power is in the hands of the union doctors themselves: and the profession and its press will not fail to support them. We shall take care that there shall be no more recurrence to the "bidding system" and invitation of "bankrupt practitioners." The organization may and ought to include every legally-qualified medical man, for it concerns equally the interests of all; and he would be a bold man who, in the face of such a combination, would aspire to the bad eminence of accepting an ungentlemanly employment in the service of an assassinating parsimony.

There should be no delay: now is the opportune moment: let the most worthy at once show himself by acting as secretary to the movement: *c'est le premier pas qui coute.* Once commenced, the success of the movement must be complete.

THE DUC DE PRASLIN.

SINCE penning our last article on the most remarkable event Paris has witnessed since 1830, additional facts have been published which, while modifying some of our opinions, only confirm the censures we felt compelled to express on the conduct of Louis, Andral, and Orfila.

If it be granted—as some apologists insist—that the criminal took poison but once, and *that* on the very day of his crime, the duke's case must have been more than ordinarily amenable to judicious treatment. It is not in the attributes of arsenic to take six days to accomplish its fatal purpose. Twenty hours is more than its average requirement; and we may lay it down as a toxicological maxim that, when the patient survives six days, he dies at last by other agencies than the arsenic. The agencies here were a mistaken diagnosis, and worse treatment.

The celebrated, and on many accounts justly celebrated, Louis is called in the day after the poisoning. His patient is a prisoner: the charge is murder: the evidence overwhelming. Before him lie every symptom that indicates poison: anxious countenance, sunken eye, extreme prostration, universal sense of cold, continual vomiting of green matter, frequent dejections, scarcely any pulse. M. Louis, however, will see nothing but cholera in all this; and, in combating that hypothetical enemy, gives the arsenic every aid to diffuse itself through and overpower the whole system—warm baths, abundant cold drinks, warm towels to the stomach, bleeding, &c. The distinguished Andral singularly enough coincides in the justness of this treatment, which has the further sanction of two other French physicians, Drs. Reymond and Rouget.

Despite, however, all these aiding agencies, the patient rallies on the third day—but the arsenic having been placed in full power, and the efforts of nature to dislodge it, or sustain itself, too successfully resisted—he grows worse the next day, and, exhibiting the usual succession of arsenical symptoms, dies on the sixth day.

The *mistaken* diagnosis, although it accounts for, does not excuse this maltreatment: but what shall we say of the course taken when the existence of arsenic had become *ascertained?* In what way was *nitre* and camphor—other poisons—to sooth the intestinal burning or neutralize the arsenic? Of what avail could be the warm bath? And still more, in what way could twenty-four leeches strengthen and uphold the organism, under the direful conflict it was sustaining?

The fact is, indeed, too clear—that some of the most celebrated physicians of Paris cannot recognise a clear case of poisoning, when there is every circumstance present to indicate its existence; and when they are at last made to recognise it, do not then know how to treat it. All this behaviour to the Duke of Praslin was of a kind to make fatal a dose of arsenic, not fatal of itself.

Orfila—we see—accounts for the extraordinary length of time the arsenic took in completing its task, by supposing, first, that the duke took laudanum (which appears now not to be the fact); and secondly, that this laudanum, paralyzing the mucous membrane of the stomach, made absorption slow. Such a paralysis being not only new to science, but impossible, in fact, we must decline to accept his high authority, which, let us say, *en passant*, we regret to see compromised by a dynastic partisanship as suspicious as it is ill placed.

CORONERS AND MEDICAL MEEKNESS.

THE "coronership" is a tumbledown office that seems kept up on no better principle than that which preserves for us that obstruction of metropolitan commerce—Temple-bar. If worse than useless, it is old; if costly, queer; and an ancient reminiscence, especially if a little *bizarre*, is entitled with some to large sacrifices of present convenience. People wont see that in a thousand ways we have outlived the coroner and his antiquated habitudes, and that they are not less out of place in the nineteenth century than would be the ruins of Netley Abbey in Birmingham market-place. The machinery of the thing has worn out and disappeared. It has been silently superseded. Its business of crime-detection has fallen or risen into other hands, and the thing is now but a ceremonial, lifeless as the corpse it sits over. Modern legislation knows nothing of the coroner. He is without court, tipstaff, or crier. Statutes know him not, except in the boon of "deputyship" (contemptuously thrown to a grumbler a session or two since). Parliament resolutely persists in looking to the police and their magistrates for "limb and life." Coronership has become, in fact, as obsolete as its kin-Dogberryship, though longer lived. Its importance is just as mock.

Yet this ghost of a tribunal—this traditionary fiction of a legal jurisdiction—can manage now and then to show some little vitality in troubling the rests of sundry medical practitioners. If ever we hear of the spectre it is as haunting and persecuting some unfortunate doctor. The law seems to let it walk the earth still—every other purpose wanting—for our especial malediction. Even Coroner Payne, who enters so fully into the nonsensicalness of his office, that to joke a colleague he will sit on a case of arson—like a matronly hen on a cockatrice's egg—can be quite serious in harassing a medical witness.

Mr. Maybury (as his letter to us last week shows) was punctual in obeying his summons: and was just as punctually deprived of his allotted guinea. As an acknowledgment of his legal obedience he was left minus his time, trouble, and golden guinea. Such are the punishments of a medical witness's punctuality, even in the comparatively respectable court of Mr. Payne! Coroner-annals are full of these case of painless and painful *extractions*.

Our office is visited in this way, on an average, three days a week with some medical complaint of coroner-hardship. "Is the coroner allowed to do this?" says one. "Has he power to do that?"

says a second; and so on ask, perhaps, a third and a fourth. In nine cases out of ten, governed by our *good nature* (a usual thing with us), we answer by a solemn "*no*;" adding our protest to that of "An Injured Subscriber," "An Indignant Constant Reader," and "One who has no more Patience with a Medical or Non-medical Coroner." Now, this has been all very good-natured in us—but—and we will make a clean breast of it—it is not *all* the truth. We ought to have said also—that, though the coroners *can't* do the things they daily do, they would be made of very different stuff to any that now forms their worshipful persons if, with the present acquiescence and tameness of the medical body, they condescended to act in another fashion.

Of the thousand injustices that coroners have inflicted on medical men for the last ten years, which one of them has been brought under judicial cognizance and censure? Not one! Yet how many the sufferers? How loud the grumblers? Not *one!*

But we mistake: we forget naturally enough one case. We *did* bring one startling case under Lord Denman. We obtained one of the most remarkable decisions in legal history; and this too—to make it all the more remarkable—in *favour* of medical men.

1. Coroners were in the habit of taking round with them a pet surgeon who got all inquest cases—*post-mortem* fees on one side and newspaper mention and laudation on the other. Lord Denman laid it down for us that this was illegal, and that such coroners might be indicted for a misdemeanour.

2. Coroners were in the habit of dispensing with the medical witness who attended the case before death. Lord Denman laid it down for us that this was illegal, and that such coroners might be indicted for misdemeanour.

3. Coroners were in the habit, on slight pretences, of treating medical men—who attended cases before death—as parties accused, whose statements should be submitted to juries without the sanction of an oath. Lord Denman declared this usage illegal and punishable.

Now this was not a very commonplace vindication for medical men. Passing by that, it cost a fair sum of money (with the risk of more), liberty as well as purse hanging on the question—a tolerably-sized privilege was laid hold of, and a rather useful example established. Well, what has been the result? Coroner injustices lessened? Very little. The law, though ascertained, is left unused. Medical grumblings fewer? Not at all. Any throwing themselves in the breach, and giving effect to Lord Denman's decision? Not one! Not one effort has been since made to keep the ground then taken. The boon with everybody was inestimable, but nobody has done anything to retain it. There has been no meeting—no association. To the old aggressions repeated, as to the new since invented, we have but the old answer—feeble and isolated complaints through the *Medical Times*.

As of individuals, improvement is hopeless where gratitude is extinct, so of communities, all is gone where public spirit is fled. There is no salvation where every one crys help, and nobody gives it. Our columns are becoming the Lamentations of the Jeremiah of British Professions; and, as if to augment superabundance and add to excess, we, too, come in *lamenting* also—what? That we are the hearers of so many groans and the witnesses of so few actions! It really is time that in this walk of grievances, as, indeed, in many others, we should WORK. Where not in combination, let it be done individually. Let us for once be refreshed by the sight of some town or village Hampden refusing *in his own person* to submit to injustice, and, by the indictment of some misdemeanant coroner, showing the world that Lord Denman's judgment is not to remain a dead letter.

As for Mr. Maybury, who has been deprived of a guinea as much his *property* as the inquest fees are the dues of the recusant coroner, let him summon Mr. Payne before a County Court, or Court of Requests, and *enforce* the payment the law *ordains*. The example will do good, and its expense is not costly. We only advise what we have ourselves done on a somewhat larger scale.

MEDICAL ATTENDANTS OF PRISONS, AND CHAPLAINS.

THE subject of medical fees has of late been so extensively discussed that there is danger of our being viewed by the public as a money-loving profession. This particular agitation, however, has been commenced and carried on, not that an avaricious spirit should be gratified by increased pay for services performed, but that the cause of humanity and professional respectability may be maintained. A medical fee is not so much a *quid pro quo* for work done as a testimony of respect to the person who receives it. The salaries which are obtained, therefore, by medical officers holding public appointments, not charitable, may be taken as a good criterion of the estimation in which they are held by persons in authority. If this be true, we are compelled to acknowledge that the members of our profession do not occupy that high position to which their talents and calling entitle them.

Of the three professions which, by universal consent, are acknowledged learned, the medical is the hardest worked and the worst paid. The lawyer and divine receive for their services something like respectable remuneration, while there are valuable sinecures in reversion for many of them in the season of declining life. It is not so with us: for a life of usefulness is too often embittered by straitened circumstances, and terminated without realizing the blessings connected with a state of affluence. We can by no means admit that the vocation of the divine is so vastly superior to that of the physician as we may be led to suppose from the different remuneration they receive for their services. It is true that the one has to do with the spiritual, the other with the material, part of the man; the one proffers future blessings, the other brings with him blessings for the body, to be enjoyed now, in this time and state, where flesh and blood are such important ingredients. Moreover, the healthy exercise of the attributes of the mind are closely connected with the healthy action of the organs of the body, and in many instances the functions of the priesthood would be exercised in vain were it not for the skilful appliances of the healing art to suffering humanity. And yet we find that, where the two obtain public appointments in the same institution, the former receives not unfrequently a salary treble in amount to that of the latter.

The chaplains of prisons and workhouses have not to undergo a tithe of the mental and physical labour which falls to the lot of medical officers, and yet how much better are they paid! In the newly-enlarged prison, at Wakefield, arrangements have been made for the occupation of 400 additional cells, and the Government contemplates sending thither a number of prisoners from the Millbank Penitentiary, under sentence of transportation. These convicts are to have a separate chaplain, surgeon, and wardens; the former at a salary of £250 a year, the latter at salaries varying from £90 to £80 and £60 per annum.

Now, what we complain of is this, the invidious distinction which is made between the clergyman and the doctor. Why the one should receive so much more pay for his services than the other we are unable to conjecture, as sound health and good morals are closely allied. We cavil not at the amount which he who has the cure of souls receives further than the relation it bears to that which he who has the cure of bodies obtains. The one has a salary befitting a scholar and a gentleman, the other that of a turnkey or any other menial. The Government has here manifested the same spirit in rewarding medical men who are attendants of prisons as it does to those who are officers of poor-law unions.

These facts palpably show that the members of the medical profession of Great Britain have not yet attained their legitimate position in society, while they should also be taught the important duties they owe to themselves. The first blow for their emancipation must be struck by their own hands, and in the right place; the set time to favour them is come, and it is for them not to allow it to pass away neglected or unimproved.

SUGGESTIONS ON POOR-LAW MEDICAL RELIEF.

[To the Editor of the Medical Times.]

SIR,—There are few who will be disposed to deny in the abstract that human life is a gift so valuable that no expense is too great to be incurred, in order to promote the healthful discharge of its functions, or to preserve it from the manifold dangers to which it is exposed. The principle of self-preservation is powerfully felt by all, so much so, indeed, that no sacrifice would be considered too great to purchase an exemption from the attacks of disease and death. The position which an individual occupies in the scale of society neither increases nor diminishes the value of life: for, while it may affect the external relations of a man, it adds nothing to the original attributes of his intellectual existence. This great fact is recognised in the laws which regulate society, the same punishment being awarded to one that is rich and noble for taking away the life of a pauper as to another who, without worldly distinctions, commits the same offence against a favourite of fortune.

As there are no degrees in the value of human existence, so that there are none in the obligations to preserve it; and while we owe to ourselves the use of all the means which Providence has placed within our power for self-preservation, we are equally bound to employ them on behalf of our fellow-creatures, when from any cause their resources are less than ours to promote their well-being. Natural benevolence prompts us to rush to the help of a drowning man, or one placed in danger equally palpable and imminent, and where this common attribute of humanity is violated society resents the insult by a moral punishment when her laws are inadequate in any other way to meet the case. Moved by the same principle, she has established for the helpless poor asylums where ostensibly their

poverty may find relief, and their sufferings mitigation. The laws for the relief of paupers were originally prompted by a spirit of benevolence, and, if they had been administered under the influence of the same spirit, the public burdens would not have been increased, while a vast amount of suffering would have been prevented. It would, perhaps, be thought that I travelled out of the path of duty were I to occupy your pages in denouncing the injustice as well as the impolicy of keeping down paupers to the starving point by a reprehensible parsimony: unjust it is, because adequate funds are provided, when they are applied to their legitimate purposes, for their relief; and impolitic it is, because it unnecessarily exposes them to the invasion of disease, which in numerous instances makes the sufferers become burdensome to the public throughout their subsequent earthly existence. What I have now more immediately to do with is the injury which is inflicted on sick paupers by the illiberality which is manifested towards their medical attendants. The public has no right to expect that duties will be efficiently performed where service is not adequately remunerated, for it is expecting too much of any man that he should as cheerfully and as usefully discharge the functions of his calling where the reward bears no proportion to the labour as in cases where it does. If the proposition which I have stated at the commencement of this letter be correct, then are the lives of paupers quite as valuable as the lives of "guardians;" and these, in refusing to pay their medical officer a just sum for the exercise of his professional talents, do not employ all the means in their power to promote the well-being of those who are especially committed to their care.

You published last week a letter from a gentleman, "A Poor Union Surgeon," which serves to illustrate the left-handed justice which guardians administer to their medical servants and their pauper dependants. Your correspondent exercises a degree of charity towards the parochial executive to which it is not entitled in my estimation, and would place all the blame on the law and the commissioners. We are told by your correspondent, that his district "contains eight parishes; an acreage amounting to 14,000; a population of 8000, three-fourths of which are on the verge of pauperism from the long-continued depression in trade. In the course of the year he has to attend upon an average 800 patients, to ride nearly 3000 miles, and to be ready, night and day, to visit a distressed sick population. For these duties he receives the liberal sum of £60 per annum; for which he has also to find medicine, leeches, and all other appliances necessary in sickness. Is it to be expected with such pay that the surgeon could do justice to his patients, if he would? If he does, I can only say, he must be very unjust to himself and horse. Of course his work is not always done in the day, neither has he always a fair sky nor good roads; a horse turned out at all times and in all weathers, and going over 3000 miles of ground in the course of a year, must, in spite of bottom and courage, soon become so "groggy" as to require his place to be occupied by another, if the master has any regard for his own neck. For such work one horse must be kept entirely for the service of the poor, which cannot be done, as your correspondent states, for less than £20 a year, and £5 for wear and tear. Here is half the salary at once gone; and add to this the sum of £30 for medicine, leeches, &c., the surgeon *gains* by his appointment a clear loss of £5! Were it a question of mere profit and loss to him, it might be quickly disposed of, because parishes would have an undoubted right to choose a professional person who would undertake to do the most work for the least money. It is not, however, a matter which has simply to do with pounds, shillings, and pence, but one which involves the temporal welfare of a large number of our suffering fellow-creatures. It is upon this high ground the profession must take its stand, while it demands for its members such a just reward for the services they render to the sick poor as shall secure for them a cheerful and efficient attendance in the hour of need.

The evils of which all now complain have been fostered and strengthened by causes which have been long in operation, and one of the most powerful is the peculiar constitution of the medical community in our country. A variety of qualifications has produced numerous divisions, and persons in authority have used these to depreciate the value of medical services. In other callings, not professional, individuals unite for mutual protection and support, but it seems to be our unhappy lot to belong to a house divided against itself. The question of medical remuneration I conceive, therefore, is closely connected with that of medical reform—such a reform as shall gather into one body the general practitioners, consolidate their energies, and heal the breaches which have so long existed amongst them. Humanity will rejoice at this, because, while it will elevate the character of the profession, it will increase its usefulness also.

It is a mistake to suppose that the medical officers of poor-law unions will be able to obtain from the Government or Parliament a recognition of their claims by solely forming an association amongst themselves; their brethren must be co-workers with them, or nothing will be accomplished. A universal organization is what is required, whose efforts shall be directed to promote the general welfare of the profession, and, this being accomplished, must inevitably be productive of good to the public. At the same time I think my brother union officers cannot too soon meet in some central point, and lay down the basis of some future combined operations. Let them once put their heads together, and take my word for it their position will be improved by the effort.

VINDICATOR.

MEDUSÆ, AS IRRITANTS TO THE SKIN.

[To the Editor of the Medical Times.]

SIR,—My attention has been called this summer to a fact which seems new to the naturalists and medical practitioners in this vicinity. It is the circumstance of the medusæ, or, as they are called here, *loch-livers*, acting as powerful irritants when applied to the skin. These animals, of which there seems to be a great variety, float in vast numbers at this season of the year along the coast, and are frequently left on the beach by the ebbing of the tide.

A girl, lately happening to trample on one of them with her bare feet, instantly complained of acute burning pain in them, and in a few minutes the skin assumed a bright red appearance similar to that produced by the application of a mustard poultice. By means of olive-oil, and the parts being enveloped with cotton wadding, these symptoms were relieved in a few hours.

A few years since a cooper lost the index finger of his left hand by sloughing from having a cut in the finger, and happening to bring it in contact with one of the medusæ.

The poisonous property seems not to be confined to any particular part of the animal, as the fishermen frequently complain of having their faces blistered by small pieces of the animal being squirted into them when they are hauling their nets, and the medusæ entangled in them.

If you think these facts worthy of a place in your journal, by giving them insertion you will greatly oblige, Yours respectfully,

Rosehearty, Aug. 23. W. WISELY, M.D.

GOSSIP OF THE WEEK.

WAR-OFFICE, Sept. 3.—12th Foot: Assist.-Surg. Peter Mackey, M.D., from 9th Foot, to be Assist.-Surg., vice Heffernan, appointed to 17th Foot.—17th Foot: Assist.-Surg. Nesbitt Heffernan, M.D., from 12th Foot, to be Assist.-Surg., vice Thomson, promoted in 69th Foot.—67th Foot: Assist.-Surg. John Samuel Charlton, from 63rd Foot, to be Surg.; Assist.-Surg John Henry Dundas, from 52nd Foot, to be Assist.-Surg.—69th Foot: Assist.-Surg. John Bathurst Thomson, M.D., from the 17th Foot, to be Surg.; Arthur Stewart Willocks, gent., to be Assist.-Surg.—76th Foot: Assist.-Surg. Henry Cooper Reade, from the Staff, to be Surg.; James Crerar, gent., to be Assist.-Surg.—Hospital Staff: Assist.-Surg. William Rutherford, M.D., from the 62nd Foot, to be Assist.-Surg. to the Forces, vice Reade, promoted in the 76th Foot.

THE PASSENGERS ACTS.—It having been deemed expedient that the act of the 10th and 11th Victoria, cap. 103, which was passed in the last session of Parliament, to amend the act of 5 and 6 Victoria, cap. 107, for regulating the carriage of passengers in merchant vessels, should, as well as the last-named act, be delivered to the masters of ships for the information of the passengers, and that for this purpose the two acts should be printed together, and issued in lieu of the publication of the act 5 and 6 Victoria, cap. 107, forwarded to the collectors and controllers at the several ports of the kingdom in the month of October, 1842, those officers have received a notification from the Commissioners of the Customs that a supply of the new publication will be forthwith transmitted to their respective ports, and that they are to take care that the provisions of the acts be duly carried into effect so far as they are concerned.

DISCOVERY OF ANCIENT RELICS.—In digging through the Castle-hill for the continuation of the Ely and Huntingdon Railway to the Great Northern, the workmen, a few days ago, threw up a very perfect skull and several bones, as also a piece of iron having the appearance of a spear head, and a coin or two; it is most likely as they advance towards the centre some other relics of a bygone age will be discovered. About forty years ago, a human skeleton in a stone coffin was dug up on the hill where the windmill stands. Of the foundation-walls of the castle itself, no traces have as yet been found; great part of the hill through which the line has yet advanced is of a fine gravel soil, and appears never to have been disturbed. It may be interesting just now to know that the castle must have been of a very early date, for it is stated, on the authority of Camden, that in the year 917 King Edward the Elder built it anew; and David the Scot, to whom King Stephen gave the borough, about two hundred years afterwards enlarged it with many works, and from its commanding eminence and position it must have been a place of great strength, and the river running at its base rendered it easily surrounded with water; the outline of the deep fosse or ditch being still clearly discernible. It was utterly destroyed by Henry II., not only from its having become a retreat for seditious rebels, but from the frequent contentions for its possession between the Scots and the family of St. Lize, to whom it once belonged. It is probable that this destruction took place about 1175, having been surrendered to the

King in person in 1174: for in the former year Henry caused most of the castles which had belonged to the rebel barons to be dismantled or levelled to the ground. Some of the fragments were standing in the time of Speed the historian, about four hundred years afterwards.—*Cambridge Independent Press.*

SINGULAR MAGNETIC ATTRACTION OF MUD.—Sir A. Mackenzie was the first to notice the attractive power of the mud at the bottom of some of the lakes of North America, which is sometimes so great that boats can with difficulty proceed along the surface. This extraordinary fact is thus stated:—"At the portage or carrying-place of Matroes, on Rose Lake, the water is only three or four feet deep, and the bottom is muddy. I have often plunged into it a pole twelve feet long, with as much ease as if I merely plunged it into the water. Nevertheless this mud has a sort of magnetical effect on the boats, which is such that the paddles can with difficulty urge them on. This effect is not perceptible on the south side of the lake, where the water is deep, but it is more and more sensible as you approach the opposite shore. I have been assured that loaded boats have often been in danger of sinking, and could only be extricated by being towed by lighter boats. As for myself, I have never been in danger of foundering; but I have several times had great difficulty in passing the spot with six stout rowers, whose utmost efforts could scarcely overcome the attraction of the mud. A similar phenomenon is observed on the Lake Zagina, where it is with difficulty that a loaded boat can be made to advance, but fortunately the spot is only 400 yards over." This statement has received confirmation from Captain Back and others during the arctic land expeditions.

BOTANICAL SOCIETY OF LONDON. — Friday, September 3.—J. E. Gray, Esq., F.R.S., president, in the chair. Donations to the library were announced from Dr. Steele and the Rev. G. H. Stoddart. British plants had been received from Dr. Dickie, Dr. Dewar, Mr. Fitt, and Mr. Maw. Mr. Alexander Irvine, of Guildford, Surrey (honorary secretary of the Surrey Natural History Society), and Mr. G. Maw, of Richmond, Yorkshire, were elected members. Mr. James Hussey presented a specimen of the Phalaris from a field near Swanage, Dorsetshire, found by him in July last, reported as Phalaris utriculata (Linn.) in "The London Journal of Botany," September, 1847, but which Mr. Hewett Watson considers to be perhaps rather Phalaris paradoxa (Linn.), of which he possesses no authentic specimen for comparison with the Dorset example. Mr. Borrer presented a specimen of Malva verticillata (Linn.), (see "Phytologist," vol. 2., p. 934). Read "Description of Hieracium heterophyllum" (Bladon's MSS.), by Mr. James Bladon.

EFFECTS OF COFFEE ON SULPHATE OF QUININE.—M. Desvouves having made known the fact that an aqueous infusion of roasted coffee destroyed the bitter taste of sulphate of quinine (a fact, by the by, which has been long known in Martinique and elsewhere), M. Martin was of opinion that some investigation should be had on the nature of the reaction of these two substances on each other, before medical men employed coffee as a vehicle for quinine, and, accordingly, made some experiments on them. On mixing the quinine in powder with coffee a reaction was instantly caused; part of the sulphate of quinine united with the tannin of the coffee, with which it formed an insoluble compound; another portion of the salt mixed with the fatty oil and vegetable extractive into a pasty mass; and a third portion combined with the free acids always found in infusion of coffee. M. Martin found that coffee was not the only infusion that precipitated the solutions of sulphate of quinine; tea also formed insoluble compounds with it, and a marked difference could be perceived in the action of this mixture from that of infusions of indigenous plants. The infusion of tea of good quality contains much tannin, as is shown by a few drops of a solution of sulphate of quinine, while the precipitate is almost nothing when added to adulterated tea.—*Journ. de Chimie Médicale.*

WEATHER PREDICTIONS.—Every one who is dependent on the weather for success in his calling, whether it be in the garden or the farm, must hail with delight any approach to correct predictions respecting it. The principles of astro-meteorology, as explained by Mr. White, and his predictions founded thereon, have corresponded, in most instances, if not in all, with the actual state of the weather; and no doubt many, like myself, entirely unacquainted with that branch of physical science, are beginning to think it may be possible to foretel, with tolerable certainty, the sort of weather we may expect for a season, or even seasons. The advantages of such predictions to the cultivator would be in no way inferior to the brilliant discoveries of chemistry, or the vital and important knowledge which physiology discloses; for, looking at the nature and composition of vegetable substances, and also the nature and composition of the surrounding atmosphere, we see at once how much the vegetable substance is dependent on the surrounding atmosphere for its growth and perfection. If, then, the state of the atmosphere can be predicted, on sound scientific principles, what a glorious field lies open for the exercise of talented scientific minds! Is it too much to hope that science, assisted by data and experience, may yet be able to benefit mankind, in no small degree, by predictions that can be relied on? How many erroneous ideas would thus be dispelled; and one more proof would be added to man's knowledge of the infinite power, wisdom, and goodness of the Great Author of all things.—*J. Gray, Datchet; Gardeners' and Farmers' Journal.*

THE CRATER OF ETNA.—The main crater is about five hundred feet deep at this time. So say the guides; but I think this must be measured down the slope of the funnel. I could not, however, see to the bottom, owing to volleys of sulphureous smoke whirling up ever and anon, accompanied by a rumbling noise, and occasionally by a slight vibration of the ground underfoot. Here I found amidst warm ashes, on the slope of the crater within, heavy crystals of ice set all at one angle, and curved like sharks' teeth. I picked up one bit as big as a walnut, and asked the guide if he could account for its presence. Far be it from him to give a "rationale" of any thing of the sort: it would derogate from the dignity of Etna. It reminded me of a chemical experiment played off by a French *savant* at one of the late "Scienziati" meetings. He made water freeze in a red-hot cup. The silver of platina being brought to a red heat, a few drops of water are thrown in, which do not evaporate, but jump about. Sulphuric acid is now poured in, which, in the act of boiling, produces so intense a cold by the disengagement of its latent heat that the drop of water at once turns to ice. I opine the chemical process here to be the same, only on nature's grand scale. The morning mists supply the moisture, and within the crater there is no lack of sulphureous mixture boiling as in a retort; hence, as hot fumes ascend, the crystals of ice are precipitated. If any one reject this solution of mine, let them find a better, remembering that they are to account for pieces of ice forming on a bed of warm ashes. This principle of disengagement of latent heat may also help to account for the severity of the cold felt on Etna, which is far greater than is due to its elevation. I believe the summit of an Alp at the same level is not so cold, though in a more northerly latitude. A Russian, who ascended the mountain a fortnight before I did, was perfectly amazed: he said he never felt, even in St. Petersburg, such peculiar sensations of cold. There lay another smaller crater not far off, with a cauldron of flames at its bottom; but the sides of this cannot be descended with safety. We paced a few yards down the interior of the big one, but I was never fond of breathing sulphur matches, so did not go far.—*Francis's Italy and Sicily.*

Some very curious experiments were performed a few days ago in the gardens of a gentleman residing in the road to the north of the Regent's-park, by Mr. Milton, of Great Marylebone-street, who is well known as the author of "The Practical Beekeeper," by the application of ether to beehives, in order to reduce the bees to a state of stupefaction whilst the comb and honey were removed. The apparatus used was very simple. The ether was placed in a vessel, to which a flexible tube was affixed, which was introduced beneath the hive (a straw one) through a small hole in a platform on which the hive was placed. The glass vessel was then placed in a larger vessel of warm water, by which the vapour was subtilized. In seven minutes the vapour completely stupified the bees, who fell inanimate to the bottom of the hive. The hive was then removed. The atmospheric air revived the bees in about ten minutes, and in a short time after they were fully recovered. The same effects were then produced by the fumes of burnt nitre in another glass hive. The stupefaction of the bees was more immediate, but they recovered likewise on exposure to the atmospheric air. Another experiment was tried on a third hive, by igniting the species of dried fungus called a "powder-puff," and the result was similar. The use of ether, however, appeared more tractable, the strength being more capable of regulation than that of either the nitre or the "powder-puff." It was, moreover, more cleanly, and less likely to occasion accidents. The honey is not likely to be affected by the vapour of ether. It is so extremely volatile that its powers are dispersed by the atmospheric air almost immediately. The great advantage is the simplicity as well as the efficacy of the application, and all apiarians will acknowledge themselves indebted to Mr. Milton for his introduction of a mode of obtaining honey, and at the same time of preserving the bees, superior to any yet made use of.—*Times*

OBITUARY.—At Spa, on the 29th ult., aged 61 Thomas Beard, Esq., M.D., formerly of the Royal Regiment of Artillery. He died universally respected and lamented, after a residence in the above town of 21 years.—Aug. 12st, at Ormskirk, much and deservedly respected and regretted, aged 66, Mr. Ed. Houghton, surgeon, for upwards of forty years senior surgeon to the Dispensary.

MORTALITY TABLE.

For the Week ending Saturday, Sept. 4, 1847.

Causes of Death.	Total.	Average of 5 Summers.
ALL CAUSES	1051	940
SPECIFIED CAUSES...	1049	935
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	351	226
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	122	103
Diseases of the Brain, Spinal Marrow, Nerves, and Senses.............	138	157
Diseases of the Lungs, and of the other Organs of Respiration	202	226
Diseases of the Heart and Blood-vessels..........	27	25
Diseases of the Stomach, Liver, and other organs of Digestion	101	94
Diseases of the Kidneys, &c.	7	8
Childbirth, Diseases of the Uterus, &c.		10
Rheumatism, Diseases of the Bones, Joints, &c. ..	10	7
Diseases of the Skin, Cellular Tissue, &c.		2
Old Age	43	50
Violence, Privation, Cold and Intemperance....	40	

No. 416. **SUMMARY.** Sept. 18.

SUGGESTIONS

FOR A MORE SIMPLE ARRANGEMENT OF THE

MATERIA MEDICA,

BASED ON ITS PHARMACEUTICAL AND THERAPEUTICAL RELATIONS.

By GEORGE LEITH ROUPELL, M.D.

Cantab., F.R.S., Fellow of the Royal College of Physicians, Physician to St. Bartholomew's Hospital, Lecturer on Materia Medica at the College of St. Bartholomew's Hospital.

(Continued from p. 561.)

LECTURE IX.

My third order of the organic materia medica is composed of

Drugs which owe their Efficacy to Astringent Matter.

These drugs are all derived from the vegetable kingdom, and produce marked and characteristic effects. They corrugate the tongue, and give a peculiar sensation of harshness and roughness to the palate. They check excessive discharges from the body during life, and after death toughen and solidify, and, as is well known, tan certain of the tissues.

M. Cavarra, indeed, maintains that the vegetable astringents act in the same way upon the living as upon dead animal matter, checking the discharges by condensing the solids, thus diminishing the calibre of vessels, contracting the muscular fibre, and producing a shrinking of the mucous membranes, which impedes the secretion from their glands. Modern chemistry has shown that this astringency is due to certain principles largely abounding in various parts of plants, but especially in the root and bark. These are tannin and gallic acid.

Tannin, the symbol of which is $\overline{Qt}$ + 3 aq. and formula $C^{18} H^{5} O^{9}$, is usually prepared by macerating gallnuts in ether, separating the heavier portion of the fluid, and drying the precipitate. It appears in masses of a yellowish colour, without odour, very soluble in water, and of an intensely astringent taste, having an acid reaction. It precipitates most of the organic alkalis, the carbonated mineral alkalis, tartar emetic, and gelatine, and strikes a green or a bluish-black colour with the persalts of iron. M. Pelouze states that in doses of three or four grains it produces vomiting, but that two or three grain doses cure leucorrhœa, gonorrhœa, and the most obstinate catarrhs; control hemorrhage from the uterus, hemoptysis, diarrhœa, and are useful in phthisis.

Gallic acid, more commonly employed in this country, is prepared by exposing tannin to the action of atmospheric air, or to that of either acids or alkalis, aided by heat, or by evaporating and purifying the lighter portion of the fluid when gallnuts are macerated in ether. When thus obtained, pure gallic acid crystallizes in brilliant white prisms, soluble in both water and alcohol. It blackens the persalts of iron, but does not precipitate gelatine. Gallic acid, in doses of from one to five grains, is of use in passive discharges, whether of blood, mucus, or perspiration.

I shall divide this class into two orders—those which precipitate the persalts of iron of a green colour, and those in which the precipitate is of a bluish-black. This difference in colour is sufficiently marked. There are, however, other differences: in the first place, the tannin in these is nearly free from gallic acid; and in the second, it appears that the precipitate formed with albuminous substances varies, according to M. Mialhe, in several important particulars. We have, then, to consider—

39. Tannin α, precipitating persalts of iron green, as contained in—
Acacia catechu.
Uncaria gambir.
Pterocarpus erinaceus.
Cinchona.
Krameria triandria.
Coffeæ arabica.

39. Tannin β, precipitating persalts of iron of a bluish-black colour, as obtained from—
Quercus infectoria.
Quercus pedunculata.
Ulmus campestris.
Tormentilla erecta.
Uva ursi.
Rosa gallica.
Punica granatum.

IV. Drugs which owe their Efficacy to Fixed Oil or Fatty Matter.

Oily substances or fatty matters are obtained both from the animal and the vegetable kingdoms. It will not be necessary at this time to prove the identity of the principles thus obtained.

These substances are important in dietetics, in pharmacy, and therapeutics.

The absorption of fatty matters would appear to be due to the action of the alkalis in the intestinal canal; if given in larger quantity than can be acted upon by these secretions, they would seem to traverse the alimentary tube, lubrefying it, and gently exciting the peristaltic movements. Given too long, oils are said to congest the liver, the kidneys, and the lungs, and to occasion concretions like cholesterine in the bowels. Some of the oils are actively aperient. The changes which result on the combination of alkalis and certain metallic oxides with fatty matters are pharmaceutically important. The action of alkalis, regarding oils and fat as the union of certain organic acids with the oxide of glycerule, is to decompose this compound, the alkali uniting with the acid, and liberating the oxide of glycerule. The acids are the stearic, the margaric, and the oleic. The compounds of the oxide of lead with the oleic and margaric acids form the basis of almost all medicinal plasters.

Oils may be divided into two classes, drying and fatty:—

40. Oils α, drying, obtained from—
Linum usitatissimum.
Croton tiglium.
Ricinus communis.
Jecur aselli.

40. Oils β, fatty, obtained from—
Amygdalus communis, amara.
Olea europæa.
Lastræa filix mas.

40. Fats α, obtained from—
Lauri baccæ.
Theobroma cacao.
Myristica moschata.
Avoira elais.
Sus scrofa.
Ovis.
Physeter macrocephalus.

40. Fats β, obtained from—
Moschus moschiferus.
Castor fiber.
Apis mellefica.

V. Drugs which owe their Activity to Resinous Matter.

Resins abound largely in, if they do not belong exclusively to, the vegetable kingdom. They are found deposited in wood or dissolved in essential oils. Resins vary much in their characters. Some are hard, others soft; some soluble in alcohol and ether, others are insoluble in these menstrua. A certain number have the properties of acids, others again are neutral and do not combine with bases. The acid resins decompose the carbonated and dissolve in caustic alkalis. According to the most modern view, resins are first acted upon by the alkaline secretions in the intestinal canal previous to their absorption. The compound formed by the union of an alkali with a resin is called a soap, but it differs in several respects from a true soap. Resins may be generally described as solid substances, brittle, semi-transparent, coloured; bad conductors of heat, and non-conductors of electricity. They are heavier than water, are composed of oxygen, hydrogen, and carbon, are easily inflammable, burning with a smoky flame; they soften in boiling water, but require a higher temperature to melt them.

They are soluble both in fixed and volatile oils, and in combination with various substances, both organic and inorganic, constitute our plasters.

Fossil resins, there can be little doubt, are derived from extinct vegetation.

I shall assume, as a basis for subdivision of this class, certain natural combinations; such, for example, as that of an essential oil; gum in addition to an essential oil; and still further, in addition, benzoic acid, forming the true balsams.

41. Resin α, as contained in—
Guiacum officinale.
Pistacia lentiscus.
Euphorbium officinarum.
Daphne mezereum.
Capsicum annuum.
Polygala senega.
Ipomœa purga.
Convolvulus scammonia.
Cannabis sativa.

41. Resin β, as contained in—
Pinus plaustris, balsamea, sylvestris.
Abies excelsa.
Pistacia terebinthus.
Copaifera multijuga, &c.
Piper cubeba, nigrum, longum.
Boswellia serrata.
Amyris elemifera.
Zingiber officinale.
Anacyclus pyrethrum.
Canella alba.
Succinum.

41. Resin γ, as contained in—
Hebradendron gambogioides.
Balsamodendron myrrha.
Ferula asafœtida.
Sagapenum.
Galbanum officinale.
Dorema ammoniacum.

41. Resin δ, as contained in—
Rhus toxicodendron?
Styrax benzoin, officinale.
Myrospermum peruiferum et toluiferum.

Under the head of resins it may be remarked that I propose to treat of the various products of heat upon this class of bodies, with other vegetable juices, as exemplified in the combustion of pine wood in the manufacture of tar. This will include the preparations of tar, petroleum, creosote, &c.

The sixth class in my arrangements is composed of

VI. Drugs which are chiefly Active, through the Presence of an Essential Oil.

Essential oils are principles with marked properties, have an odour more or less agreeable, a pungent, acrid taste. They are highly inflammable, their vapour taking fire on the approach of a burning body. They abound in vegetables, almost all parts of which occasionally secrete them; the seed, however, and the flower, with the leaf especially, contains them. Distillation and pressure are the means by which the essential oils are procured, some of which are lighter, others heavier, than water. They are mostly fluid, but in some few instances appear in a solid from. By exposure to the air they become converted into a resin by the absorption; the idea, however, formerly entertained, that essential oils were resins imperfectly oxidized, is not now considered as tenable; still they are often combined in nature, as has been already shown. They vary in composition: some contain oxygen, hydrogen, and carbon; others contain no oxygen; a few are differently composed, as the oil of bitter almonds or of mustard. They are all soluble in alcohol, ether, and fixed oils, and they are soluble to a certain extent in water. Taken internally, they are powerful stimulants; applied to the skin, they quickly excite the vessels, are rubefacients and vesicants. The blistering principle of the cantharides would appear to have its nearest alliance with the essential or volatile oils. The principal sources of these bodies not yet alluded to are—

42. Essential oil α, as obtained from—
Ruta graseolens.
Cochlearia armoracia.
Origanum vulgare.
Cuminum cyminum.
Rosa centifolia.
Mentha piperita, sativa, pulegium.
Lavandule spica.
Rosmarinus officinalis.
Pimpinella anisum.
Anethum graveolens.
Feniculum dulce.
Coriandrum sativum.
Carum carui.
Daucus carota.
Melaleuca minor.
Cinnamomum zeylanicum, cassia.
Caryophillus aromaticus.
Myristica moscata.
Eugenia pimenta.
Valeriana officinalis.
Sassafras officinalis.

42. Essential oil β, as obtained from—
Citrus medica, aurantium.
Juniperus communis, sabina.

42. Essential oil γ, as obtained from—
Asarum europœum.
Sambrucus nigra.
Laurus camphora.
Cantharis visicctoria(?).

42. Essential oil δ, as obtained from—
Amygdalus amara.
Sinapis nigra.

I shall here conclude my proposed arrangement of the essential oils, and of substances allied to them. It is evident that the subdivisions have reference either to the chemical composition or to the aspect of the substance in question,—properties which it is important should be borne in mind, whether we regard the preparation of these bodies or their medicinal use.

A COURSE OF LECTURES ON SURGERY,

BY

SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London Consulting Surgeon to London University Hospital, &c.

Lecture XV.

Gentlemen,—In my last lecture I spoke briefly of boils; in some respects carbuncles are analogous to them. The appearance of the carbuncle is generally preceded by great heat and much pain in some parts of the body, and presently several vesications arise, attended with a violent burning and itching pain. The base of this affection is very deep, and widely spread in the cellular tissue, so that where you have a superficial extent of two inches the base may measure six inches in diameter. Towards the centre it becomes of a dark red colour, but near the edges it is much paler. If allowed to go on for a time, the skin at the apex will rise, becoming at the same time very thin and easily broken, and, as the itching pain is excessive, it often is removed by the scratching of the patient. Out of the opening thus made a thin brown matter exudes, or a whitish matter tinged with blood, and an eschar is seen. The size of carbuncles varies very much. I have in my experience found them as large as an ordinary-sized dinner plate. They differ from boils chiefly in this, that it has no core in the centre, and instead of suppurating they progress very rapidly to a gangrenous termination under the skin; unlike boils, they generally attack the old, and these carbuncles have a peculiar feel, reminding one of brawn. Sometimes sloughing takes place very extensively under the skin when no sign of mortification can be seen. The constitutional disturbance is often very great, especially when the carbuncle appears in persons in a typhoid state; the patient is restless and pale, and complains of headache; the tongue is very white, or else of a deep red. He is, perhaps, delirious, and has rigors, and a chilly feeling comes over him; he loses appetite, has difficulty of breathing, and is low and fainting. When the carbuncle occurs in old persons whose constitutions have suffered from excess, as is often the case, the disturbance becomes so great as frequently to endanger the whole system. Generally we may consider the danger to be in proportion to the size and locality of the tumour, their number, the age of the patient, and, of course, the state of the constitution. With respect to the treatment, the grand point is to promote the free escape of the sloughs and matter from the tumour at as early a period as possible. In order to this, a free incision must be made; and when this has been done, and time has been allowed for the detachment of the dead skin to advance, it will be advisable to complete the separation with a pair of scissors. Before the opening is made no applications are so beneficial as emollient poultices, and after the operation they are far better than the lotions and injections which some have employed. The poultices should be changed frequently, on account of the fetor of the discharge. When the sloughs have come away, and the internal cavity exhibits a red colour and granulates, the poultices may be discontinued, and a pledget of soft lint and some unirritating ointment should be substituted, secured by the compress and bandage.

The treatment of this disease does not consist in much bleeding or depletion, although I have seen leeches employed with advantage, and of course it is right to clear out the bowels with mild purgatives: but such is the prostration of the system, that tonics and stimulants are generally more in place. The local treatment is often more important than the general and constitutional. An early incision—crucial incision is of first importance; it gives quicker relief than any mere internal means can afford. Sometimes, too, you must support the constitution by bark, ammonia, camphor, wine, and ether; these are the principal medicines which the surgeon can resort to. You must not neglect diet; allow the patient to take wine and brandy now and then. When you have made the incision, you often find that the dead cellular tissue, which has so much to do with the maintenance of disease, will not readily come out, and you must then use a little pressure, but not, however, so much as to put the patient to immense pain; perhaps you will get it half out the first time, and the rest you must leave to the poultice. The best applications you will find to be warm emollient poultices. There are some who put confidence in local stimulants. Sir Astley Cooper was very partial to use oatmeal poultice mixed with port wine, to be used when the sloughs are slow coming out; and I do not deny that it may be very rational to employ these stimulents under some circumstances. If you see that a stimulant will be useful, you will not be at a loss to meet with one for your purpose; it is when the slough lies deep and the carbuncle is old that they will be most useful.

Another gangrenous inflammation is called the malignant pustule; it appears, at first, as a small vesicle, containing a bloody serous fluid, and under it is an induration which produces sloughs; it will destroy the cellular tissue and the soft textures of the body in twenty-four hours. It is not circumscribed like the boil, and is more typhoid; it is remarkable as occurring in persons who follow particular trades; and you will understand why this should be when you learn that it arises not like the carbuncle and boil, from internal causes, but from a specific contagion, such as from contact with cattle affected with contagious disease. Thus it is found in tanners, butchers, drovers, and shepherds, and those who have to do with cattle. Baron Larrey relates that, in the campaigns of the French army in Italy, the soldiers were attacked with it in consequence of eating the flesh of cattle which had been infected; it is, however, generally produced by contact of the poisonous substance at some part of the patient's

body, which is abraded at its external surface. A cook in skinning a hare may prick her finger, and this may be followed by what many excellent surgeons think is malignant pustule; but whether any infectious matter is introduced into the wound, or whether the bad consequences are the result of a bad habit of body, may be very doubtful. This is a kind of gangrene which does not admit of antiphlogistic treatment: for in the beginning the patient's strength is very low, and there are frequent syncopations coming on; the patient has pain about the region of the heart; coma and delirium are present, and the symptoms are most urgent and severe. The local treatment consists in making deep incisions, and in the application of strong caustics; and, where the pustule is small, it may be well even to excise it entirely: following this up by stimulating dressings. The best internal means are the exhibition of bark, quinine, dilute sulphuric acid, and other tonics and stimulants, together with opium.

There is one form of inflammation which is much more necessary to be treated of, because it is much more common: I mean erysipelas—a disease which often baffles the skill of the best operative surgeons. He performs his operation with the greatest dexterity, but afterwards inflammation comes on, spreads very fast, and great constitutional disturbance takes place. It is found that, in particular places, at different seasons of the year, persons are more liable to it than others. There are some wards in hospitals of this city which are notorious for the ravages of erysipelas. Every one who has been much at the Borough hospitals knows how much mischief has been done by erysipelas there. It is a disease of the skin, the cutaneous tissue, and the cellular membrane beneath; it is always characterized by a great deal of redness, and also by a disposition to spread, and in a very short time to cover a large surface.

It is divided into three varieties, and these have themselves been subdivided: they are, simple, phlegmonous, and œdematous erysipelas. It is a common question at the examination of the College of Surgeons—What is the colour of erysipelas? The answer is, that simple erysipelas is generally of a bright red, smooth and shining, but it differs in shade, though it is never so dark as in the phlegmonous kind. When we touch the parts a white spot is seen, which soon disappears, showing how quick is the circulation in the part. When a little time after you apply your finger, you perceive it has lost some of its suppleness; although the alteration may not be very great, yet it is plainly perceptible. The pain is a pricking and irritating sensation, which afterwards becomes an intense burning pain. Then, with respect to the redness, instead of being diffused, as in some other inflammations, it terminates abruptly, not fading away, as in the phlegmonous kind. About the third day vesicles make their appearance: they are small, though some cases have them larger; and about the sixth day these vesicles burst, and when they have discharged their contents scabs form in their place. It is the nature of erysipelas to spread very fast; but, though it will spread very much in one direction, it will at the same time be getting well in another; the skin peels off (for erysipelas ends chiefly in resolution), and another incrustation is formed, the pain of which is severe. You will find sometimes, when inflammation has been severe, suppuration taking place in some parts of the cellular tissue, and when the scabs fall off the skin is found in a healthy state. The constitutional disturbance is often severe, and sometimes fatal, even in simple erysipelas. The tongue is covered with white fur, and the pulse is quick and weak—weaker than in phlegmonous inflammation. The patient suffers with chills, and where it comes with fever, the rigor is very severe. If we except gout, mumps, and rheumatism, there is no other disease which attacks so suddenly other parts; it will frequently fasten upon the internal structure of the body.

With regard to the causes of erysipelas, I told you that it was sometimes an effect of febrile disturbance of the whole system. We have found it following mechanical injuries and surgical operations baffling the skill of the surgeon. There are some parts of the surface more disposed to erysipelas than others; for instance, the skin of the face and covering of the head. At some periods of the year, too, we found that some patients are more liable to erysipelas than at others, and any operations which may be required at this season will be undertaken with reference to the disposition to erysipelas.

I attended a lady who had a tumour on the nose, which was rather a drawback upon her appearance. I told her she had better not have it taken out; she, however, went to Sir Astley Cooper, and he took it out at once in his parlour. She was attacked by erysipelas, and died in eight days afterwards. I removed a tumour once off the parotid gland, and, though the operation was easily performed, the patient died of erysipelas a week after. You are to remember, then, that the skin of the neck and face, and scalp, are especially liable to erysipelas, and surgical operations are frequently made void by this circumstance. Yet you must remember that, if these persons had not been in a bad state of health, they probably would not have been attacked with erysipelas. I was saying that it follows mechanical and chemical injuries; fractures, also, and exposure to cold draughts, will bring on erysipelas when the person is in a bad state of constitution. It is said that it is sometimes contagious: it is certainly endemic, prevailing in certain districts; but whether it is contagious is a question difficult to answer. Unprofessional persons have no suspicion of its being contagious, and these are generally ready to take up an alarm of that kind. There have been cases brought forward by acute observers in which they have believed they have had evidence of the contagious character of this disease. You will find a paper by Dr. Wells in the "Transactions" of the Medical and Chirurgical Society, in which the advocates this view; and certainly there is a difference of opinion on this subject. I attended two cases in the same house—a gentleman and his servant—but whether the second case was brought on by infection, or by breathing the same air and living on the same diet, it is hard to say.

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.

By Professor MATTEUCCI, of Pisa.

Part XV.

CIRCULATION OF THE BLOOD.

The blood is of a bright vermilion tint in the arteries, of a dark red colour in the veins; it is a slightly alkaline liquid of from 1·0527 to 1·057 specific gravity, and holding in suspension globules of greater or less diameter; these globules are circular in the great majority of mammifera, and of elliptical shape in birds, reptiles, and fishes.

The quantity of the blood varies in the different classes of animals, and its weight seems to stand in a certain ratio to that of the animal. Valentin has given us the following ingenious method to determine the total quantity of the blood:—Withdraw a small quantity of blood from an animal by means of venæsection, and determine the exact proportion between 100 parts of the water and the solid matter of the blood. Insert now a given weight of water into one of the bloodvessels of the animal, and determine subsequently, again, the proportion between 100 parts of the water and the solid matter of the thus diluted blood. From these data the total quantity of the blood may be readily calculated.

The quantity of blood contained in the human body amounts, on an average, to from twelve to fifteen kilogrammes, which is to the weight of the body as 1 : 5.

The heart of an adult contracts from seventy to seventy-five times per minute; the number of pulsations varies with the age, the sex, the constitution, individual idiosyncrasies, the class to which the animal belongs, and the pressure of the atmosphere. Thus we count from 130 to 140 pulsations in new-born infants; from 20 to 24 in fishes; 60 in the frog; from 100 to 140 in birds. Parrot found the number of his pulsations amount to 110 per minute, at an elevation of 4000 mètres above the level of the sea, instead of 70, the usual number with him on the level, or but slightly above it.

We now come to the velocity of motion of the blood. The researches made on this subject may be divided into two catagories, viz.—1, as regards the time which the blood takes to pass through the whole of the circulatory system; and 2, as regards the respective velocity with which the blood passes through the various organs constituting this system, viz., the arteries, the capillaries, and the veins. Hering, Poiseuille, Piria, and the author have made several experiments to determine the velocity with which the blood passes through the whole of the circulatory system. These experiments were made as follows:—A solution of prussiate of potass was injected into one of the jugular veins of a horse, and blood drawn at the same time from the opposite jugular: the blood drawn was found to contain traces of this salt from twenty to twenty-five seconds after injection. Poiseuille observed, in the course of his experiments, that the injection of the prussiate of potass, and certain other substances, causes no variation in the number of the pulsations nor in the force of the contractions of the heart; mixing the prussiate of potass with solution of acetate of ammonia, he found traces of the former salt in the blood after eighteen seconds; mixing it with nitrate of potass, he found the prussiate after twenty seconds; the addition of alcohol, on the contrary, retarded the appearance of the prussiate by about twenty seconds. Poiseuille has ascertained, in the course of important researches on the flow of liquids, such as water, serum, &c., in the capillaries, that these substances act in the latter absolutely as in the circulatory process, which shows that it is upon the velocity with which the blood passes through the capillaries that the action of the alcohol, nitrate of potass, and acetate of ammonia is exercised. It would be a great mistake, however, to suppose that it is by any influence of this description that many other substances introduced into the circulatory current act: many of them exercise their action upon the nervous force, and thence upon the contraction of the muscular fibre of the heart; thus a small quantity of infusion of coffee injected into the veins of a dog suffices to augment instantly the force of the cardial contractions, whilst the injection of solution of opium, on the other hand, diminishes the energy of these contractions.

The author thinks that Hering's method of determining the velocity of the circulation is liable to objection, although the results obtained by this method are generally adopted as correct. The author thinks it would be more satisfactory if a small solid body of the same density with blood could be introduced into the one jugular, and should make its reappearance at the opening of the other. We know that two fluids susceptible of intermixing do so rapidly, and without the aid of motion; and that, though but a small quantity of one fluid be added to a large amount of another fluid, the presence of the former is very speedily detected in the whole mass of the mixture. Moreover, the injection of a fluid into the vessels is effected by means of a pump, and with considerable force, to overcome the opposing pressure of the blood; and we find that the intermixture of the injected fluid with the mass of the blood is promoted in direct ratio to the degree of force applied.

But we have another and more exact means to measure the velocity of the circulatory current, viz., the method of Hales, which deduces this velocity from the capacity of the ventricles and the number of cardial pulsations in a given period of time.

Hales measured the capacity of the left ventricle of the heart of the horse and other animals;

he found it to be of ten cubic inches, English, in the heart of a young horse; the weight of one cubic inch of blood being 267 grains, it results that the total weight of blood contained in the left ventricle is about six ounces. Assuming the ventricle to void itself entirely at each pulsation, there would thus be six ounces of blood expelled at every contraction, and it would, accordingly, require seventy-two contractions to accomplish the circulation of the thirty-six pounds of blood contained in the body of the horse. This gives a very different result regarding the velocity of circulation from that found by Hering: the heart of the horse making sixteen pulsations in twenty-five seconds, no more than eight pounds of blood are expelled in that time from the ventricle. It would be difficult to account for this marked difference in the result, were we to admit the correctness of Hering's figures.

Hales gives the following numbers:—Taking seventy-five as the number of pulsations per minute in adults, and from twenty-four to thirty pounds the weight of the total mass of the blood, and about two ounces as the amount expelled from the left ventricle at each contraction, it would require 192 pulsations, or about two minutes and a half, to accomplish the circulation of the whole mass. And even these figures are below the correct ones, as we can hardly admit that the whole of the blood contained in the ventricle is expelled at each pulsation.

We now come to the second point, viz., the respective velocity of the circulation in the different classes of vessels constituting the circulatory system. Assuming the section of the orifice of the left ventricle to be the same with that of the aorta, and the sum total of the sections of the several ramifications into which the aorta is divided, to give the same number, the same quantity of blood passing thus everywhere in the same space of time, the velocity would be equal in each vessel. But this assumption is not correct for the sections of the arterial and venous trunks, and the sections of their ramifications. The most simple observation suffices, on the contrary, to demonstrate that the sum of the sections of the small vessels, exceeds that of the sections of the large trunks. Thus the author found the diameter of the orifice of the aorta, in the heart of the ox, = to about 28 millimètres; that of one of the trunks = to 20 millimètres; and that of the other trunk = to 16 millimètres, while the venæ cavæ were found to have a total diameter of 76 millimètres. The well-known law of Castelli is to be applied to calculate the respective velocity of the blood at the several stages of the circulation; this velocity will invariably be in inverse ratio to the sections. If we could correctly and rigorously appreciate the proportions which the sections of the several vessels bear respectively to one another, it would be easy to determine the respective velocity of the blood in the several classes of vessels, provided we knew *exactly* the quantity of the blood expelled at each contraction by the left ventricle and the time employed in the expulsion.

We shall confine ourselves here to give an example how to determine the velocity with which the blood passes through the aorta; we adopt the figures given by Hales. The amount of blood expelled from the left ventricle of a horse is about ten cubic inches; the section of the aorta being about 1·036 square inches, the fraction $\frac{10}{1{\cdot}036}$ = 9·65 expresses the length of the column of blood penetrating into the aorta at every systole of the heart; and, as the number of cardial pulsations in the horse is 36 per minute or 2160 per hour, it follows that the column of blood thrown into a tube of the same diameter as the aorta would be, at the end of one hour, 1670 feet long. Considering that the systole lasts only one-third of the space of a pulsation, we have to multiply this by three, which gives a velocity of 83·5 English miles per minute.

Hales has endeavoured to determine experimentally the velocity of circulation in the capillaries. For this purpose he introduced warm water into the descendant aorta of a dog (by means of a long glass tube pushed into the artery). The pressure exercised by the liquid column was about equal to that which the blood has to support in this vessel. An intestine being laid bare and cut, the water was seen oozing out drop by drop from the capillaries. He varied the experiment, by dividing the vessels, approaching nearer and nearer to the aorta, and measuring at the same time the amount of water running in a given time from the several capillaries, of which he knew the diameter. The pressure of the liquid column was maintained constantly at the same point. The following are some of the resulting numbers:—342 cubic inches exuded from the capillary vessels in 400 seconds; from the mesenteric arteries the same quantity ran off in 140 seconds; from the crural arteries in 20 seconds. Although these figures do not by any means show the absolute velocity with which the blood passes respectively through the different vessels, yet they demonstrate clearly how much this velocity diminishes in proportion as the vessel is more distant from the heart. Notwithstanding the marked excess of the sum total of the sections of the branches over that of the trunks, it is certain that the circulation decreases in velocity, and proceeds far more slowly, than it would if all the partial sections were united into one vessel. This decrease in the velocity of the circulation is owing to the friction of the fluid against the walls of the vessels, the large folds, the numerous bends, and the resistance of the liquid column to the motion imparted to it.

The capillary circulation of the lungs of the salamander, and of the mesenterium and foot of the frog, may be studied under the microscope: the globules of the blood are seen to move with greater or less rapidity in the interior of the small vessels, in proportion as the section of the latter is greater or smaller.

(To be continued next week.)

DUMAS ON ORGANIC CHEMISTRY.
No. XXX.

(Continued from page 568.)

THE BONES—(*continued*).

THE TEETH.—The different parts of which the teeth are composed—the enamel, the dental bone, and the cement—present a composition very analogous to that of bone.

The *enamel* is a hard, smooth, and shining substance, which surrounds the dental bone as a kind of coating; this may be detached from the tooth by drying it at a temperature of 120° C. It contains more earthy salts than the other parts of the tooth. M. Berzelius analyzed the enamel of the human tooth and that of the tooth of the ox; the following are the results he obtained:—

	Enamel of man.	Enamel of the ox
Phosphate of lime with fluoride of calcium	88·5	85·0
Carbonate of lime	8·0	7·1
Phosphate of magnesia ..	1·5	3·0
Soda	—	1·4
Brown membrane adherent to the dental bone, alkali, water, &c.	2·0	3·5
	100·0	100·0

The *dental bone* forms the interior part of the crown and of the root; it is hollowed in the centre by a canal destined to receive the vessels and nerves which serve for the nutrition of the tooth. Its anatomical structure is analogous to that of bone, from which it is distinguished, in respect to its chemical composition, solely by a somewhat more considerable proportion of earthy matters. According to Berzelius, dental bone possesses the following composition:—

	Man.	Ox.
Cartilage and vessels	28·0	31·00
Phosphate of lime with fluoride of calcium	64·3	63·15
Carbonate of lime	5·3	1·38
Phosphate of magnesia	1·0	2·07
Soda with a little chloride of sodium	1·4	2·40
	100·0	100·00

The root and that part of the tooth which is simply covered by the gum, and which we call the *neck*, are surrounded by the *cement*, a peculiar osseous substance, of which the composition greatly resembles that of bone, properly so called. According to the analysis of M. Lassaigne, the cement contains:—

Animal matter	42·18
Phosphate of lime ..	53·84
Carbonate of lime	3·98
	100·00

M. Lassaigne has made some extended researches on the composition of the teeth in animals. The following are the results which he has obtained:—

Teeth.	Organic matters.	Phosphate of Lime.	Carbonate of Lime.
Of an infant, a day old	35	51	14
Of a child, 6 years of age	28·57	60·01	11.42
Of an adult man........	29	61	10
Of an old man, 81 years of age	33	66	1
Of an Egyptian mummy	29	55·5	15·5
Front teeth of a rabbit..	31·2	59·5	9·3
Molares of a rabbit	28·5	63·7	7·8
Molares of a wild boar ..	29·4	63	6·8
Tusks of a wild boar....	26·8	69	4·2
Tusks of a hippopotamus	25·1	72	2·9
Molares of a horse	29·1	62	8·9
Fore teeth of a horse....	31·8	58·3	10
Fore teeth of an ox	28·6	61	8
Teeth of an adder	30	76·3	3·7
Poison fang of a viper..	21	73·8	5·2
Teeth of a carp	35	49	16
Teeth of a shark	33·5	52·6	13·9

SHELLS.—Most insects are covered by a shell of considerable hardness, which is principally formed of a substance to which M. Odier has given the name of *chitine*. We also meet with this substance in the *elytra* of the *coleopteræ*. These organs must be acted on by a solution of caustic potass, which removes their albumen, extractive matters, and a coloured fatty matter, when there remains the *chitine* which forms a fourth in weight of the *elytra*. This substance is dissolved in dilute sulphuric acid, and, by the aid of heat, in nitric acid, forming a colourless solution. When exposed to a strong heat, it carbonizes without melting, or without yielding any ammoniacal products.

Hatchett found, in the shell of the insect, a considerable quantity of phosphate and of carbonate of lime, besides 26 per cent. in weight of a clear, yellow-coloured, animal substance, similar to cartilage.

The *shell* of the crawfish contains a peculiar colouring matter which has the property of reddening by boiling. According to MM. Macaire and Lassaigne, this substance may be isolated by acting on the shell by alcohol, and then evaporating the solution. There remains a red matter of a fatty appearance, insoluble in water, but very soluble in alcohol, ether, and in the oils. Caustic potass in like manner dissolves it, but does not form a soap with it. According to an analysis of M. Goebel, this fat is composed of 68·18 carbon, 9·24 hydrogen, and 21·58 oxygen. The same chemist found in the claws of this fish:—

Carbonate of lime	68·36
Phosphate of lime	14·06
Animal matter	17·88

According to M. Chevreul, the shells of the lobster and of the crab are formed of:—

	Lobster.	Crab.
Animal matter.. ..	44·76	28·6
Salts of soda	1·50	1·0
Carbonate of lime ..	47·26	62·8
Phosphate of lime ..	3·82	6·0
Phosphate of magnesia.	1·26	1·0

Shell of the Oyster.—MM. Bucholz and Brandes give the following as the composition of this shell:—

Insoluble animal matter	0·5
Carbonate of lime..	98·6
Phosphate of lime	1·2
Alumina (accidental)	2·0

Oyster shells are formed of nearly pure carbonate of lime: they may, consequently, be employed in the preparation of caustic lime; only, it sometimes happens that lime, thus prepared, besides some traces of phosphate, will also contain a little sulphuret, of calcium, arising from the sulphur of the animal matters.

BRAIN.—The brain is the nervous centre of the superior animals. We divide it into the *cerebrum* and the *cerebellum*. The cerebrum occupies the whole of the anterior and the postero-superior part of the cranium; the cerebellum occupies the postero-inferior part, and, in the adult man, constitutes scarcely the eighth part of the entire brain. The surface of the brain is uneven, and presents projections which have been denominated convolutions. When the brain is cut, we remark that the substance of which it is composed is not homogeneous, but that it is formed of grey and of white layers, which have been designated as the cortical and the medullary substance.

Vauquelin published, in 1812, "An Analysis of the Human Brain," which he found composed of:—

Water	80·00
White, crystalline, fatty matter (stearine)	4·53
Reddish, unctuous, fatty matter (élaine)	0·70
Albumen	7·00
Animal matter	1·12
Phosphorus	1·50
Acids, salts, and sulphur	5·15
	100·00

M. Lassaigne has arrived at results very similar to the foregoing; only, he made separate analyses, first, of the entire brain, then, of the medullary, and, finally, of the cortical substance Annexed are the principles which he met with in the brain of an idiot:—

	Entire Brain.	Cortical Substance.	Medullary Substance.
Water	77·0	85·0	73·0
Albumen	9·6	7·5	9·9
Colourless fatty matter	7·2	1·0	13·9
Red fatty matter	3·1	3·7	0·9
Extractive matters / Lactates	2·0	1·4	1·0
Phosphate of lime / Magnesia; oxide of iron	1·1	1·2	1·3
	100·0	100·0	100·0

John had previously remarked that the fatty matters predominated in the medullary substance. M. Chevreul was the first to point out the existence of cholesterine in the brain.

M. Couerbe, also, has endeavoured to isolate some of the fatty matters contained in the brain, and he has admitted the existence, in this organ, of the four following bodies:—

Stearoconote, a yellow, pulverulent, fatty principle.

Cephalote, a yellow, elastic, fatty matter.

Eléencephol, a reddish-yellow oil.

Cerebrote, the white matter of Vauquelin.

M. Frémy has pursued the same line of investigation, but he has adopted more perfect means of separation; the results of his analyses, though somewhat different to the foregoing, seem to be nearer to the truth. He has, at the same time, shown that the matters studied by M. Couerbe were mixtures, and not pure matters. The cerebral mass, according to M. Frémy, is formed by an albuminous matter mixed with various substances of a fatty nature; he found that the human brain contains:—

Water	88
Albumen	7
Fatty matter	5
	100

For the purpose of making a complete analysis we should cut the brain into thin slices, treat it, several times by boiling alcohol, leaving it in contact with this liquid for some days; then we should express it, rapidly pulverize it, and act on it first by cold, and subsequently by boiling, ether. The pulp left after this treatment is nothing more than coagulated albumen mixed with the coats of the vessels, &c.

The immediate principles obtained from these solutions, are—1. A peculiar acid body, called cerebric acid. 2. Cholesterine. 3. A fatty acid, named oleo-phosphoric acid. 4. Traces of oleine, margarine, &c.

Cerebric Acid.—To obtain this body, we react on the mass resulting from the evaporation of the ether by a fresh quantity of this menstruum we thus procure a white precipitate, which is to be isolated by decantation, and which, when exposed to the air, quickly becomes transformed into a wax-like, fatty mass. This precipitate contains cerebric acid combined with soda, oleo-phosphoric acid united with lime or soda, phosphate of lime, and albumen. This must be again taken up by boiling absolute alcohol, slightly acidulated by sulphuric acid. The sulphates, mixed with albumen, remain in suspension, and are to be separated by filtration. The cerebric and oleo-phosphoric acids become deposited on cooling. Cold ether takes up the oleo-phosphoric acid, whilst the cerebric acid is to be dissolved in boiling ether, and then allowed to crystallize.

The acid thus obtained is white, forming crystalline grains. It is dissolved in boiling alcohol. Like starch, it possesses the remarkable property of swelling up in water without dissolving. It melts only at a very elevated temperature—so great, indeed, as almost to cause its decomposition. It burns, giving out a characteristic odour, and leaves an acid charcoal difficult to incinerate. Sulphuric acid blackens it; nitric acid decomposes it very slowly.

Dr. R. D. Thomson has given another process for preparing this acid; he separates as much as possible the membraneous part of the cerebral mass; cuts the brain into small pieces, and then digests it, by the aid of a gentle heat, in about twenty times its weight of weak potass-ley; by rest, a very slight white precipitate is thrown down; he removes by decantation the limpid liquid, and pours some pure water over the deposit; when the liquid is clear, he again decants it, and boils the precipitate with tartaric acid. The surface of the mixture becomes covered with a white substance, which is to be removed. To extract from it the cerebric acid, he washes it with boiling water, dries it on a porous tile, exhausts the desiccated mass by ether, and crystallizes the residue in boiling alcohol. This acid contains:—

	Fremy.	R. D. Thomson.
Carbon	66·7	67·01
Hydrogen	10·6	10·85
Nitrogen	2·3	2·21
Phosphorus	0·9	0·16
Oxygen	19·5	19·41
	100·0	100·00

Cerebric acid combines with bases, and forms with them insoluble, or very slightly soluble, combinations. It is a very feeble acid, which, according to M. Frémy, greatly resembles some fatty acids and animal substances, which have the property of combining with bases, as albumen and fibrine.

Oleo-phosphoric Acid.—We have seen that the cerebric acid is precipitated on adding fresh ether to the product left by the evaporation of the ethereal solution; there remains, however, dissolved in the ether, a viscous substance, which contains oleo-phosphoric acid, frequently combined with soda. To purify it, we are to treat the product obtained by an acid, then react on the mass by boiling alcohol, and, on cooling, we shall have deposited impure oleo-phosphoric acid, which is to be freed of oléine and cholestérine, by washing in cold ether and alcohol, in which it is less soluble than are these principles. M. Frémy has not been able to obtain it perfectly pure and free from all cerebric acid, cholesterine, and cerebral oleine (*cerebroleine*).

Oleo-phosphoric acid is ordinarily of a yellow colour, like oleine; it is insoluble in water, and swells up a little in this fluid when boiling. It has a viscous consistence. When brought into contact with bases, it combines with them, and constitutes a matter possessing all the properties of the mass which we obtain from brain by means of ether. It burns in the open air, and leaves a very acid charcoal, impregnated with phosphoric acid.

By prolonged ebullition with water or alcohol, it becomes transformed into an oily matter, identical with oleine (*cerebroleine*), and into phosphoric acid: this decomposition is greatly accelerated by the presence of a free acid, and takes place without the intervention of the air. It, moreover, occurs in brains which have commenced to putrify.

Oleo-phosphoric acid contains about two per cent. of phosphorus. The bases transform it into oleic acid, phosphoric acid, and glycerine.

M. Frémy analyzed some cerebral oleine, and found in it numbers equivalent to those which M. Chevreul deduced from the analysis of the oleine of human fat. He has, moreover, proved in the brain the presence of oleic and of margaric acids.

Dr. R. D. Thomson extracted from the brain a substance crystallizing in beautiful flat prisms, and which does not resemble cholesterine; he has not obtained it pure; his analyses gave him:—

Carbon	from 81·9 to 81·5
Hydrogen	from 13·5 to 14·0
Oxygen	from 5·8 to 6·5

These numbers differ greatly from those furnished by cholesterine itself.

According to Vauquelin, the spinal marrow and the medulla oblongata offer a very analogous composition to that of the brain; only, they contain more fatty matter, and less albumen, extractive matters, and water.

Sometimes, but rarely, we find concretions in the brain; these are formed of the earthy phosphates, cholesterine, and animal matters. John met with one which contained 75 per cent. of phosphate of lime and magnesia, and 25 per cent. of animal matter. That which was analyzed by M. Morin, was formed of cholesterine, coagulated albumen, and earthy phosphates.

Lassaigne analyzed a cerebral concretion in a horse, which contained

Cholesterine	58·0
Coagulated albumen / Cellular tissue	39·5
Phosphate of lime	2·5
	100·0

Vauquelin further affirms, that the *nerves* possess a composition similar to that of the brain. They, however, contain a little less solid fat, and rather more liquid fat, than that organ. They swell up in boiling water; and, by ebullition in alcohol, we separate from them a liquid fat, which collects at the bottom of the vessel. A solution of caustic potass dissolves their albumen; the fatty matter forms with it an emulsion, and the *neurilemma* alone is left behind.

The *ganglia*, of which the structure is more compact than that of the nerves, contract in boiling water, and it is only by prolonged ebullition that we can succeed in softening them. Caustic potass gradually dissolves them, when aided by ebullition.

NAVAL APPOINTMENTS.—Surgeons: Pete, Niddrie, M.D., to the Asia; John Gallagher, to the Arab.—Assistant-Surgeons: Dr. Henry Richardson, to the Spider; Thomas M. Costello, to the Excellent; John H. B. Collings, to the Oberon; H. C. J. Wilson, to the Asia; Richard Butler, to the Arab; James J. Ayerest and William Evans (b), to the San Josef; John Cotton and Richard B. Power, to the Victory; William Domville, to Greenwich Hospital.

CHOLERA.—The *Augsburg Gazette* of the 9th inst. announces that the cholera had advanced from Kari to Tschilter and to Olti, eighteen leagues from Erzeroum. It was feared that this scourge would reach Taganrog, in consequence of the frequent communication between the latter port and Erzeroum.

ORIGINAL CONTRIBUTIONS.

FOREIGN PRACTICE.

Reported for the MEDICAL TIMES by ALFRED MARKWICK, Esq., Surgeon to the Western German Dispensary, and formerly Externe to the Venereal Hospital, Paris, &c.

ON STRICTURE OF THE INTESTINE IN HERNIÆ.—BY DR. LOUIS CHAPEL, OF SAINT MALO.

The subject of this paper is one in the history of herniæ to which but little attention has been paid, and of which we possess but few perfect cases. Are we to conclude from this that it is an affection of rare occurrence? The obscurity which existed, even till lately, relative to the seat of the strangulation, and which has now, under the influence of the beautiful and patient investigations of M. Malgaigne become removed, leads one to believe that by more attentive observation we should have been enabled to discover sooner this cause of accidents that have been hitherto but badly explained. The researches I have thought proper to institute have led me to the following results, with which I intend to preface the remarks I have to make on the case about to be recorded:—

In 1765 the question of stricture of the intestine in cases of hernia was considered by the Academy of Surgery, in consequence of a case that was laid before it by Ritsch, in which it was stated, "that the ilion was found as much constricted in two places, in the situations which had been strangulated by the ring, as if it had been forcibly tied with a piece of thread." This case, which Ritsch believed to be without a parallel, called forth similar instances that had been met with by Mertrud and Coutavoz, who, at the *post-mortem*, recognised a stricture at the point where strangulation had taken place.

Heister, in his "Institutions de Chirurgie," mentions that, after the operation for hernia, the patient may be seized with hiccough and vomiting; but he appears not to suspect that these symptoms may depend on stricture of the intestine. I met with no better success in looking through Arnaud or J. L. Petit.

John Hunter, in his "Treatise on Inflammation," states having found the intestinal canal closed by plastic lymph after a strangulated hernia.

Pelletan informs us, in his "Clinique Chirurgicale," that he had an unsuccessful case after an operation for strangulated hernia, owing to a stricture of the intestine.

Astley Cooper, who has varied his observations on hernia so much, does not appear to have given his attention to this point of pathological anatomy now under consideration.

Lobstein makes no mention of stricture of the intestine in his "Traité d'Anatomie Pathologique." Not so, however, with M. Cruveilhier, who alludes, in his "Essai sur l'Anatomie Pathologique," to the stricture and obliteration of the displaced intestine; he even divides the stricture into acute and chronic, and is of opinion that the continued pressure of an imperfect bandage may be the cause of it. (a)

Boyer, in speaking of the accidents that may follow an operation for hernia, says, "that there were no distinct signs to point out whether the continuance of the symptoms was owing to *stricture* or to strangulation of the intestine; but that it might be presumed to be due to either one or the other, when laxatives and antiphlogistic means were without avail."

"The *constriction* of the intestine within the ring is a fact admitted by all authors, and has been long since placed beyond a doubt by the case related by Ritsch. In a patient operated on by this surgeon, the symptoms continued after the reduction; on opening the body the cause immediately presented itself: that part of the alimentary canal which had been strangulated was found so constricted as to admit with difficulty an ordinary-sized quil. Other examples of a narrowing of the intestine remaining within the abdomen have since been recorded; I have myself met with some, but their nature appears to me to have been mistaken. *There is nothing organical or permanent about them.* They may be removed in a few seconds with the fingers, when we have them at command; a purgative generally overcomes them after the operation, and it would be cruelty to stretch the organ beneath in order to enable us to distend them from within outwards before the reduction is effected."—*Velpeau, "Nouveaux Elements de Médecine Oper." 2nd Edit.*

In a memoir on "Enterotomy of the Small Intestines," published by M. Maisonneuve in the "Archives Générales de Médecine," 1845, is contained an enumeration of the causes by which the intestine may be constricted. The author, after having alluded to a forcible constriction being practised on the coats of the intestines, adds that "this latter variety is the most frequent of all. When a loop of intestine has been submitted to the powerful constriction of a hernial ring, it frequently becomes the seat of an organical stricture, which prevents the free circulation of the fæcal matter, and which may be divided into primitive and secondary."

The authors of the "Nouveaux Elémens de Pathologie" merely mention the fact in question. "Generally speaking, they say the intestine is contracted in itself, and the course of the fæces is only impeded."

Lastly, M. Vidal (de Cassis) states, in the second edition of his "Pathologie Externe," that the displaced intestine sometimes becomes contracted; and he adds in another place, "that part of the intestine which has been constricted undergoes the most severe and rapid alterations. The first effect observed in it is stricture of the part strangulated. This stricture is the more powerful, and continues for a greater length of time after the cause has been removed, the longer the strangulation has lasted."

CASE 10.—A female, aged seventy-four, weakened by age, poverty, and disease, has occupied a bed as an infirm patient for nearly three years, in one of the medical wards of the Hôtel Dieu at Saint Malo. It was impossible to fix the patient's attention on the previous history of her complaint, or to ascertain the disease for which she entered the hospital. None of her relations knew that she had a hernia, and she herself perhaps was ignorant of it, until the 5th of August, 1846, when the surgeon was made aware that she vomited and complained of colic. Futile attempts at reduction were made on a tumour that was discovered on the right side. I saw the patient the following morning, and found her in the following state:—Face very pale, but not sensibly altered; pulse regular and apparently normal, from sixty-six to seventy in a minute; the extremities are cool; there is dyspnœa and frequent vomiting of thick matter resembling fæces much diluted with water. Strong pressure on the abdomen causes no pain to the patient. On examining the right inguinal region with my friend and colleague Dr. Behier, we detected a hard tumour, somewhat painful, extending in the direction of the fold in the groin, but rather below it, and about the size of a very large chestnut. I in vain employed the taxis; M. Behier did the same, but with no better success. She was ordered frictions with the extract of belladonna.

We again examined the patient at eleven o'clock. She then replied indifferently to questions; there was some prostration, but neither headache nor thirst; pulse sixty-six to seventy in a minute; skin cool; matter vomited similar to that in the morning; no pain in the abdomen. The taxis was again employed, but without success, and with some pain. She was ordered warm bath, and to remain in it two hours; laxative enema, and frictions with extract belladonna.

I tried, while the patient was in the bath, to reduce the hernia, but not succeeding, I recommended her, although not without some difficulty, to submit to the chances of an operation.

I made an incision on a fold of integument parallel to the length of the tumour, and, by dividing layer by layer the cellular membrane, I reached a tissue which I took for epiploon, but it was not so. On opening the sac a small quantity of a reddish-coloured serum made its escape. I passed the finger between the bowel and the sides of the sac, so as to destroy the adhesions that existed, and then directed it towards the hernial aperture, and endeavoured, by pressing down the intestines, to reach the strangulated part, but was unable to do so. I made tense the sides of the sac, and introduced a director with some difficulty between the intestine and the neck of the sac, on the inside of which I divided the stricture several times, together with Gimbernat's ligament. My finger then penetrated freely into the cavity of the abdomen. I examined the bowel, which I found much injected, and reduced it; the reduction being scarcely effected when a large quantity of serum several times made its escape. The usual dressing was applied.

On visiting the patient two hours after the operation, I found her in the following condition: Pulse regular, from seventy to seventy-four in a minute; countenance more satisfactory; no headache, and she has drunk without vomiting. The abdomen is supple and without pain; she has had no evacuation from the bowels. Two purgative enemas, ordinary tisane.

Passed a restless night on the 7th; the neighbouring patients state she was rather delirious. She has passed water once, and has had one stool. She does not complain of colic. Heat of skin moderate, pulse not frequent. There is neither thirst nor nausea. Continue the ordinary tisane, and a little milk and water granted as the patient desired it.

I was sent for at one o'clock in the afternoon, when I was informed by the nurse that since twelve she had had bilious vomiting, and passed several stools involuntarily. The features are much altered; the pulse is small and frequent, and the skin cold. The abdomen is neither tympanitic nor painful. To take an opiate draught, ice-water to drink, a quarter of a starch glyster to be administered, bottles of hot water to the feet.

At four o'clock I again saw the patient. The vomiting still continued. I examined the wound, but it presented nothing unnatural in appearance. The patient began to shiver as soon as she was uncovered. The limbs have regained their natural temperature; the pulse only seventy-four in a minute, and small. The abdomen is neither painful nor swollen. She continued in this state till midnight, when she expired.

Sectio cadaveris eighteen hours after death, in the presence of Dr. Behier, presented the following appearances:—A very small quantity of serum within the abdomen; the intestinal convolutions slightly injected; recent adhesions to a slight extent on a level with the right Poupart's ligament; some parts of the intestine adhere together, and to the abdominal wall. In the midst of these intestinal loops, which are of a dark red colour, I perceived a spot very strongly contracted, as if that part of the bowel had been submitted to the pressure of a ligature. To the touch it feels like a fibrous ring of not more than twenty-seven or twenty-eight millimètres in circumference; while the portion of intestine above it is as much as ninety-six millimètres, and that below it seventy millimètres. The intestinal mucous membrane in the neighbourhood of the stricture is slightly inflamed; there is, however, no ulceration either on it or on the serous membrane. The remainder of the digestive canal, as also the other viscera, presented nothing worthy of notice. The neck of the sac is thickened.

Such are the simple data which I considered it necessary to furnish in order to elucidate this case, which I consider interesting in more than one point of view. In the first place, let us see whether all authors agree as to the possibility of there existing a permanent obstacle to the pas-

(a) This was also the opinion of Garengeot, who thought that the pressure of a badly-constructed bandage might constrict the intestine.

sage of the fæces. One of our most justly celebrated surgeons, M. Velpeau, expresses himself in terms which no longer leave any doubt in the mind, when he says "that strictures of the intestines have nothing organical or permanent about them. They may be removed in a few seconds with the fingers, when we have them at command." I regret much to place myself in opposition to so distinguished a master as is Professor Velpeau, but the case above quoted is one against which all theories must fall. I do not deny that the transient diminution of the intestine is the most common form; but, as regards the existence of the permanent stricture, I appeal to the true observation of facts, which will not be wanting when the attention of surgeons has been more particularly directed to this point of surgical anatomy. The intestine which I held in my hand, and which my colleague Behier examined as well as myself, was thickened, hard, and fibrous to the extent of a few millimètres, the tractions to which it was submitted not altering in the least its diameter. "A more frequent lesion than the inorganic stricture," says M. Velpeau, in his "Médecine Opératoire," "is ulceration of the external surface of the intestine." Would not M. Velpeau imagine that, when the bowel is reduced, the process of cicatrization may occasion a diminution in the calibre of the intestine, which I conceive ought to be permanent? This is, at least, one way, and I think not an improbable one, and to which I know of no allusion having been made of explaining the cause of permanent strictures.

M. Tessier published an essay in the "Archives Générales de Médecine," for 1838, in which he particularly insisted on the paralysis of the upper end of the intestine, and the necessity of administering purgatives immediately after the operation. "If the obstacle to the passage of the fæcal matter," says M. Tessier, "can be mechanically produced by the narrowing of the tunics in the seat of the constriction, and by the swelling of the mucous membrane of the strangulated loop, still these cases are rare."

How was the stricture in this woman produced? Must we, with John Hunter, admit that an effusion of plastic lymph, which has become organized, has taken place as the result of inflammation? or that it has arisen from the continued pressure of an imperfect bandage, as the opinion of Professor Cruveilhier? to the constriction of the ring or of the neck of the sac? It is evident that in the case in question it cannot be attributed to the effect of a bandage, since the patient had never worn one. There remains, therefore, the very probable hypothesis of the ruptured intestine being strictured by the neck of the sac, inflammation and its products being the result. Nothing more was necessary to impede the passage of the fæcal matter than a slight degree of inflammatory action to tumefy the mucous membrane, and diminish more or less the calibre of the intestine. What occurred here I have observed, as indeed all other surgeons have done, in certain cases of stricture of the urethra.

The same cause has produced the same results, which are in both cases the dilatation of the canal behind the obstacle. Repeated coïtus, severe mental emotion, a change of temperature, or an excess at table, causes the mucous tissue to swell, and the stream of urine, which was tolerably large, diminishes to such an extent as to cause strangury and even ischuria. At the *post-mortem*, we shall probably be astonished to find that the stricture is not very extensive; but we must not forget the state of congestion of the parts, and the spasm which may exist in the intestinal canal as well as in that of the urethra, and which disappears during death.

The operator, after having divided the stricture, ought to examine the parts with the greatest attention. It is from not attending to this precept that several surgeons have had the misfortune to lose their patients, without being able to obviate the painful result. He should draw the intestine towards him in order to ascertain whether it has suffered constriction, or is in any way altered. By neglecting to do this, I had the sad advantage of making a *post-mortem* examination of the body, and an opportunity of studying this question with more attention than I otherwise should have done. In the memoir already quoted, Ritsch makes the following remark: - "I felt how important it was, in every operation of this nature, not to reduce the intestine after dilating the ring in inguinal or complete hernia, and the crural arch in femoral hernia, without previously withdrawing a little the loop of the protruded bowel, for the purpose of examining the nature of the impression that has been made on the part strangulated. If there was a band or an obliteration, which it was evident would prevent the passage of the fæces, I would on no account reduce the intestine, as death would be the inevitable result." Reflection on these sensible observations of Ritsch would, I am persuaded, convince those surgeons who still hesitate to follow his advice of the importance of acting as he has stated in drawing the intestine towards them, at the risk of experiencing more difficulty in the practice, as some imagine.

The utility of purgatives is far from being acknowledged by every one; and although they may be had recourse to by MM. Velpeau, Tessier, &c., they are not by L. J. Sanson, who stated, in 1833, that "formerly it was considered an advantage to promote the alvine evacuations by means of purgatives administered by the mouth or *per anum*, and the practice is still recommended by some persons. But, if we consider that constipation is the result of inflammation, we shall at once perceive that purgatives, although they may occasion evacuations, are, nevertheless, more dangerous than useful, and their employment will be rejected." Consequently Sanson was influenced by physiological medicine, and exaggerated the action of purgatives after an operation for hernia. For my own part, without having so great a repugnance for evacuants, I think it prudent first to have recourse to simple or laxative enemata, and only to employ purgatives when these have failed. Such was the course I pursued with my patient, who certainly would not have been benefited by the most drastic cathartics. The digestive tube, both above and below the strictured part, contained only a small quantity of diluted fæcal matter, which the patient had not the time, as it were, to get rid of either by vomiting or *per anum*.

The duty of the surgeon, when he has ascertained that the intestine is contracted, and that its parieties are thickened, must frequently be fraught with difficulty. Ought he to expose himself to the very uncertain chance of success, by reducing the bowel, as Dupuytren appears to have done in a similar case? or is he to slit up the intestine above the contracted point, without, however, fixing it at the abdominal opening with La Peyrouie's ligature, which Scarpa considered as useless and even dangerous? The cases related by Louis in his memoir "On the Cure of Herniæ," when gangrene has taken place, are such as to induce the surgeon to establish an *artificial anus*. This celebrated surgeon even proposed to apply this operation to the small intestines, in cases where stricture has been the result of the strangulation. "If I were called," says he, "to attend a person who had been cured of a hernia by gangrene, the pain of which over the cicatrix, together with the vomiting, indicated an obstruction of the canal above the narrowing of the intestine, I should not hesitate to make an incision to procure the evacuation of the fæces, and should maintain a drain through the wound which would henceforth serve the purpose of an anus. This operation, if performed in time, would have saved the lives of many." It appears certain that the method by which an easy flow of the fæcal matter through a new anus is procured would secure the patients from subsequent unfavourable occurrences, and diminish the danger.

In a case where there exists a stricture which does not allow the fæcal matter to pass, the indication, in the opinion of Ritsch, is no less positive than urgent. "I should not hesitate," he adds, "to cut the loop of intestine above the stricture so as to remove the whole of it that was comprised within the ring." He then recommends Rambdohr's method, as modified by Sabatier, to be followed, which consists in introducing into the intestine a card varnished with oil of turpentine. We must, therefore, necessarily form an artificial anus, and endeavour to dilate the bowel, or else cut through the intestine, and afterwards bring it together again: M. Jobert's (de Lamballe) proceeding of enterosaphy.

If, in spite of the operator's wish, the intestine returned, or if, unobserved by him, the symptoms continued after the operation, we must then imitate M. Maisonneuve, who decided on seeking the intestine two days after he had operated on a lady, aged sixty-four, whom he was fortunate enough to save by this hazardous determination.—*Revue Medico-Chirurg.*

19, Langham-place.

THE PHYSIOGNOMY OF DISEASES OR SEMEIOTICS IN THEIR ASSIMILATIVE CHARACTERS.

By GEORGE CORFE (Author of "A Popular Treatise on the Kidney," &c.), of the Middlesex Hospital.

[Illustrated by Portraits of Cases.] (a)

(Continued from p. 571.)

OTITIS.

When inflammation falls upon the internal ear, in consequence of any slow disease which is progressing in the petrous portion of the temporal bone, the symptoms of such a disease are most insidious, deceptive, and fatal. There is no part of the bony structure of man that is so dense dense as this portion of the skull, and yet there is no part of the osseous system that undergoes such fatal changes in a scrofulous constitution as the above-mentioned bone. If a patient complains of lassitude, mental and bodily depression, if he presents a dull and rather hypochondriacal countenance, and if, moreover, he has had a discharge from one ear, and it has suddenly ceased, and he has become deaf, whether he complains or not of any head symptoms, yet these are alone sufficiently serious to awaken alarm in the mind of an attentive and observing practitioner. Let the inexperienced student beware of treating such cases with levity. Sometime since a young gentleman of the legal profession was "out of sorts," as his friend, a relative of mine, expressed it, but not feeling ill enough to send for medical aid. My friend insisted on his having advice, or else going to his chambers. He preferred the former, when an eminent surgeon of the Borough hospitals was called in, but, as his patient made no complaint, he told my friend that he thought he was "hipped," and ought to be roused and be made to go to his professional duties. They tried that advice, but it was all to no purpose, the patient declared he could do nothing but lie upon the sofa and read. Three or four days after this occurrence my friend, who lodged with him, thought he noticed a slight aberration of mind as he was conversing, and, becoming alarmed, he requested the surgeon to call in a physician, which was accordingly done. The latter gentleman made known his suspicions freely to his friend, requesting that he would communicate with the patient's father, stating at the same time that he feared there was slow disease going on in the brain. The next day the gentleman complained of earache, and in twenty-four hours more was furiously delirious, and lingered for a few more hours, when death terminated the scene.

There was arachnitis of one hemisphere of the brain. The petrous portion of the temporal bone was pulpy; the mastoid cells and cavity of the tympanum were filled with purulent matter.

Another instance occurred here, when the un-

(a) These portraits, which are painted from the life, by that eminent artist George Foggo, Esq., are to be seen in the museum of the Middlesex Hospital School of Medicine, a woodcut being deemed inefficient to carry out the peculiar features and tint of each countenance.

usually marked features of the disease could leave no doubt as to the diagnosis. However, by mild forms of mercurial treatment, depletion from the mastoid cells by leeching, &c, he ultimately recovered, and my case-book reports him to have been discharged convalescent from the hospital.

Destruction of the ossicula auditus, and softening of the petrous portion; ulceration of the tympanum, and purulent secretion from the whole mastoidean cells, can exist without any other striking symptoms than those already enumerated. This has been repeatedly witnessed, as the following among the many instances will show:—

William Clements, aged twenty-one, painter, was admitted Sept. 29, with the following symptoms:—Somewhat emaciated; countenance pale and thin; features shrunken, expressive of anguish; eyes dull; deaf in the right ear, suffers no pain in it, but there is pain over the frontal and temporal bones of this side; no vertigo nor delirium. States that he has had earache accompanied with discharge.

Six weeks ago he got wet through; shivering, followed by fever and pain in the head, supervened. The former ceased, but the headache recurred from time to time ever since. The headache has been intermittent, though not observing any stated periods of recurrence, until six days ago, since which time it has been constant. He says that through life he has been subject to earache on the right side, which has been attended with discharge and relief to the pain. C. c. ad ℥viij. temp. dex. et ol. ricini ℥ss. st.

Oct. 2. Pain relieved by the cupping, but through yesterday he lay quiet, occasionally starting up and shrieking out with pain; towards evening on this day he became insensible, and the extremities cold. In the course of an hour he rallied out of this collapse, but remained in a state of stupor, though he was easily roused, and complained of a sense of weight over the right side of the head; drowsy and impatient of being spoken to; pulse 96, hardish. Pil. hydr., gr. v., ter. rep. c. c.

5. Coma more complete; iris of the right eye insensible to light; increased sensibility of that side of the face; no paralysis; slight conjunctivitis. In the course of the following day his breathing became stertorous; insensibility was complete, and he sunk rapidly, and died the same evening.

Autopsy Twelve Hours after Death.—Head.—No notable vascularity of the membranes; no effusion beneath them; firm adhesion of the dura mater to the petrous portion of the right temporal bone, in a small space external to the ridge beneath which are the semicircular canals. It was easily detached from the bone, and was found to be almost cartilaginous in consistence. The bone at this part was rough and partially destroyed; the brain, opposite this adherent portion of membrane, was soft and pulpy to the extent of two inches. An incision was made into this softened substance, when an ounce of greenish pus flowed out. This matter was contained in three distinct cells, of which the parietes were complete, formed of a hardened mass of cerebral substance, and possessing a red, vascular, and flocculent internal lining. Beyond these hard margins the medullary matter was of a dusky yellow colour, and very pulpy. The largest of the three abscesses extended to the base of the lateral ventricle over its posterior horn. These latter cavities were full of clear serum. On carefully examining the internal ear a small abscess was found just above the mastoid cells which communicated with the tympanum, and had destroyed the small bones and membrana tympani. There was no communication whatever between this abscess and the cavity of the cranium.

Malignant disease of the brain, or tumours within the cranium, give rise to a train of symptoms which are strongly assimilated to those organic lesions that have been already enumerated. However opposite these morbid changes may be, and however they may differ as to their origin and their progress, yet the attentive physiognomist cannot fail to discern a remarkable assimilation of features in the broad outline of them all. It requires a practised eye to discriminate these likenesses, but with the exercise of some tact and judgment they soon become capable of distinction, and the tutored mind seizes on their varieties, but general resemblance, before it allows the statements and complaints of the patient to carry it away to an indistinct combination of less intelligible proofs.

In cerebral diseases, beyond all others, the physiognomy is most instructive. The student in this valuable branch of medical study should accustom himself to search, fix, and class some of the external signs of internal diseases, as portrayed in the face, as in the brow, forehead, the eyelids, the cheeks, the nostrils, the lips, and, above all, the expression of that index of the mind, the eye.

The following instance of fungus medullaris of the brain will elucidate some of the foregoing observations:—The facial paralysis did not depend upon simple thickening or inflammation of the neurilema of the nerves of expression and motion, as is the case in ordinary instances of twisted face, but other grave and more serious features were recognisable in the countenance, which clearly denoted destructive mischief in the substance of the brain itself.

Samuel Dovey, fifty-seven, tailor, admitted Feb. 26. A tall, athletic man. Drags his left leg after him; left arm in a state of semiflexion, and powerless; countenance singularly distorted from paralysis of those parts supplied by the portio dura on the left side; deaf in the right ear; pupils natural, but does not see distinctly with either eye; overhanging eyebrows; general aspect of the countenance dull and distressed. Acknowledges that he has pain over the right eye, which comes on worse in the evening, and affects the whole head, so that he is obliged to hold it with both hands in order to obtain some relief; the deafness, he thinks, came on from the severity of the pain. Ten days ago he found out the paralysis of the face by not being able to spit; he never had a fit, but says his memory is not so good as formerly. The hemiplegic symptoms are of a few days duration only.

℞. Hydr. chlor., ij.; opii ½ bis. die.; c. c. ad ℥viij. nuchæ. Emp. canth. ponè aures.

From his admission to his death, the following notice was made of his heart's action:—"Impulse increased; the systole attended with a sharp noise, like the sound produced by passing the finger briskly down silk or bombazine, most evident at the base of the heart; respiratory murmur healthy."

From this period to his death, which took place on the 29th March, he had several fits of coma and convulsions, for which he was bled to 10 oz., and on another occasion the c. c. was repeated. The last fit occurred on the 16th, when he was found breathing stertorously, lips flapping to and fro in each respiration; face flushed and turgid; head hot; paralysis unaltered; gums sore; perfect insensibility; evacuations pass involuntarily; sloughing of the nates; heart beating forcibly; temporal arteries distended and firm; one of the latter was opened, and ℥xvj. of blood removed, which reduced the power of the pulse and turgidity of the countenance, but did not alter the other symptoms. He roused somewhat in the course of the following day, but again became drowsy, and gradually sunk; the nates had sloughed to a great extent.

Autopsy Twelve Hours after Death.—Chest.—No fluid in the pleura; serum, tinged with blood, resembling porter, in the pericardium; heart large and loaded with fat; a deposit, more like fat, on the tricuspid valve; left ventricle hypertrophied; mitral and semilunar valves irregularly thickened. Many atheromatous deposits along the aorta, with puckering of the membrane. Just within the ventricle, and half an inch from the commencement of the aorta, the inner membrane was white, opaque, and along the middle of this space, parallel with the circumference of the aorta, and in the same line with the attachment of the mitral valve, ran a prominent line or ridge, whiter than any other part, and having the feel of a sharp cord. On closing the ventricle, it was manifest that at this part of the chamber a real stricture had been constituted. (a) *Head.*—Sulci between the convolutions dry and flat, and not very apparent. Substance of the brain firm, and marked by several red puncta. Left lateral ventricle enormously distended with clear serum, and of great size even when emptied; on the other side the walls of the ventricle were forced nearly into apposition by the pressure of a tumour, which occupied a large portion of the right hemisphere, the central part of the tumour being rather posterior to the centre of the hemisphere. The posterior portion of the tumour was of a red colour, and soft; centrally it had a light orange tint, and a spongy cellular structure; the anterior part was hard, homogeneous, and pearly in appearance. The tumour was about three inches in length and nearly two in breadth, and of considerable thickness. In a subsequent section an apoplectic clot, as big as a hazel-nut, was found at the under part of this growth. (b) The plexus choroides was hard, irregular, and enlarged at its posterior part or extremity. The arteries at the base were covered in several parts with white calcareous deposits, and they were dilated at this spot. The portio dura and mollis, where they emerge on the right side as distinct chords, were as if adherent to each other, and the former nerve was both larger and harder than its opposite. So also it was found where it entered the petrous portion of the temporal bone. A projecting nipple-like portion of the brain existed immediately above the point of emergence of the seventh pair of nerves, and apparently had caused pressure on that part. The portio mollis was softened and nearly invisible at the first glance. This projection arose, seemingly only, from a part of the brain that was pushed over by the tumour. The sixth nerve on the diseased side was *larger* than the opposite one.

In the instance of a young female, of strumous diathesis, and who laboured under symptoms of cerebral disease, precisely analogous to the foregoing case, perfect recovery followed the inunction of the tartar emetic ointment on the shaved scalp, over the surface of the seat of the disease. The patient was rapidly sinking, with loss of consciousness, hemiplegia, deafness, involuntary action of the sphincters, when our late and intelligent house-surgeon, Mr. R. Pyper, now in the 11th Hussars, visited the ward, and suggested the immediate and persevering use of the above remedy, and the result in the course of one week was most gratifying and decisive. She left the hospital convalescent, and returned six months afterwards to pay a visit to the day nurse of the ward, who remarked that she looked quite well, only that she thought she was "rather silly."

ANEURISM OF THE INTERNAL CAROTID ARTERY. PARALYSIS ON THE DISEASED SIDE OF THE BODY.

David Pedhurst, gilder, aged thirty-five, May 19. Countenance pale and heavy; deafness; constant drowsiness during the day; pulse 70, with power; tongue furred, but moist. Complains of great pain in the head, particularly at the left side; and shooting down the spine. Bowels torpid.

Ill four months with pain in head and occasional giddiness, and dreaming at night. Eight days ago was walking in the street, when a sudden dimness of vision seized him, and he fell insensible; after a short time his senses returned, but he observed a partial loss of use

---

(a) Could this give rise to the peculiar sound of the ventricular action? or did this abnormal sound arise from any altered action of the mitral valve, with the insertion of which the line of stricture was continuous?

(b) It is a matter of question whether this was the result of the destruction of some small vessel in the progress of the disease, and whether it occurred on the 16th ultimo, when the symptoms became so suddenly aggravated.

in the left side: the use has gradually returned. The deafness, which he has had from a child, has increased during and since the attack; has had a discharge from both ears for many years, but it has stopped within the last week. H. gent. c. sen. ter; pil. calom. gr. ij. h. et m.

June 1. Frequent vomiting and sinking during yesterday. Has been in a comatose state for the last two or three days; deafness increased; evacuations passed involuntarily. Died in the course of this night without apparent pain.

Examination Twelve Hours after Death.—Brain.—Its membranes and external surface were very dry—the latter smooth, with the convolutions flattened; there was no excess of vascularity. The substance was exceedingly firm, so as not to be torn asunder; at the front part of the longitudinal fissure the hemispheres adhered one to the other, just above the corpus callosum; the medullary matter was here softer than elsewhere; lateral ventricles distended with bloody serum; both communicated; choroid plexus was pale; upon the floor of the left lateral ventricle were small coagula of blood; and the left corpus striatum was quite soft and pulpy. An incision through this passed to the centre of a large coagulum; the brain around it was yellow and soft; on removing the blood, an aneurismal sack, of the size of a hazel-nut, was discovered at the internal carotid, just after it passed through the carotid canal; it subsequently proved to be just at the commencement of the middle cerebral artery; the petrous portion of the temporal bone, just over the tympanum, was softened; the internal surface of the tympanum rough, and denuded of its periosteum; and membrana tympani gone; kidneys each had several small cysts filled with a yellow, thick, gelatinous fluid; enlargement and calcareous deposits in the mesenteric glands; other organs healthy. A small portion of the ilium was given off from the continuous intestine, and inserted at the front part of the pelvis, between the bladder and rectum.

It appears from his history that, about the time of the sudden increase of his pre-existing symptoms, the discharge from the ears stopped, and did not again recur, whence it is probable that this discharge was a salutary effort of nature to ward off a more fatal disease, or at any rate to protract its fatal termination.

It is surprising the extent to which the brain may be the seat of progressive disease on the one hand, or of injuries from causes external to it on the other, without any alteration in the faculties of the mind. During the last twenty hours that I write, a man has been brought here having compound fracture of the skull from a blow by a poker; he was trephined by Mr. Arnott, but has been, and still is, perfectly rational, calm, and anxiously inquiring when he may leave the hospital to get on with a job he has in hand; whilst the following instance of aneurism of the basilar artery, and consequent pressure on the most vital portions of the brain, the pons varolii, and medulla oblongata, tend to show that the symptoms of injuries of the skull and brain are by no means commensurate with the extent of those injuries. (a) The stomach may fill with blood before vomiting and syncope ensue; the uterus, too, will often contain pints of blood before contraction of the organ takes place to expel its contents; so like the brain appears to be capable of bearing with the existence of a tumour, or with severe injury, for a longer or shorter period before it manifests any decided train of symptoms indicative of the lesion.

J. Pettiwether, apparently forty years of age, was brought into the hospital at eleven A.M., July 16. He is a short, thick-necked, gross man weighing, perhaps, sixteen stone. Lies perfectly senseless, and was so found in the street half an hour before. He had been working during the week, and was in the enjoyment of tolerable health—that is to say, he made no complaint of sickness. Countenance bloated; eyes closed; pupils contracted; breathing laboured; no apparent paralysis; pulse full and hard. He was bled to twenty ounces, and cupped to the same amount on the nape of the neck, but he rapidly sunk, and died in seven hours, unable to swallow any liquid. On examining the brain it was found gorged with blood, and its ventricles with clear serum. There was no rupture of a bloodvessel, nor extravasation of blood in any part; but the pons varolii, and a portion of the medulla oblongata, were hidden from view by a tumour the size of an ordinary walnut, which proved to be an aneurismal pouch of the basilar artery, full of semi-coagulated blood. The heart was flabby and large, thin in its walls, but dilated in its cavities.

In concluding the subject of cerebral diseases, it may be mentioned that the assimilation of features of some of those derangements which are included in the second division of this first class are so strong that it will be necessary to pass from the one to the other without any further remarks. Injuries of the head, accompanied with intoxication, narcotic poisoning, coma from a sudden invasion of urea upon the nervous system, sanguineous apoplexy, and hysteria, are so allied to each other in some of the broad outlines of physiognomy that it is important to keep the mind closely bent upon these diseases respectively, and yet, at the same time, to attempt to point out wherein the main distinction between them exists.

However, I shall have occasion to advert to this interesting field of pathology when the subject of disorders of the stomach influencing the nervous system is alluded to; and, meanwhile, I would pass on to the consideration of cerebral asphyxia produced by the presence of narcotic poisons, and the circulation of urea in the blood in patients afflicted with degeneration of the kidneys.

Before I proceed to the consideration of the other diseases which are placed in the first division of this class, it may be of great practical utility just to take a retrospective glance of the foregoing cases, and point out the physiognomical character of each, so that the assimilation of features may be traced in the respective diseases now under notice.

It is often observed that a practitioner may arrive at a correct diagnosis of some obscure disease by first ascertaining what the malady in question really is *not*, and by this means, the mind is led on to an acquaintance with what the actual disease *really is*. Now, in the preceding group of four cases of cerebral lesion, we may notice the following prominent characters.

In the first, there is complete insensibility, closed eyes, contracted pupils, and a slow pulse. May these not arise from intoxication? The pulse will not allow us to draw this conclusion. May it not proceed from narcotism by opium? This is possible, but the unaltered state of the symptoms after the exhibition of the stomach-pump, precludes us from drawing this inference. What other conclusion can we, then, come to, from the above symptoms? I am acquainted with no other means which are capable of producing the above features to a disease, but poison by urea, and sanguineous effusion into the central portions of the brain, thereby causing pressure upon both thalami. The circumstantial evidence tended to form in our minds the latter diagnosis.

In the second, insensibility is not quite perfect, but the eyes are closed; there is no distortion of the features, but there is hemiplegia, and unequal irides. Sudden effusion into one cerebral hemisphere must, therefore, be the cause of these aggregated symptoms.

In the third, the eyes are staring and vacant, and the brows are knitted, which is a strong presumptive evidence that the cerebral disease is not recent, nor from any sudden lesion of this organ, otherwise the lids, as in the former two, would be closed over the eyes.

In the fourth, somewhat similar observations might be made, as on the third case, comparing them both with the two former ones. In fact, we might lay down the following axiom in the study of pathological physiognomy, that whenever a sudden lesion has been offered to the brain, the eyes are closed, and the patient is insensible; whereas, if the same organ is the seat of a slow yet progressive disease, the eyes are half closed, or wide open, and there is some distortion of the features, irregularity in the pupils, and dulness in the whole countenance, with palsy of the body.

Complete insensibility does not follow the presence of effused blood into the walls of one lateral ventricle, for the second patient could answer to our interrogations, but she was hemiplegic; recovery was partially established; and, therefore, we may infer, that where the symptoms enable us to form a correct diagnosis as to the immediate seat of the effusion, we can, at the same time, give some opinion as to the probable results of the case.

But the third instance differs widely from the two former ones. The countenance denoted that a slow, wasting disease had already made severe ravages upon the constitution. There was some power of expressing his feelings still residing in the muscles of the face, he knitted his brows, and his features were pinched. The conjunctivitis, hemiplegia, and, above all, the unequivocal evidences, which we obtained by auscultation, of tubercular deposition in the upper lobes of both lungs, left no doubt upon the mind that the brain was the seat of a disease similar in its character to the one which was making its slow devastations in the chest, namely, tubercular deposition and softening. The greenish serum, it is asserted, is another test of the presence of tubercles in the system.

If we review the fourth case, one of simple ramollissement, accompanied with ruptured aorta, we observe that the cerebral symptoms had been creeping on, in an aged woman, for some weeks before loss of consciousness ensued. The occipital pain, the numbness of the arm and leg, the impaired deglutition, the contraction in the right iris, but, especially, the influence which this slow disorder was capable of producing on the features of the face, would lead the observant and discriminating physiognomist to conjecture the disease which terminated her life. The altered condition of the rhythm of the heart greatly tended to favour the opinion that the cerebral disease was ramollissement consequent upon impaired nutrition and diseased bloodvessels; and the difficulty in deglutition led the mind to suspect that this morbid process was going on at the base, and *not* on the superficies, of the brain.

It is understood that a commission to inquire into the special means requisite for the sanitary improvement of the metropolis is about to be issued, consisting of Lord R. Grosvenor, Mr. Chadwick, Dr. S. Smith, Professor Owen, F.R.S., and Mr. L. Jones.

(a) As a farther proof of this remark it may be added, that the servant of the Duke of Portland was brought here, having just previously been thrown by a spirited horse, and was kicked by the animal in his fall. The whole parietal bone was carried away; the brain was extensively bruised, and lying about the hair, &c.; indeed, this side of the skull was a frightful mass of contusion, laceration, and fracture. The man, nevertheless, was perfectly sensible, and insisted on going to the water-closet from the ward, alone, and was very dissatisfied that he should be confined to his bed. However, this rationality did not last more than two days, when coma, and ultimately death, ensued.

On the other hand, there was an instance of a boy who quarrelled with a strange lad whilst playing at cricket, when the latter seized the wicket and struck the boy, it was supposed, on the head, as the child fell senseless on the ground. On examination we could not discover the slightest bruise, discoloration, or abrasion on the face or shaved head. Insensibility continued, and the lad died in eighteen or twenty hours. The examination of the body did not afford the slightest help in forming an opinion as to the cause of death; since the *post-mortem* appearances were wholly of a negative character.

SOME REMARKS ON THE EPIDEMICS OF 1846;

and the Influence of Locality in Modifying Disease.

By JOHN GORDON BAILEY,
Member of the Royal College of Surgeons of England.

At the present time, when England and its unhappy sister island are visited by a bad form of fever, it may not be uninteresting to the readers of the *Medical Times* to bring before their notice the following observations on the influence which locality exercises over disease, showing that the type of an epidemic may be changed in many of its features according to the place in which it appears. I am led to do this in consequence of the epidemic fever of 1846 having visited most parts of England, and assumed in many of the towns a character common to all in the commencement, but differing widely as the disease progressed.

I do not profess to bring forward any original views on the nature of a malady about which so much has been written, and such diversity of opinion still prevails, but merely to record my experience of the disease as I witnessed it; and in doing so, I follow the suggestion of Mr. Sibson, of Nottingham, who published a very interesting paper in the *Medical Gazette* of January, 1847, and concluded by expressing a hope that other members of the profession would follow his example: an appeal which has been responded to by many through the pages of the *Medical Times* and other journals.

ENGLISH CHOLERA.

In the month of June, 1846, the small town of Strood, in Kent, which is separated from the city of Rochester by the river Medway, was visited by the ordinary English cholera, which prevails about that period of the year. It differed little from its usual character, except the way in which it was produced. The cause of its appearance at this particular season is generally believed to be owing to the use of unripe fruit, and vegetables; but the year 1846 formed an exception to this rule, for many were attacked who indulged in neither, and those who from peculiar circumstances could not enjoy them had no immunity from the disease.

Now, to what cause was the epidemic to be attributed at this early period? It was the intense heat of the weather. It will be in the recollection of all how warm the months of May and June were, indeed the valuable tables of the Register-General prove that the three months ending with June exhibited at Greenwich a mean temperature of above the average of twenty-five years, and 3° above the average of the corresponding quarter of 1845. This very satisfactorily proves how great an influence heat has in producing the disease, and how it may be the true and only exciting cause, every other being absent; and I arrive at this conclusion from having witnessed its occurrence in infants at the breast, among whom it was very fatal: indeed I met more than half a dozen cases, all of which proved fatal in consequence of the profuse purging being suffered to go on unchecked, which soon brought them into a state resembling that of patients suffering from hydrocephaloid disease, which Dr. Marshall Hall says has its origin in early infancy chiefly in diarrhœa or catharsis. I had no opportunity of seeing them before they were brought in this state, persons in the country generally trying a round of their own remedies before seeking medical advice. It is hardly necessary to state that few recovered out of this stage, and those that did had cordial stimulants administered very freely. In one instance only did I know it to terminate fatally in adults, and this was in the case of a delicate young woman of strumous diathesis, who had been confined about three weeks previously, and had been troubled with diarrhœa for some time. In this case the disease set in with all the true characters of Asiatic cholera, and went on through its different stages till the unhappy sufferer was released by death, about twenty-six hours from the commencement of the attack.

FEVER.

As the season advanced, this affection of the bowels began to decline, but was quickly followed by fever. In several cases the disease was ushered in by a copious bilious diarrhœa, but they were more amenable to treatment than those which did not commence for some time after the diarrhœa had ceased. The febrile symptoms were in the commencement well marked: there was the hot skin, quick pulse, furred tongue, headache, thirst, &c. &c.; these were present in each case at the commencement, and persisted till a period varying from the tenth to the fifteenth day, when the disease, from being of the continued type, changed to the remittent: this, with one or two exceptions which I will relate presently, occurred in the great majority of the cases I attended. A shivering fit of great intensity, occurring in the morning or evening, always indicated the change that was about taking place; and this led to a corresponding alteration in the treatment, which was attended with success.

The first case that assumed this character was that of a fine young man who, in the discharge of his duties as a sailor, got wet feet, and soon after was obliged to put himself under treatment, in consequence of the feverish symptoms which appeared. His, like all the others, commenced in the way which ordinary fever does. There was, however, a complication in his case from the beginning, namely, congestion of the liver and pneumonia. The antiphlogistic treatment necessary to get these under reduced his strength considerably, and as soon as it began to fail, rigors set in, followed by great heat and profuse perspiration: the latter, indeed, was most distressing to him, and from his being a fine able young fellow he was soon reduced almost to a shadow. The remedy which proved so serviceable in other cases (quinine) seemed to have little power in checking the disease in him: typhoid symptoms supervened, and after an illness of three weeks he sunk.

The next fatal case was that of a young girl, about twelve years of age, whose illness commenced as simple fever. She was not exposed to contagion, but was one among several of her family in whom the disease suddenly sprung up; with them, as with her, there were all the symptoms of pyrexia present; but a few days after its commencement, rigors set in, followed by heat and perspiration. From this time the character of the disease changed: the perspiration continued, and alternated in her with diarrhœa. An acute attack of bronchitis rendered it necessary to use tartar emetic; and, small as was the quantity which sufficed to relieve the disease, that relief was purchased dearly by the loss of strength which followed: this poor girl lay in a wretched state of exhaustion, for what with complete loss of sleep, diarrhœa, and profuse perspirations, she was terribly reduced. Hers was one of those cases in whom some of the features of the Nottingham fever were present, as described by Mr. Sibson: she lay "coiled up, almost night and day uttering a piteous cry," which latter continued till she died.

Another case occurred in the same locality, having also this distressing cry, but it did not terminate fatally: this indicated exhaustion, from which she had nearly sunk. About the same time I was in attendance, with my able and valued friend Dr. Brown, on a young lady whose illness was ushered in by smart fever. The symptoms did not differ from the others in the commencement, but about the tenth day, a severe fit of shivering set in, followed by great heat and perspirations; the latter being established continued for several days; to this was added a most severe attack of bronchitis, and hemorrhage from the bowels. These serious complications made the issue of the case very doubtful, seeing that opposite treatment was required for one, which the others would not well bear; however, it pleased Providence to bless the remedies that were adopted, and she recovered.

LOCALITY.

I may now make a few observations on the locality as well as on the treatment of the disease.

As regards the [illegible] mic, it may be said, "ab uno disce omnes," [illegible] applies, so far as Strood is concerned, [illegible] chester, where I witnessed the disease [illegible] nt dress. The town of Strood is built on a marsh, and this marsh is a fertile source of the malaria, which makes ague always endemic there. This exercises such influence over the constitution that few diseases make their appearance that are not modified by it—all having a tendency to intermit. During the great heat of last year, I attended several women in their confinement, who were attacked with ague during the first week. Now, the majority of the patients I attended lived in Strood and its neighbourhood; their illness commenced in the same way as in other towns, as ordinary fever; but the moment that malaria gained its influence over their constitutions, the antagonism which existed in health was lost, and those suffering under any illness were easily susceptible of its operation. Out of a large number of cases there were but two deaths, and in those most serious complications existed.

TREATMENT.

The treatment in the commencement was simple. The bowels were freely opened if no diarrhœa was present; the body was sponged with tepid vinegar, and water when the temperature was high; and the action of the skin was also promoted by diaphoretics. If complications arose, they were met by appropriate treatment; and the most frequent form was bronchial inflammation; when this occurred after the fever had changed its type, there was much care required in the administration of remedies: those which were found useful were a combination of mercury with chalk, and small doses of tartar emetic, with free counter-irritation over the lungs by means of mustard poultices and turpentine embrocations. When hemorrhage occurred from the bowels, alum in large doses was found very useful, together with opiate injections, and supporting the constitution with quinine, wine, beef-tea, and jellies. This was the treatment that most generally succeeded; and I may observe, the most powerful and, at the same time, most valuable and indispensable remedy was quinine: it checked the periodic rigors, and exerted great influence over the perspirations, which were more amenable to it than anything else that was tried.

Turning from Strood to Rochester, I will briefly relate the heads of two cases which I attended there, and which serve to illustrate the point, that the locality in which a disease appears exercises a remarkable control over the course it takes. This was very manifest in the case of a young girl living in Troytown, a portion of Rochester which is considerably elevated, and removed some distance from both river and marsh: she was the second in the family who was attacked, and had as bad a form of typhus as ever I witnessed. It was not a little interesting to me at the time to meet with a disease which assumed different forms in each town, and I was induced to examine closely into the *fons et origo mali*, believing that a fever so bad, and differing so widely from the comparatively mild form then raging in Strood, should have some very strong cause close at hand for its production. I examined the house, and most clearly traced the cause of this fever to an open privy which was situated at the back of the house, quite exposed to the action of the sun, and producing a most abominable stench. This was not the only case in that locality; I met several which I could safely affirm were caused by the filth which surrounded their houses; in all those cases the distinct type was typhus; there was no sweating or rigors, or any marked remission in the symptoms: the disease ran its course, terminating, however, but fatally in two cases.

Dr. Christison, of Edinburgh, has made some remarks on the local origin of fever, in "The Monthly Journal" for July, 1846, where a similar cause produced the disease. He says—"The origin of the disease from general epidemic

causes was rendered unlikely by the difference of the disease, both in its symptoms and mode of propagation, from the ordinary typhus; there remained, therefore, but one plausible supposition, namely, the existence of a local source of effluvia. This supposition was verified by an examination of the drains belonging to the house and farmyard, which were found to be choked with the ordure from three privies, as well as by the drainage from stables and pigsties, and which, upon being opened, gave rise to the most fetid effluvia, the stench of which was perceptible for a considerable distance."

That fever presents itself in a different type each year is a well-ascertained fact, and is founded on the observation of the most learned physicians since the days of Sydenham, who confessed that he generally lost a few patients at the commencement of an epidemic, till he understood its leading features; indeed, the fever of 1846 was remarkable for its various character: in one place it was simple idiopathic, in another it was remittent, and in a third, typhoid; but in each place that it appeared, its course and character were shapen by the causes that produced it, which clearly proves that locality modifies disease, no matter how it commences. The large towns, such as Manchester, Leeds, and Liverpool, have been severely visited by typhoid fever, and those parts where the disease proved fatal abounded in filth; indeed, there were few of the causes which generally produce fever—such as want of food, irregular habits, in a word, poverty with all its attendants—wanting to generate the disease. In Ireland the same rule obtained, both last and in the present year.

There are few subjects more worthy of the attentive consideration of the profession than those which relate to the sanitary condition of towns; and it is only to be regretted that a Government so wise and powerful as that which presides over such an important portion of the globe should be so apathetic to what concerns the happiness and prosperity of its inhabitants. If the labouring classes in large cities are to reside in houses surrounded by cesspools, breathing the deadly poison of overfed graveyards and badly-constructed drains, how is it possible that health, so essential to labour and industry, can be enjoyed? Let us trust that another session of Parliament will not pass over without the bill so ably constructed by Lord Morpeth (but which had one great omission, in not including the great metropolis along with the large towns of England in its provisions) becoming law. The subject has been often and ably brought before the notice of the profession by the *Medical Times*, whose powerful advocacy it is to be hoped will be continued till the object is attained.

CASES OCCURRING IN THE PRACTICE OF S. P. AITKEN, ESQ.

INJURY OF THE HEAD.

I.—N. Reed, aged ten years, received an injury of the head on the 29th of July last, being accidentally struck by a shovel thrown from a man's hand at the moment of his leaving his work. He walked to the surgery, a distance of about half a mile. On examination a wound about two inches in length was discovered over the most prominent part of the parietal bone, completely dividing the integuments, and disclosing a fracure of the skull extending in a longitudinal direction for more than two inches, the fissure being more than a line in breadth. Further examination showed that a portion of the skull had been completely separated and driven in by the shovel, and was lying loose on the dura mater. There had been considerable hemorrhage.

Treatment.

The wound was enlarged in the antero-posterior direction, and an incision from within outwards made to meet it at right angles. On dissecting back the flap thus formed, another fissure was detected lying parallel with the first, but nearer the middle line of the head, partly separating a portion of the skull about two inches long, and half an inch broad. This was removed with the elevator, and showed the dura mater nearly cut through at one part, and the brain pulsating laboriously from the pressure of the detached fragment; this was removed with some little difficulty by the aid of a hook and forceps, and found to be about an inch and a half long, and more than three lines in width at its broadest part, the inner table having given way much more extensively than the upper one, and, on removing it, the brain seemed to recover its healthy action. A single suture was made use of to keep the parts *in situ*, and the wound covered with a dossil of lint. Ordered to be kept in bed, and to take calomel gr. v. at night.

July 30. He slept tolerably, and complains of no pain. Tongue a little white; pulse natural; bowels open.

31. Ordered to poultice the wound.

Aug. 7. Allowed to get up, and have a more nourishing diet. Wound nearly healed.

10. Came up to the surgery. Wound healed. To discontinue the poultice, no bad symptoms having arisen during the cure, and only the one dose of calomel administered in the way of medicine.

I may here observe that in this mining district, where injuries of the head are so common, that in all such injuries the knife is freely used, both to enlarge the original wound, when that is too small to admit of a thorough examination of the state of the cranium, and to divide the fasciæ and pericranium, when that has not been effected in the first instance by the stone or other hard body causing the injury. The trephine is also unhesitatingly employed at once when there is any depression, without waiting for urgent symptoms to come on. And this pactice is proved to be the best by the experience of many years and a vast number of cases.

II.—E. Daw, aged 29, miner, received an injury of the perineum in the month of December, 1845, by falling across a tram-iron. About two hours after the accident he attempted in vain to make water, but felt a burning heat in the perineum, and was sensible that swelling had taken place there. About six hours after the accident a catheter was introduced with some difficulty, and about eight ounces of bloody urine were drawn off. Leeches were applied on two occasions to the perineum, and fomentations; but on the fifth day, fluctuation being detected, an opening was made which gave exit to some very offensive matter. A catheter was then introduced and retained for five days, the urine appearing to find its way entirely by it, none coming by the perineum; it was then removed, but introduced night and morning for the next five weeks, at the expiration of which time, on his first attempts to pass his water by the natural efforts, he found it come both by the perineum and the meatus, and continue to do so for about three months, when the wound healed up.

June, 1846. Returned to his employment as a miner.

September. Again laid up with abscess and fistula in the perineum.

Dec. 18. Was admitted into the Truro Royal Infirmary, where a catheter was passed, and retained for two days.

22. Catheter again introduced, and retained for twenty-four hours.

Jan. 1, 1847. Discharged, with the fistulæ healed.

Feb. 1. Saw the case for the first time. The stricture is a long gristly one, situated about the membranous portion of the urethra, with considerable hardness and thickening of the parts in the perineum. Two fistulæ exist, through which urine and a thin purulent fluid are discharged. The patient is obliged to rise two or three times in the night to make water, which comes away almost *guttatim* after much straining, and cannot retain it for much more than an hour at a time during the day.

Treatment.

A catheter, No. 5 of a set ranging from Nos. 1 to 7, was introduced. After entering stricture it required steady, long-continued pressure with a light hand to pass it through. It was retained for twenty-four hours, and, not having caused any great irritation, was withdrawn and replaced by No. 6, which now passed very smoothly, and was retained for twelve hours.

Feb. 6. Fistulæ healed. No. 6 passed and retained for a quarter of an hour, and repeated on the 10th and 14th, when it was retained for twenty-four hours, and then withdrawn and replaced by No. 7, retained for a short time and repeated on the 19th and 23rd, and on March 1, 5, 9, 13, 17, and 24, when it was retained for sixteen hours, producing great irritation.

March 29. He now passes his urine in a fair stream, can retain it all night, and for three or four hours at a time during the day. Catheter No. 7 was passed at intervals of four days up to the 13th of May, but without any further improvement. A gristly stricture of an inch long being to be felt in the perineum, the instrument, on arriving at its seat, requires to be held against it with a steady pressure for some time; can then be felt to enter it, and slowly to traverse it. Mercurial ointment was perseveringly rubbed into the perineum for about a month, but without dissipating the hardness.

May 13. He returned to his employment, which he has been enabled to follow up to the present time. I have seen him within these few days, when he expressed his conviction that he is perfectly cured, and his gratitude for the relief afforded him.

From the opportunity I enjoyed of watching Mr. Liston's practice at the University College Hospital for three years, during six months of which I was resident house-surgeon there, I feel convinced that the silver catheter, with a somewhat conical point, is the safest and most efficient instrument for the treatment of these cases.

DR. HEBERDEN'S TREATMENT OF DYSENTERY.

[To the Editor of the Medical Times.]

SIR,—At this period of the year, when dysentery is usually more or less prevalent, I am desirous of calling the attention of the profession to the method of treatment recommended long ago by the celebrated Dr. Heberden. In his elegant commentaries on the nature and cure of diseases the following passage occurs:—

"Cogitanti itaque mihi de natura dysenteriæ, visa est contineri in humoribus vitiosis inclinatis in intestina, quæ inde vehementer perturbata sunt, et in motus inordinatos conjecta, sic ut intus lædentia exitum non habeant. Cum vero nullum medicamentum alvum promptius solvat quam sales purgantes (quorum præcipuus est magnesia vitriolata) cum quoque facultatem habeant aliquam componendi motus intestinorum perturbatos, tum rarissime nauseam et vomitum movent, sperabam fore, ut non contemnendam opem præberant. Primum itaque dedi magnesiæ vitriolatæ drachmam sexta quaque hora; quæ brevi levabat dolores, etiam priusquam alvus purgata est. Aliis majorem modum imperavi ex quo non solum fructus præsens perceptus est, verum dejectionibus copiosis excitatis, ipsa morbi causa sublata est. Postquam vis morbi transierit æger quanquam in tuto sit, tamen vexari solet molesta desidendi cupiditate, propter levem dolorem qui in recto intestino manet. Huic optime medetur jusculi ovilli pinguis selibra, cui instillatæ sunt tincturæ opii guttæ viginti in alvum infusa; *atque hac sola occasione censeo opium in hoc morbo tuto et utiliter dari posse.* In principio certe, ventre noudum purgato maxime noceret. Singultus accepit et aqua fœtida dejecta est ubi dysenteria morte finita est.".

It is to urge the use of this mode of treatment in dysentery that I pen this brief note. I have been in the habit of giving saline purgatives, in accordance with the recommendation of Dr. Heberden, for the last seven or eight years; and I can safely affirm, without a single un-

favourable or even disagreeable result. To adults I have usually given a drachm of sulphate of magnesia, combined with a grain of ipecacuanha, in some simple aromatic water, every six hours; to children about half the quantity; and to infants a still smaller dose. I have observed, that so soon as natural fæcal dejections are produced, the bloody mucosities cease to be discharged, the tenesmus disappears, and the patient is cured. In by far the majority of cases the bowels have been properly relieved within twenty four or thirty-six hours; but in a few cases of a more severe character the bowels have been more obstinate, and the saline purgatives have not produced their proper effect until after the lapse of three days. I have, also, occasionally observed the continuance of tenesmus after the proper action of the bowels; but this has been easily relieved by an opiate. The addition of small doses of ipecacuanha I have imagined to be beneficial from the known efficacy of this substance in several intestinal diseases; but I should place my chief reliance on the saline purgative. In practice I direct the patient to continue the medicine until fæcal motions have made their appearance, and then either to take the medicine less frequently, or altogether omit it, as, without this precaution, severe diarrhœa might be induced. Where this plan of treatment has been adopted, I have not seen a single case in which the disease became chronic.

I am further desirous to know what would be the effect of saline purgatives in the more severe forms of dysentery in hot climates, although I have little doubt that similar good consequences would follow from its use; and I should feel extremely obliged if some Indian practitioner would make the trial, and give us the result of his experience.

I am, Sir, your obedient servant,
PHILIP B. AYRES, M.D.,
Senior Physician to the Islington Dispensary, &c.
12, Howland-street, Fitzroy-square, Sept. 13.

ON THE INTERNAL USE OF THE NITRATE OF SILVER.

By Mr. RICHARD SOUTHEE, Cambridge.

The nitrate of silver being much more frequently prescribed than heretofore, it may not be uninteresting to some of your numerous readers to learn that the discolorization of the skin is not of that frequent occurrence generally supposed; in fact, large and repeated doses may be given without producing such effect. In the year 1831, when the cholera raged to a frightful extent at the port of St. Petersburg, I ordered it in grain doses in every case of collapse, and frequently repeated the same quantity every quarter of an hour, without in one instance discolouring the skin. This remedy was mentioned as being very successful, in the report of the Government Commissioners, Drs. Russell and Barry, at the time; and I know of no medicine capable of producing reaction with so much certainty, though this sometimes was sudden and violent, requiring the immediate use of the lancet; and in several cases the inordinate excitement was difficult to suppress, but no discolorization followed.

CONGENITAL IMPERFORATION OF THE URETHRA THE WHOLE DEPTH OF THE GLANDS.

By E. WHITEHEAD, Surgeon, Dukinfield.

Mrs. B. gave birth to a male child on Christmas eve, 1846. I called the following day, but no remark was made. Being a distance of a mile and a half, I omitted visiting on the second day, but intended doing so on the third. However, early on the morning of my intended call I was hastily summoned. On my arrival, I found the infant screaming vehemently, and apparently in great pain. Upon inquiry, I was informed its bowels had been moved repeatedly, but the nurse could not say it had ever passed any urine. Upon examination this was verified, the glans penis being imperforate; bladder considerably distended. Not having my pocket-case with me, I ordered the little sufferer to be brought to my house, where, assisted by my friend Mr. Hunt, surgeon, of Ashton-under-Line, an opening was made with a lancet in the place where the orifice of the urethra is usually situated, and an attempt made to pass a probe: the lancet and probe were again used, but without success.

The incision was then carried through the inferior length of the glans, upon which urine escaped freely. Not the slightest vestige of an opening could be found in the glans other than the one made by the operation, which was allowed to heal. The artificial outlet now supplies the place of the natural one.

CASE OF STRANGULATED INGUINAL HERNIA,

Reduced on the New Method recommended by Dr. Andrew Buchanan, Professor of Institutes of Medicine in the University of Glasgow.

By ARCHIBALD WALLIS MACKIE, Cupar, Fife.

G. M., aged seventeen years, railway labourer, of a stout habit of body, and enjoying previous good health, whilst employed lifting some heavy railway sleepers on Friday last, felt something to give way at the lower part of his abdomen. The patient was unable to walk, and was carried to a neighbouring house, where he remained till next day, when he was conveyed to his father's residence, a distance of eleven miles. I was called to visit him on Sunday morning, and on examination found a tumour the size of a hen's egg, situated in the right iliac region, the general characters of which led me to conclude that it was a case of strangulated oblique inguinal hernia. The patient had not had his bowels opened since the morning of the accident. I ordered him an enema, and, after waiting till it was expelled, I applied the taxis, but unsuccessfully; I then had recourse to the usual remedies adopted in such cases, but without any effect. I bethought me of the plan recommended by the talented Professor of Physiology in the Glasgow University, and I was glad to see my efforts crowned with success. The mode is very simple. I placed my patient on his back, flexing the thighs on the pelvis, and putting the muscles of the abdomen in as relaxed a condition as possible. I then desired the patient to empty his lungs of as much air as possible, and having an assistant at hand, who immediately held his nose and mouth to prevent inspiration, I applied gentle pressure over the tumour in the proper direction, and had the satisfaction to feel it give way, and, as it were, *draw up* into its natural cavity.

The *rationale* seems to me to be, when the lungs are emptied of air, the diaphragm is, as it were, sucked up to fill the diminished thoracic cavity; it (diaphragm) exerts a tractile power over the floating viscera of the abdomen, and draws the protruded intestine upwards—naturally *assisting*, if not altogether accomplishing, the reduction of the hernia.

Such is the mode, I conceive, in which the reduction is accomplished; and I have no doubt that, in addition to the mechanical influence, the temporary suspension of the breathing must have a powerful sedative effect, and consequently a relaxing influence, on any part morbidly constricted. Before operating I would always give this plan a fair and impartial trial, and I am confident, if practitioners would adopt this method, they would have the satisfaction of relieving their patients, and thus averting the dangers of a painful and often fatal operation.

APOTHECARIES' HALL.—Gentlemen admitted members on Sept. 9:—Henry Davis Benwell, Robert Blaikie, William Pritchard, Henry Davis, James Payton Badley, Joseph Thomas Clover, William Leyson Thomas, Folliott James Sandford and Thomas Horn.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of Sept. 6; M. BRONGNIART in the Chair.

ANATOMY OF THE EYE.—M. Pappenheim forwarded a short communication on this subject. His observations had led him to conclude that the conjunctiva of the eyelids still preserved the same constitution as the skin, *i. e.*, the dermis, papillæ, the reta mucosum, and the horizontal layers of the epidermis. The papillæ disappeared at the edge of the tarsal cartilage; and where the membrane passes over the cornea, nothing was left but the epidermic layer. Glands (follicles?) had been discovered by M. Krause in the human conjunctiva. During health, the daily desquamation consisted of epithelial fragments, and of small cells, composing what M. Krause calls the lenticular glands; but when inflammation was present new cells were generated, and, in some instances, pigment. During this first period of inflammation, vessels did not necessarily form, but when their production became evident to the naked eye, when the transformation of the membranes was effected, the physician's art was of no more avail. The paper terminated with a theory of the paralysis of the recti muscles. The motores oculorum (third pair) arises from a gelatinous substance which M. Pappenheim had demonstrated in the corpora quadrigemina; in this substance might be found a rich plexus of capillaries which communicated with the envelopes of the brain; hence, in meningitis, the frequency of paralysis of the recti muscles of the eyeball.

EPILEPSY.—M. Plouviez, of Lille, proposed for the treatment of epilepsy the extract of belladonna, exhibited in doses sufficient to produce a commencement of intoxication. The following was the prescription he employed:—℞. Extr. belladonnæ, ʒss.; pulv. digitalis, ʒj.; indigo, ʒijss.; mucil. q.s.f.s.a. pil. 50; one, two, or three, according to their effects on the system.

FRACTURE OF THE CLAVICLE.—M. Guillon presented a child to the academy; it was the ninth case of fracture of the clavicle cured without deformation—an accident very difficult to avoid generally. The bandage consisted—1, in a sling for the support of the forearm and elbow; 2, a handkerchief folded in the shape of a cravat, one extremity of which was passed on the diseased side between the body and the arm, embraced the arm, and was solidly fixed to the sling; 3, an axillary cushion; 4, a broad *bandage de corps*; and 5, a square cushion to be fixed between the shoulders. M. Guillon then related two cases which induced him to believe that by appropriate means, and when the callus was not very solid, the natural rectitude of a deformed clavicle might be restored. The first case was that of a drummer of the National Guard, who fell five years since from a considerable height and fractured his collar-bone on the right side. The fracture was perfectly cured, and the case was shown at the Société de Médecine Pratique, and recognised as one unattended with deformity. Five weeks after the accident the patient returned to his duties, and the weight of the drum and sword bearing upon the right clavicle brought on a very well-marked depression in the original seat of the fracture. The second case was that of a child, aged twelve years, who, having fractured the left forearm eleven months before, fell upon the hands with great violence. The radius and cubitus were bent backwards at right angles in the spot which had been fractured. M. Guillon restored the limb to its proper direction by the use of considerable force, and placed the extremity in the bandage for fractures. One month afterwards the child was perfectly cured without deformity.

ACADEMY OF MEDICINE.

Meeting of Sept. 7; M. BEGIN in the Chair.

DIFFERENCES BETWEEN TYPHOID FEVER AND THE PLAGUE.

In January, 1846, a disease of a doubtful na-

tu[illegible]as observed at Marseilles on a sailor. Dr. Renoult asserted it was a case of typhoid fever. The physicians attached to the Lazaret were of opinion it was an instance of plague. The Minister had forwarded the history of the disease to the academy, with a request that the society would express its opinion upon the nature of the complaint in the case alluded to; and, secondly, would examine into the resemblances and differences of typhoid fever and plague, and point them out. M. Prus, the reporter of the commission, in answer to the first question, said that the case observed at Marseilles was in all probability one of typhoid fever, although a bubo was present. Typhoid fever and the plague had numerous analogies, but also certain characteristic differences; for instance:—

In Typhoid Fever we find	In Plague.
Premonitory symptoms	None.
Diarrhœa	None.
Lenticular spots ..	None.
Meteorism, and enterophony in the right iliac fossa	None.
Very rarely ..	Buboes.
Rarely	Petechiæ.
Enlargement of the mesenteric glands only..	Enlargement of the lymphatic glands of the whole body.
Special and characteristic intestinal eruptions	Ecchymotic patches in the pericardium and pleuræ.

After a short and unimportant debate, the report and its conclusions were adopted.

CASE OF WOUND OF THE BRAIN—CURE BY DR. GINTRAC, OF BORDEAUX.

A boy, aged twelve years, fell, on Dec. 15, 1846, upon an open clasp knife which he held in his hand. He rose unassisted, and went to the infirmary of the school. M. Gintrac was immediately called, and found that the knife had penetrated between the eyeball and the upper eyelid, on the left side, at equal distances from the commissures, had perforated the orbital plate of the frontal bone, and was solidly fixed in this situation. Its direction upwards and backwards was inclined at an angle of 15° with the face, the back of the blade rested upon the eyeball, the sharp edge raising the eyelid. The child was unconscious when M. Gintrac first saw him, the skin cold, face pale, pulse imperceptible. The surgeon first endeavoured to remove the knife by drawing it cautiously downwards and forwards, without moving it from side to side. After several unsuccessful efforts, M. Gintrac was obliged to call his assistant to his aid; and, having fixed the head, at last removed the kni[illegible]; the blade was eight centimètres in length, one in breadth, and had penetrated altogether five centimètres; during the extraction the patient had remained entirely insensible. After five hours he recovered his senses, could speak with freedom, and complained merely of slight pain in the orbit, unattended with headache. The child slept: the next day he was almost well; considerable swelling of the lid persisted for several days, and after one fortnight the boy returned to his studies—neither vision, speech, nor intelligence having in the least degree suffered from the accident.

M. Gintrac, in order to determine if really the brain had been wounded in this case, introduced the same knife, at the same depth, into the orbital plate of the frontal bone of a dead subject; and, having afterwards opened the head, found that the instrument had penetrated eighteen millimètres (nearly six lines) into the anterior lobe of the cerebrum.

TYPHOID FEVER AND SMALLPOX. BY M. SERRES.

On a former occasion we mentioned the treatment which M. Serres considers most efficient in typhoid fever, viz., the black sulphuret of mercury; and, also, how the profession was led to adopt this method, from the good effects of mercurial preparations on the eruption of smallpox. In another communication to the Academy of Sciences the learned professor continues the same subject.

The intercurrent affections, says M. Serres, two diseases progressing at the same time in the same individual, each preserves its physiognomy, its special characters, although the intimate nature of both may have undergone a considerable modification. The most severe of the two almost invariably communicates its gravity to the other, and diminishes if it does not destroy the chances of recovery. In the treatment, therefore, of intervening disorders, the most dangerous must exclusively occupy the attention of the therapeutist; in order to judge a curative method, it should be put to the test of these intercurrent affections, and to this test I have submitted the method I propose for the cure of typhoid fever; and have chosen the most severe complication—variola. The dangers of confluent smallpox are known to all; vaccination has considerably diminished them, but within certain limits. Thus, at the Hospital of La Pitié, during the epidemic of 1825, out of 162 vaccinated subjects attacked by the epidemic, twenty-five died. Fr[illegible] the statistics published by Dr. Bousquet, it appears that in the thirty epidemics of smallpox observed in France between the years 1816 and 1841, 5963 vaccinated persons were attacked, and sixty two died. Analogous results have been noticed in England, Germany, Italy, and Sweden. This revival of smallpox was attributed to the inefficiency of vaccination—a conclusion which we consider erroneous: "It is," continues M. Serres, "to the influence of intercurrent disorders that this impotency of vaccination to prevent variola should be attributed, and chiefly to typhoid fever. During the epidemic of 1825 we were struck principally by two facts: the first was the progress of the pustular eruption, which was the same in the vaccinated subjects as in those who had not been vaccinated; and the second was the presence in the intestines of the facial characters of typhoid fever. The epidemic, in one word, was double: it was at the same time variolic and typhoid. The mortal influence of typhoid fever in cases of smallpox has appeared to us still more evident in cases of non-vaccinated patients. We may ask ourselves if, before the discovery of vaccine, the interference of typhoid fever was not one of the great elements of the danger of variola; and we will find in the symptomatic history of ancient epidemics abundant proofs that such was the fact. Typhoid fever is not, therefore, a new disease, but smallpox and typhoid fever were, perhaps, coeval: the cutaneous eruption of the former struck more forcibly the observer and concealed the complication. It would seem that, after Jenner's discovery, variola was in a great measure arrested, and typhoid fever, being unmasked, was at last recognised." After having established that in most cases the complication of typhoid fever was the principal source of danger in cases of smallpox, the learned professor proceeded to say that he had watched attentively the effects of the black sulphuret of mercury in such cases, and that, in proportion as the medicine relieved the symptoms of the typhoid fever, it also weakened the violence of the smallpox.

ANTIDOTES OF ARSENIC.—Insoluble salts of arsenic, after remaining a certain time in the stomach, are at last absorbed, and act as violent poisons. The cause of this fact is to be found, according to M. Caventou, in the presence in the stomach of a certain quantity of muriate of ammonia, by the action of which the arsenical preparation becomes soluble. In order to ascertain the different degrees of facility with which the muriate of ammonia dissolves the arsenites of lime, of magnesia, and of iron, M. Caventou instituted experiments, the result of which was to prove that the arsenites of lime was readily dissolved in 115 parts of a saturated solution of muriate of ammonia, the arsenite of magnesia in 330 parts, and the arsenite of iron in 600. Consequently the hydrate of sesquioxide of iron is the antidote which will resist for the longest time the dissolving action of the gastric fluids, and which it will be most proper to exhibit in the first place in cases of poisoning by arsenic.

D. M'CARTHY, D.M.P.

Amputation of the Penis.—M. Ricord recommends, that after amputation in the ordinary way, enough skin be left to cover the corpora cavernosa, and no more; the surgeon seizes with forceps the mucous membrane of the urethra, and with a pair of scissors makes four slight incisions so as to form four equal flaps; then, using a fine needle, which carries a silk ligature, each flap of membrane is united to the skin by a suture. The wound heals by the first intention; adhesions form between the skin and mucous membrane, and these textures become continuous, a condition analogous to which is observed at the other natural outlets of the body. The cicatrix then contracting, instead of operating prejudicially, tends to open the urethra.

Treatment of Hypertrophy of the Septum Nasi.—A boy was brought to M. Brulet, of Dijon, to be relieved of a tumour situated in the nasal fossæ, which were obliterated by it. The tumour was of bony hardness, and situated close upon the external orifice of these cavities; it was manifestly developed in the cartilaginous septum, forming a hard plug of the size of a small nut. It was removed by separating the inferior part of the septum to its junction with the upper lip by a cut with scissors. All the hypertrophied part was then cut away with a tenotome, and reunion was quickly effected with one point of suture, and it was impossible to perceive where the operation had been performed.

Erectile Tumour of the Head of the Tibia.—A young woman was admitted into the Hôtel Dieu, of Toulouse, suffering from transient and indistinct pains in the left leg, which, however, did not impede the motions of the joint. Some time previously she fell from a chair and struck her limb, when the disease more plainly developed itself. A tumour was perceptible over the head of the tibia, which continued to increase. It was developed of irregular size, having two unequal elevations, incompressible but not painful. Pulsations were plainly perceptible isochronous with the arterial diastole; there was also a slight *bruit de soufflet*. Both ceased on compression of the crural artery. A ligature was applied on this vessel, and immediately the pulsation in the tumour ceased. Next day it was considerably decreased in size, but suppurative inflammation of the cellular tissue having supervened, with pleurisy, the patient died at the end of a week, after having miscarried. The *post-mortem* inspection showed sero-purulent effusion in the left pleura, with compression of the lung. The cellular tissue of the thigh on which the operation had been performed was filled with pus, which had burrowed among the muscles in every direction. On removing the integuments from the tumour it was found to be hard and incompressible in some parts, fragile in others, and crepitating on pressure like dry parchment. In some points the bony tissue had disappeared. A division of the head of the tibia showed that the tumour was composed of a tissue of varied colour, being yellow in some spots, rose-coloured in others, and spotted so as to resemble a section of the brain. The mass of the tumour appeared to consist of two substances, one of a chalky white and inorganic, the other areolar. Occasional masses resembling brain were seen, as well as spots having the aspect of softened encephaloid matter. The diseased masses had entirely replaced the spongy tissue of the bone, but the cartilage was unaffected. The solid parts of the bone were reduced to a complete shell.

Senna with Matico, in Hemorrhage from the Bowels.—Dr. Watmough, of Pocklington, says that he has frequently used matico in cases of hemorrhage, and that he has combined it with advantage with senna in a case of typhus fever, when hemorrhage from the bowels took place. Matico and senna, in the proportions of two drachms each, were infused in a pint of boiling water, and a wineglassfull administered frequently. Scybala, mingled with blood, soon passed, after which the blood decreased; and by continuing the mixture in similar doses, at intervals, for three or four days, the alvine evacuations gradually improved.

Sulphuric Acid in Aphthæ.—Professor Lippich,

of Padua, employs with success the sulphuric acid against aphthæ, and syphilitic mercurial stomatitis when the mucous membranes of the mouth and lips are covered with ulcerations which render deglutition difficult. The ulcerated surfaces are to be frequently touched slightly with the following liniment, by means of a soft brush:—White honey, thirty grammes; sulphuric acid, two grammes; mix. In severe cases the sulphuric acid may be increased to eight grammes.

Characteristics of Mercurial Sores.—Mr. Porter gives the following (in "The Dublin Medical Press"):—1. Mercurial sores are not necessarily circular or oval in shape, neither are their edges regularly defined, but assume different forms as they spread; their edges are often quite ragged, loose, and undermined, and their borders are often marked with a thin transparent cuticle, like that of a newly-formed cicatrix, extending quite around them, and giving them a silvery white appearance. 2. The bases of mercurial sores are not hard, neither are their surfaces covered with the tenaciously adherent lymph, so characteristic of venereal; but the surface may present every variety of shape and appearance, sloughy at one spot, deeply excavated and rapidly ulcerating at another, with exuberant granulations at a third, and exhibiting a tendency to heal at a fourth. 3. But the most striking characteristic of the mercurial sore is its tendency to spread, and the manner in which it enlarges itself. Venereal sores, when not affected by phagedena, increase slowly, and having reached a given size remain so. The mercurial generally spreads quickly, and there seems to be no limit to the size it may possibly attain. Mercurial sores, too, are easily distinguished from the venereal when they assume a herpetic character, and heal in one part whilst they are spreading in another, which the latter never do: this latter diagnostic is often extremely valuable in ulcers of the throat and on the penis, when any extensive loss of parts may be most sensibly felt during the life of the patient. The mercurial ulceration, too, often attacks the cicatrix of a recently-healed chancre, and a fresh sore is thus formed—a circumstance that does not happen to the true venereal sore, except by some accidental injury, or the application of a new infection.

Warty Excrescences of the Eyelids.—Mr. Estlin, of Bristol, considers these to be diseased sebaceous glands, and that the most expeditious and least painful method of getting rid of them is to slit them through with a lancet or cataract knife, passed perpendicularly to their bases, and then forcibly to squeeze the separated halves, with the thumb-nails placed on the sound skin, till the contents are fully turned out; in two days the part is usually healed. The tumours, when thus removed, are found to be lobulated. If they resist considerable pressure, the loosened portion may be taken hold of with forceps, and thus the whole extracted. This practice may be employed when the tumours have begun to inflame or suppurate. Smaller ones usually disappear without treatment; their chief annoyance arises from the inflammation they occasion on the eyelids. Children are the chief subjects of this affection.

Bloodletting in Hemorrhages.—Mr. Hewson says, as hemorrhages seem to be stopped partly by a contraction of the bleeding orifices, and partly by the coagulation of the blood, and as the disposition of the blood to coagulate is increased by weakening the body, and likewise the contraction of the bleeding orifices is promoted by the same means, it is, therefore, evident that medicines to be used should be such as cool the body and lessen the force of the circulation; and experience teaches us that such are the most efficacious. It likewise shows that all agitation of mind and all bodily motion should as much as possible be prevented, because they increase the force of the circulation, and are thence unfavourable to the stopping of the hemorrhage. But that languor and faintness, being favourable to the coagulation of the blood and to the contraction of the bleeding orifices, should not be counteracted by stimulating medicines, but, on the contrary, should be encouraged. And, as evacuations weaken the body more when they are sudden, we see a reason why bloodletting should be advisable in hemorrhages, and why a large orifice should be preferable to a small one when we want to produce the languor or faintness, or that weak action of the vessels so useful for the stopping of the hemorrhage.

Effect of Prolonged Interment on the Bones.—Some human bones having been discovered at Pantin, in the neighbourhood of Paris, M. Lassaigne endeavoured to ascertain their date by comparing them with bones of some soldiers who had been buried near them in the year 1814:—

	Unknown Skeleton.	Bones of 1814.
Water	20·0	20·0
Organic matter	11·0	15·0
Subphosphate of lime ..	45·1	40·5
Carbonate of lime ..	21·6	15·8
Sulphate of lime ..	2·3	—
Traces of oxide of iron ..	—	8·2

From these analyses it was concluded that the unknown bones were not of so remote a date as was at first supposed.

Advantages of Compression over Ligature in Aneurism.—Dr. Bellingham, in his "Observations," &c., considers that compression is superior to ligature, because that the mode in which the consolidation of the aneurism is brought about by compression is exactly the same as that in which a natural or spontaneous cure occurs; and, moreover, when a cure is effected in this way the vessel is obliterated merely at the site of the aneurism; whereas, when a ligature is applied in the usual situation, at some distance from the tumour, the artery is obliterated both at the seat of the ligature and at the seat of the aneurism; that compression effects the cure of this disease by safer means than the ligature, because its employment can be intermitted and resumed according to circumstances, and no ill consequences have hitherto resulted from its use. On the other hand, the ligature of a large artery is always a precarious operation; when it is once applied, we must wait its separation before the patient can be considered out of danger; and when it fails, which frequently happens, the case almost always terminates unfavourably, not from the increase of the disease, but from the operation performed for its relief. Compression is more certain than ligature, for by this latter operation the aneurismal sac, and the part of the artery from whence it springs, are gradually filled up with fibrine separated from the blood and deposited in the same way as when nature cures an internal aneurism. Cure effected by compression is more likely to be permanent than when the ligature has been used, for pulsation cannot return after the employment of the former, as sometimes has happened after the latter operation. A cure brought about by this can only be permanent when it causes the aneurismal sac to be filled up and the artery to be obliterated at its seat, after the same manner as compression. If a loose coagulum of blood merely forms in the sac as the result of the ligature, there is danger either of the sac suppurating, or a secondary aneurism may form at the part, neither of which have ever occurred after the treatment by compression. Aneurism not unfrequently occurs in individuals in whom the coats of the artery leading to the sac are so much diseased that the vessel, instead of taking on the adhesive inflammation after the application of the ligature, ulcerates, or the ligature cuts its way through, giving rise to secondary hemorrhage. The disease, also, is not uncommon in individuals labouring under diseases of the heart and when more than one aneurism exists at the same time cases in which the ligature is contraindicated whereas pressure may be applied under these circumstances with nearly the same prospect of success as where the patient is perfectly healthy. Again, aneurism occasionally occurs in individuals who dread surgical operations so much that they cannot be induced to consent to them Compression involves no operation, so that patients will probably make application at an earlier period, and thus will come under treatment at a more favourable time for effecting a cur heretofore.

Development of the Teeth.—Mr. Hassall, in his 'Microscopic Anatomy," says that preparations are made for the formation of the milk teeth at very early period of intra-uterine life; that the first trace of the future tooth is manifested in form of a papilla placed in the primary dental groove, and consisting of granular and nucleated cells; that around this papilla a membrane is developed, with an open mouth, thus forming a follicle; from the margins of this aperture processes of the mucous membrane, of which the follicle is constituted, are developed, and these uniting with each other close the opening, and convert the follicle into a sac. With the closure of the mouth of the follicle, the first or follicular stage of the development of the teeth is terminated, and the second or saccular stage commences. The number of opercula developed from the margins of the follicles is determinate, being only two for the incisives, three for the canines, and four or five for the molars. In the second or saccular stage the papilla takes the form of the tooth, of which it is the representative, the base dividing, in the case of the molars, into fangs, and its apex assuming the shape of the crown of the tooth, in the place of which it stands; in this stage, also, a blastemic matter, consisting of plasma and nucleated cells, is developed in the space intervening between the papilla and the sac, and adherent to the inner surface of the membrane of the latter, by which, indeed, it is generated; lastly, the papillæ become capped with tooth substance, or dentine. With the passage of the teeth through the gums the saccular stage terminates, and the third or eruptive stage is entered upon. The second or permanent teeth pass through stages precisely similar to those of the first, or milk teeth, the papillæ and follicles being developed in crescent-shaped depressions, placed in the posterior walls of the follicles of the milk teeth, and which together constitute the secondary dental groove.

Membrana Jacobi.—On the outside of the granular layer (of the retina), observe Messrs. Bowman and Todd, in their "Physiological Anatomy," is that remarkable lamina, known by the name of its discoverer, the membrana Jacobi. It consists of club-shaped rods, placed uprightly, the thin end inwards, the thick outwards; and it is very easily detached from the rest of the retina, when the choroid is removed so as to float as delicate shreds, visible to the naked eye, in the water in which the eye is immersed. The rods have a tendency to separate from one another when placed in water, and the club-shaped extremities are then often seen to be formed by a sudden bending back of the stem like a crook, which may be more or less opened out. Interspersed among the rods are seen on the outer surface a number of clear spaces, as though transparent cells were disseminated among them. This layer forms the connecting medium between the retina and the choroidal epithelium.

Method of Extracting Pins from the Urethra.—M. Boinet employs the following simple process:—He first passes the finger into the rectum, if necessary, or presses it against the lower part of the urethra, so as to form a point of resistance to the head of the pin; the penis is then bent directly over the point, which is thus forced out through the sides of the urethra; the pin is then seized and extracted. No injurious consequences have followed.

Dislocation of the Hip-joint Reduced under the Influence of Ether.—Mr. F. Dehane records in "The Provincial Journal," the cure of a strong muscular man, who, while getting over a stile, his foot slipped, and falling, dislocated the head of the femur into the foramen ovale. The accident had occurred four days before admission into the dispensary. The limb was elongated to the extent of three inches, the heel elevated from the ground, the toes slightly everted, the knees advanced, and the thighs separated from each other; any attempt to handle the parts produced

exquisite pain. Prior to reduction, the ether was inhaled for about five minutes, when he be-ca[illegible]pparently intoxicated, but not insensible. H[illegible]s placed on his back upon a mattress, the pelvis fixed with a towel, and the pulleys attached to the upper part of the thigh, and the usual extension made so as to remove the head of the bone from its abnormal position. In four minutes the head of the bone returned into its place with a sudden jerk. The patient did not appear to suffer much pain, although great force was gradually excited for its reduction; and he had the appearance of a person partially tipsy, and continued to talk and laugh through the operation.

Hair, Wool, Rags, and Thread expelled in a Mass from the Rectum.—Mr. Edward Spry, of the Royal Cornwall Infirmary, recently read, at the annual meeting of the South Western Branch of the Provincial Association, an account of the cure of a young woman, aged sixteen, who voided with excessive pain two large lumps of foreign matters—the first about the size of an ordinary pullet's egg, the second larger and longer—much compressed and very hard, having a thin albuminous coating which served to conceal the character of the contents of the lumps until forcibly separated. After being washed they were found to consist of dyed wool of various colours; of thread, of worsted, and of cotton and linen rags, all compactly fitted together, and weighing one ounce and four drachms. The patient had never from infancy enjoyed a good state of health, complaining of severe pain in her bowels. In September, 1846, when first attended by Mr. Spry, there was a considerable swelling just below the margin of the right ribs, and occupying the whole of the right hypochondrium. This tumour had a well-defined edge extending towards the epigastrium, and firm pressure on it occasioned pain. There were occasional vomitings. After the evacuation of the foreign substances, she steadily improved in health, and appears a fresh-coloured girl. It appears that this patient has no recollection of swallowing any part of the matters evacuated, but her mother stated that when a child learning to walk she could get at the seat of a settle in the kitchen, by the edge of which she held, and that the children often amused themselves by turning over the contents of a box in which old rags of all sorts were deposited; and that then the child must have swallowed the substances which after the lapse of many years were voided by the rectum.

Anencephalous Births.—Dr. Simpson states that, in his opinion, in anencephalous monsters the malformation arises from intra-uterine disease, viz., from the bursting of the head when hydrocephalic. The brain is opened up and distended by fluid so that it becomes gradually absorbed; at length the enclosing membrane gives way. The two small tubercles, always seen in anencephalous cases lying on the base of the cranium, seem to be nothing else than the remains of the membranes, shrunken up and almost obliterated.

REVIEWS.

Consumption of the Lungs and Asthma, Arrested and Cured, in the Majority of Cases, by Inhalation and other Rational Means; containing all the Remedies and Plans that are necessary in every Stage of those Diseases. Also the Means of Curing Influenza, Cough, Bronchitis, Sore Throat, Hoarseness, Inflammation of the Lungs, &c. By Daniel Carr, M.D., Author of "Advice on the Diseases of the Stomach, Liver, &c., arising from Indigestion." London: Effingham Wilson, Royal Exchange, &c. &c.; pp. 200.

Some people are very clever in their own estimation, but they are not content with holding this opinion themselves, they must have others think as they do in the matter. This is evidently the case with the author of the work before us, which is written for the twofold purpose of opening the eyes of the public to his merits as a physician, and of increasing the number of his patients by showing them how they may doctor themselves. Of course Dr. Carr never intended that the book should be of use to any one but himself, and that by bringing patients to his house.

The *thing* is one of the oddest productions that has issued from the press in this remarkable age, having a titlepage which looks exceedingly like a quack advertisement, and a number of questions on the last leaf that have all the characteristics of a "Brummagem button." The preface shows us the singular modesty of the author, for there we are told that "many of the medicines are given from the writings of eminent practitioners, *with some alterations that have rendered them more efficacious;* while the peculiar feature of this book is the full information which it gives on the subject of inhalation: *for in no other treatise in existence can there be found such particular and minute directions for the proper management of this important mode of treatment.*" The fame of Birmingham has hitherto been rather of an equivocal character, for while it has been celebrated for its artificers in brass, it has been renowned also for sending forth wares composed of a very base material with a very imposing aspect. We sincerely hope that our author will not prove a "Brummagem" doctor with pretensions so showy as for a season to pass current with the public, but which will be unable to withstand the test of science and experience.

We do not intend to dispute the fact that inhalation, under certain circumstances, may be usefully employed in diseases of the pulmonary organs, but we do not believe that, "when inhalation is not employed, all other means will be tried in vain." We could cite numerous instances to show the fallacy of this statement, but, as it is evidently made with a view to promote "puffing," we shall leave it without expending time and paper upon it.

In order that this "puffing system" may be carried on with advantage, patients must provide themselves, with glass inhalers, capable of holding about a quart, and the following articles:—"Iodine, conium, hydrocyanic acid, ipecacuanha, chlorine, morphine, lobelia inflata, stramonium, sulphuric ether, digitalis, belladonna, hyoscyamus, papaver, lactuca, black currant, colchicum, hoarhound, hyssop, red cabbage, hops, and other emollient herbs; vinegars, spirits of turpentine, tar; also some of the gums and balsamic resins." This is rather bold work to recommend unprofessional persons to have and to use such things as iodine, hydrocyanic acid, chlorine, and morphine; and we hope that even the doctor's friends will not be silly enough to tamper with their own lives, in preference to giving a fee for proper medical advice. Some of the remedies, however, may be employed with out incurring the risk attendant upon the use of chlorine or prussic acid; amongst these we find the decoction of red cabbage. This vegetable, we are told, "is possessed of great medicinal powers in consumption, and is used to greatest effect in the following manner:—Take of fresh leaves of red cabbage, cut into small pieces, three handfuls; boiling water, four pints; boil down to three pints, and add honey, two ounces; boil again, skim it during the time, and afterwards let the whole be strained. About a teacupful may be put into the inhaler at a time with a pint of hot water, and the vapour then received in the usual way, three, four, or five times daily. This composition will effectually diminish the irritation of the respiratory organs, lessen the cough, and facilitate expectoration. A teaspoonful of it may also be drunk internally three times a day (if it does not derange the bowels), and thus the system will receive all the benefit which this excellent remedy can impart." There is a certain kind of "irritation" with which knights of the shears are said to be troubled with, when engaged in making garments for the outer man, and which cabbage effectually allays. We hope that the red cabbage decoction recommended above will prove nothing inferior in allaying irritation of the respiratory organs; the patient, however, must take care that the preparation be quite fresh, or the flatulence which follows will prove anything but comfortable.

We cannot imagine for what purpose this book was sent to a medical reviewer; the editors of provincial newspapers may give it a "puff," but the medical press must condemn it as a work which a doctor of medicine ought to consider beneath his dignity to write, as it can neither benefit the profession nor the public.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.*

A Student.—*The information sought will be given in the number about to be published. It does not affect the validity of the indenture, the master not being a member of the College of Surgeons in London.*

An Old Surgeon.—*The fee for a diploma of Master in Surgery, Glasgow, is £10. 10s.; for Doctor of Medicine, £25. 3s.*

A Subscriber and Wellwisher.—*There is no doubt that a fertile source of fever is the neglect of proper sanitary measures for clearing away the nuisances which exist in the densely-populated districts of large towns. Open drains, offensive and putrid matters, arising from animal and vegetable bodies in a state of decay, are permitted to send forth their pestiferous gales to the jeopardizing of the health and lives of both poor and rich. It is probable that some movement in the right direction will be made in Parliament during next session, though there will be a powerful opposition from interested parties. We shall not fail to use our best endeavours to aid the Government in any efficient measures they may bring forward to promote sanitary reform. The letter shall be used.*

Medicus.—*Chemistry and the microscope have thrown some light on the nature of mollities ossium, but we know of no one having been so successful as to stay the progress of its frightful ravages by the use of medicines. The case, though thus suspicious to us, will be welcome.*

A Licentiate.—*The strictures on the Apothecaries' Society are under consideration, and may probably be inserted in a future number. We are unable to state the annual income of the corporation, or the number of prosecutions it has instituted against unqualified practitioners. We would advise our correspondent to apply to the secretary, at the Hall.*

An Old Student.—*The Royal Infirmary, Edinburgh, has some English students attending its wards; the fees are low, and the hospital is low. Edinburgh is a ruin, considered as a medical school.*

Mr. J. Westmacott.—*The severity of the remarks on certain parties may, for aught we know, be just, but it would be imprudent in us to publish them without a guarantee, as the inevitable consequence would be an action for defamation.*

Mr. J. Richardson's *suggestions will be attended to.*

X. Y. Z.—*Ether has been employed in the French capital successfully in the detection of simulated disease. We believe that M. Baudens was one of the first to use inhalation for this purpose.*

A General Practitioner and Subscriber.—*We are not ignorant of the tricks which certain itinerant quacks play upon the public. The most efficient remedy which we can recommend our correspondent to resort to, as they have visited his neighbourhood, is to get some of the injured* patients *to institute a prosecution.*

F. R. S., West-end.—*We have some doubts concerning the genuineness of the production, which personal interview, or a more satisfactory letter, can only remove.*

A Member of the Institute.—*Mr. Pennington is a general practitioner, and is worthy of the highest admiration for the constant solicitude he has maintained for the welfare of his order.*

A Juvenile Correspondent.—*We do not remember having received the communication; if received it was overlooked amid the mass of correspondence which we have weekly to inspect. Write again, and it shall receive attention*

Galen.—*The assistant-surgeon of the East India Company is required, as a condition to his appointment, to subscribe to the Military and Medical Retiring Fund, at his respective presidency, and also to the Military Orphan Society, if appointed to Bengal. The diploma of the Faculty of Physicans and Surgeons of Glasgow is received by the Board of Directors.*

A Parochial Medical Officer.—*The facts stated in the private communication received are of sufficient importance for publication. With the permission of our correspondent we will give them a place in our columns, as they will still further show the hard bondage in which gentlemen of his class are placed. "The lines of some country practitioners are not fallen in very pleasant places."*

A St. Thomas's Pupil.—*The lectures are in accordance with the Society's regulations, but the want of an indenture of apprenticeship will be a barrier to examination. The loss of the document, and the death of the master, can be remedied if there are no further difficulties to encounter.*

A Young Surgeon.—*There must have been some defect in the apparatus, or the mode of using it. The nostrils should be carefully closed, or the desired effect may not be produced. A common bladder of large dimensions has been used with success, but it has been objected to on account of the patient respiring carbonic acid exhaled from the lungs. There are apparatus constructed for the especial purpose of administering oxygen when required. Our correspondent had better see an experienced surgeon administering the ether before he attempts to do so himself.*

Ignoramus.—*The English word is derived from* omoios, *similar; and* pathos, *affection.*

We shall consider the communication of Mr. Thomas, of the Cumberland Infirmary, *and if it does not expose us to an action for libel it shall receive an early insertion.*

We are requested to correct a mistake in a former number of the Medical Times, *in which it was stated that Mr. Crosse, of Norwich, had dissected many hundred ears of deaf and dumb persons. Mr. Toynbee is the gentleman who is entitled to this distinction.*

French, Higham Ferrers, *must stand over till next week.*

A Hebdomadal Reader.—*There are certain periods of the year when candidates are examined at St. Andrew's for the doctor's degree.*

Mr. C. A. Dalby, Ashby-de-la-Zouch.—*Laennec and Fergusson.*

Mr. Brandon, 3, Vernon-place, Bloomsbury, *says that he has seen venereal ulcers cured by human saliva, and no secondary symptoms follow; also, ophthalmia tarsi, and foul ulcers on the finger. The effect, he says, is very quickly perceived. He adduces the corroboratory fact, that sores in dogs are rapidly healed in this way. We are aware that in the French army saliva is held in great esteem both as a curative and preventive of venereal sores.*

J. B. O.—*A prosecution could be maintained against the parties mentioned, but it would not be advisable, the qualification being one sanctioned by the Legislature. The party also is entitled, we think, to professional courtesy.*

Letters and communications have been received from Mr. Nance, Eccleshall; Dr. Nicol, Inverness; Mr. Dalby, Ashby-de-la-Zouch; Mr. Corfe, Middlesex Hospital; Mr. J. Gordon Bailey, London; Mr. Alfred Ebsworth, Bulwell, Notts; Galen; A Parochial Medical Officer; A St. Thomas's Pupil; A Young Surgeon; Mr. Oliver Thomas, Hipwell, Ferryside, Carmarthen; Ignoramus; Mr. Evan Thomas, Cumberland Infirmary; French, Higham Ferrers; A Hebdomadal Reader; Mr. Brandon, 3, Vernon-place, Finsbury; A Juvenile Correspondent, A Member of the Institute; F. R. S., West-end; A General Practitioner and Subscriber; Z. Y. Z.; Mr. J. Richardson; Mr. Westmacott; An Old Student; A Licentiate; Medicus; A Subscriber and Well-wisher; An Old Surgeon; A Student; J. B. O.

THE MEDICAL TIMES.

SATURDAY, SEPTEMBER 18, 1847.

THE POOR-LAW INIQUITY.

Mr. Prankerd, in his manly and valuable letter, given in another column, says truly that neither Parliament nor the country have any sympathy for the wrongs of the medical man. Why? Probably not through disinterestedness. There is in them a sort of lurking conviction that they have the benefit of our losses. We are a community apart whom they would support, as a necessity, at the smallest possible cost. Hence, when we grumble, they "smile"; and when our complaints are reiterated, they absolutely "laugh"; for these are the happy assurances that they are successful—that they not only have doctors, but have them cheap.

This feeling, so naturally indicated to Mr. Prankerd by his guardians, is more general than is fancied. Parliament—in this respect the mirror of the public sentiment—has never displayed any anxiety to ameliorate our condition. The M.P.s are far from anxious we should rise in the social scale, or that with a higher science we should vindicate a larger usefulness. To set us right, or give us our legitimate position, are courses which take the shape of what they are rarely guilty—self-taxation. Through the poor on their estates, through their tenantry and their servants, they have the benefits of our injuries; and though there may hover about them a half-consciousness that what they gain in purse they will lose in the larger and more substantial advantages of greater health to themselves, and higher usefulness in one of the country's most important professions, still the immediate numismatic consideration is overwhelming, and like the safe spectator in "Lucretius," gathering personal comfort from observing the distant storm and its shipwrecks—they survey our grievances with a secret pleasure, and hear our groans with an unavowed delight.

This is quite natural, and would excite in us no regret if our friends gathered from it that lesson of self-seeking and self-reliance it so powerfully teaches. We are quite strong enough to attend to our own interests. We want no external aid, and if we will not use our own adequate means, we merit the indifference we are deploring. Our legislators are not the good-natured men to help those who will not help themselves. They act on the other theory themselves, and are entitled to resent as a personal affront the idle beseechings of powerful do-nothings. In the poor-law question, too, the living pauperism of the land is so much more deeply concerned than we, that we should be apathetic or indiscreet indeed if we failed to enlist *for it* a large amount of public sympathy and support. Ours is only a small part of the Government question. All that we can say is, that we are *cheated*—widely, continuously, and systematically. The poor are cheated too, but it is not so much in purse alone: it is in comfort, in health, in life. We suffer as the agents, they as the victims, of a bad system. For them, at least, there is sympathy and support; and, in doing justice to their wrongs, we adjust our own.

The public ought to know at once, tha[illegible]ever the medical man may be, a system of half-payments can never secure a system of plenary attendance. There is a principle in human nature that stands up against the system, and in many, if not in most, men it will, more or less, sway and govern—whoever may suffer by it. "You, a guardian, complain that the duty is inefficiently done; but, being inefficiently paid for by you, you cannot consistently reprimand the fault; and if you do, the place is so little worth possessing, the holder may fling it in your face. You get more than you pay for—and, wherever be the falling off, the injustice is yours. If the union require a thousand hundredweight of meat, and you contract to pay but for the half, the starvations that follow lie at your door rather than at the butcher's. It is much the same with the medical officers. At all events, however wrong the doctor, you are still more so to place him in a position in which he can only be just to you by doing wrong to himself, or avoid the ruin of others save at the price of his own."

The Convention in London, attended by every union doctor, is the great clue that will extricate the profession from this labyrinthine difficulty. We shall then have secured unity of purpose and action in a large section of our brethren, which, observed by the rest of the profession, will guarantee assistance and sympathy, instead of jealousy, rivalry, and opposition. Thenceforward, in our battlings with commissioners and guardians, it will no longer be an obscure affair of individual hardship or contest: for the future to accomplish a single injustice in one district would be first to triumph over the resistance of all. A powerful enemy would find a still more powerful foe, and in every union doctor there would be—if ill treated—a defendant with five thousand backers. But, powerful to resist aggression, they would be equally so to secure further improvements. They would inform their own brethren and the public; they would diffuse a better knowledge of a subject yet much in the dark, and would operate by personal influence as by public exertions on men in power. We repeat, then, now is the time to be stirring; it is most favourable, and not a minute should be lost. *A conference of the union doctors of London is of primary and immediate importance.*

THE HULKS AT WOOLWICH—MR. DUNCOMBE'S CHARGES AGAINST MR. BOSSEY.

It is our anxious wish in all cases to see justice done to the members of the medical profession, as they are especially liable to have their best efforts slighted, and their conduct maligned without any just grounds. Reputation to them is all that is valuable: for this once taken away, nothing remains for them but future neglect and ruin. The public are too ready to believe an unjust insinuation; and, though in the end justice is always done, yet this is often after the infliction of much suffering.

Mr. Bossey, the medical officer of the Hulks at Woolwich, has been placed in a very painful and critical situation, in consequence of certain charges which have been brought against him by Mr. Duncombe, in the House of Commons. These charges originated with an inmate of the hulks evidently of unsound mind; but, having reached the ears of the honourable member for

Finsbury, he considered them of sufficient importance to call for a searching investigation. Doubtless, Mr. Duncombe's intentions were good, but we are compelled to say, they were not prudent, and they must have been the means of inflicting much mental suffering upon the gentleman against whom they were made though fully conscious of his own integrity. The result of the affair is that Mr. Bossey is entirely exonerated from all blame, the official commissioner and Sir G. Grey having both reported to the Legislature that in "no instance had either harshness or cruelty been proved against him."

We congratulate Mr. Bossey on the result of this investigation, as it leaves him without a stain on his professional character, while we trust that Mr. Duncombe will in future exercise a little more discretion before he introduces to the House of Commons charges against the medical officers of public institutions. He is, *de profession*, the people's friend, but the very circumstance of his being so, and the readiness which he exhibits to vindicate his clients, expose him especially to the danger of being imposed upon, and thus of inflicting an injury when intent, perhaps, upon redressing one.

A FANCY HOSPITAL.

[To the Editor of the Medical Times.]

SIR,—Your article on "The Royal Free Hospital" is curious. If founded on facts, the hospital is romantic: if sketched from fancy, the romance looks very like truth. Which is it, Dr. Marsden?

Supposing that your Gray's-inn concern is no isolated case, and predicting from what little has occurred in one hospital how much *may* occur in others, why, as we have had in the lay world "The Mysteries of Paris" and "The Revelations of London," should you not add (as a *feuilleton*, perhaps) "The Mysteries of a London Hospital," or "Revelations of Metropolitan Charity," and give the professional world a capital novel? What interest might be anticipated from working out such commonplace points as even my poor fancy extemporizes: thus:—

I.

How to form a new or support an old hospital—showing how needy men may make fortunes by the activity of their benevolence.

II.

What experience suggests as the best standing machinery for turning the *religious* sympathies of the public through the breeches pocket of a man of the world.

III.

How a projector's *chers amis* may find it worth *their* while and *his*, officially to serve the destitute poor.

IV.

How incurring or paying a swinging debt may equally prove a profitable transaction—the destitute poor not included.

V.

Whether an adroit system of bill-discounting might not prove a useful fructifier of charitable donations.

VI.

How far the "extreme-destitution" principle, so useful in admitting patients, should be extended to the letting in of auditors and *other* bosom friends to office.

Add to the above, for character's sake, a few choice professional schemers from the gaols, the billiard rooms, and the stews, and it must go hard with the dullest writer if he want either incident or plot for "a romance of thrilling interest."

A LOOKER FORWARD.

THE POOR-LAW DOCTOR.

[To the Editor of the Medical Times.]

SIR,—The principles and sentiments contained in your remarks of the 11th instant so fully coincide with my own, that I cannot refrain from responding to them, and expressing the long-cherished feelings of indignation with which I have beheld so many educated and talented members of our profession degraded and oppressed by the heavy yoke imposed upon them in the position of medical officers to the poor—a class of people who ought to be the peculiar care of an enlightened and benevolent public.

I have long, too, held the opinion that no reform can be expected but from the combined cooperation of all who feel its importance; and, as you justly say, "*there should be no delay—we do not know a better moment than the present for an agitation of the question*."

The public ought to be faithfully and fully acquainted with the unworthy mode of electing the medical officer at the least possible salary, without any regard being paid to the real requirements of the sick poor, or the way in which they are to be met. But I believe that such an appeal, if *unitedly* and *powerfully* made, must produce its merited result—a decided and complete reform—a remedy which equally meets the grievances of the suffering poor and the oppressed practitioner. This object, I do not consider, has yet been sought in the most effectual manner, medical men having generally brought their own complaints forward, when they should rather show how deeply the *poor* are injured. This lesson I learned when in attendance upon the Select Committee of the Medical Poor Relief in London, under Lord Ashley, in 1844, when I expected the grievances of medical men would have been prominently brought forward and reported on; but I soon found that the members of that committee had no sympathy for our profession any longer than they affected the poor; and this, I believe, is the public feeling now. Medical men have been so slighted and oppressed (which they have almost merited, or at least procured by their supineness), that the public cannot easily be roused to any wrongs they may express; though let it be seen that the paupers are injured by the medical arrangements, and a ready ear will be found from influential quarters, which, properly followed up, would achieve much good for our profession. Not that I would deprecate our own claims to the sympathy of our fellow-citizens, but I fear we shall meet with only a cold response, as long as men are found who will voluntarily, or by force of circumstances are compelled to, submit to the indignities under which we are now suffering.

To give an idea of the medical relief in this neighbourhood, I must briefly detail some of my own troubles. I have the care of a union workhouse. For nearly ten years I have had the care of part of the L—— Union, during which time the remuneration paid the surgeons has continued the same, although in my own instance, as well as of others, the duties have increased nearly twofold. The salaries paid are generally on a lower scale than most unions in the county of Somerset, and very unequal to the duties required. I have several times made application to the guardians for an advance of salary, but have been invariably denied, until the commencement of the present year, when, in consequence of an inquiry from the poor-law commissioners, the salaries of some of the medical officers were slightly raised—my own district to the sum of TEN SHILLINGS *annually!!!* This district contains a population of 4567, has an acreage of 13,600, and during one year I registered 870 cases of sickness, for which I received the sum of £18. I registered, also, 2412 attendances at my own and the paupers' residences, travelling about 1500 miles, giving me, as remuneration, *one shilling and a penny and a fraction of a farthing* per case of sickness, and *fourpence halfpenny* for each attendance (it may be of eight or nine miles' ride to and fro), besides the supply of medicines, which are very expensive—such as quinine, bark, opiates, &c &c.

The majority of the cases treated were such as arise chiefly from bad food, with too much work, or from living in low, damp situations—as the following summary will show, viz.:—

Epidemics, endemics, and contagious diseases—Typhus, and remittent fevers ..	118
Scarlet fever 25, ague 13, diarrhœa 39, measles 19, dysentery 4, cholera 2 ..	102
Diseases of the nervous system—Chorea 4, epilepsy 6, hysteria 6, insanity 3 ..	19
Various affections of the head 33, *diseases of the respiratory system* 56	89
Diseases of the circulatory organs 1, *ditto digestive*—viz., worms 46, teething 7 ..	54
Jaundice 1, dyspepsia and various affections of the stomach 180	181
Urinary organs 10, *generation* 26, skin 116, rheumatism 27, dropsy 7, debility 19 ..	207
Surgical—Eye 17, abscess 16, ulcers 17, amputation 1, rupture 3, fistula 1, ..	55
Various injuries of different regions 41, miscellaneous cases, 4	45
	870

The medical man being so ill remunerated cannot possibly afford, on the salary given, the proper medicines and attendance, consequently, by a false economy, the poor, I am convinced, in very many instances, are kept in a state of suffering and distress longer than they should, and the ratepayer is *longer burdened by the support of the sick pauper*. During the present year I have already registered 690 cases of sickness, and one-half and more of my yearly contract is still unexpired; of this number are 212 cases of ague—a number considerably less than I really attended, as the labour of registering such a multitude of names was more than my assistant could well accomplish. I calculate, therefore, the cost of the quinine administered amounts nearly to the salary I shall receive: this great outlay was mentioned once at a meeting of the board of guardians, when it was received by an incredulous smile from the chairman, and a loud grin from several of the guardians.

The gross absurdity of the poor-law medical arrangements will be seen in the following table, where, taking similar districts in population and acreage, the great disproportion paid for the services rendered in the different unions of this county will be apparent.

Union.	Population.	Salary.
Langport	1506	£10
Bridgwater ..	1526	27
Taunton	1578	30
Shepton	1320	27
Frome	1436	28
Axbridge	1806	35
Langport	2758	30
Dulverton	2222	50
Wincanton ..	2283	43
Taunton	2164	45
Yeovil	2836	45
Dulverton	2805	55
Bridgwater ..	2924	48
Frome	2991	55

All Agricultural Unions, or, rather, Districts.

Again, an adjoining union pays 2s. per head for vaccination, this union pays 1s. 6d. per head, and the next union to this pays but 1s. for the same duties. I have, myself, to vaccinate children living six miles from my residence, and am expected to see the child twice, giving at least twenty-four miles to be ridden over.

It will naturally occur to your readers why, as a practitioner of upwards of ten years' standing, I should subject myself to such treatment? I simply reply, that, if I will not consent to the arrangement, another medical man would be introduced, which may materially affect my private practice; and the neighbourhood being a poor one, this would not be desirable.

I have, however, seen a few reforms in the system, and I live in the hope of seeing still greater, when our posts will be really honourable, rather than as they now exist—*degrading* to our-

selves, disgraceful to the *poor-law* officials, and *most iniquitous to the poor.*

Our profession to the *public* is most self-denying and liberal—to ourselves most selfish; every one follows his own interest, and cares little for the mass. We are so divided by the varied qualifications of our ranks, that our labours have been depreciated by public authorities; and the so-called *heads* of our profession have never stirred in our defence, but have left us to our fate.

The only plan which can satisfy medical attendants of unions must be a fixed rate per head on the whole population, allowed by the commissioners, from which the guardians *cannot deviate.* This, together with the additional rates granted by the medical order of March, 1842, and a medical commissioner for arbitration in all points relative to medical relief, will, I believe, satisfy the profession generally; and this, through perseverance and unanimity, I trust we shall obtain; and if you, as editor of a widely-circulated and valuable publication will further the cause with your sanction and exertions, the grateful thanks of an oppressed class of brother practitioners will be your reward, with the satisfaction in your own mind of being the best friend of the union doctor, and a *real* guardian of the poor.

I am, Sir, your obedient servant,
John Prankerd, M.R.C.S.E. and L.A.C.
Langport, Somerset, Sept. 15.

P.S. I may perhaps add, that I have the care of a union workhouse, at the salary of £32 per annum, whilst in the adjoining union £50 is paid for similar services.

DEGRADATION OF MEDICAL OFFICERS.

[To the Editor of the Medical Times.]

Sir,—I arrived at this place last week, with the intention of offering myself as a candidate for the office of house-surgeon to the hospital in the town; but, after some inquiries into the state of its affairs, abandoned that intention, and now communicate to you what information I obtained with regard to that establishment.

I confess that it startled me to find, on the outset of my inquiries, that, although the hospital has been established only five years, there have been *four* elections of house-surgeons, and a *fifth* about to take place. Upon further investigation my wonder ceased; and, feeling that the situation would not suit me, I did not offer myself; nor can I imagine how any man with a spark of gentlemanly feeling could condescend to the degradation of such an office.

It appears that the house-surgeon is nothing more than a mere dispenser, which any druggist's shopman would be fit for, as well, or better, perhaps, than an educated man, for he is to have nothing whatever to do with the management of the cases beyond spreading plaisters and compounding the medicines ordered by the physician and surgeons. If he venture to act upon an emergency, and suspend the administration of such medicines as foxglove or arsenic—the effects of which, by accumulating in the system, are injurious, and it may be fatal—he is liable to be visited by the wrath of the physician; or, if a man is suffering from agony from too tight a bandage on an inflamed limb, he must not remove it for fear of the high displeasure of the surgeons; and it is entered in the committee-book, that "the house-surgeon is not to prescribe a second time (even) for a casualty."

Again, there is a standing order in the book of the said committee, that "the house-surgeon must not order any medicines from the druggist without the sanction of the physician or one of the surgeons." Have the former in-door officers been dishonest? Have they been suspected? Such an order would naturally give rise to some misgiving on that head; if not, why, then, the order is a direct insult to them. The richest part of the story remains to be told. This said sapient committee have decreed that the gentleman who may be elected shall "give a bond or undertaking to retain the office for three years; but the committee may dismiss him at any time"! Hence, the natural implication is, that if he should retire, in order to better himself by a partnership or public appointment, within the three years, he leaves his office in disgrace. The agreement is not mutual, and the gentleman is in a worse condition than a menial servant who stipulates for a month's warning on both sides. Does not this also imply that the committee fear lest the character of the institution should, by its frequent changes of its in-door officers, be in such bad odour that gentlemen will not come forward to fill any vacancy which may happen. And, therefore, they determine to nail one poor devil for a specified term to escape that imputation.

Now, what are the advantages to be derived from the office? Is it salary?—That is only £60 a year with board, for the combined duties of house-surgeon and secretary. Is it the hope of distinguishing himself, and gaining a *locus standi* in the county?—Alas! beyond the walls of the house, and a weekly summary of the killed and wounded in the county papers, he is unheard of. Is it instruction and furtherance in the knowledge of the profession?—The surgeons may be respectable practitioners, but their fame has not extended beyond the hills which surround the town; and the chances are that the young men of the day may rather instruct the surgeons. Is it personal peace and comfort?—Why, he is more likely to be knocked about as a shuttle-cock between the surgeons, who are not on speaking terms; and, if he is civil to one, the other is sure to take offence at a supposed preference given to the other.

Is there not everything here calculated to discourage an educated man from accepting such an office?

"I'd rather be a dog and bay the moon,
Than such" (an officer).

I cannot find, upon inquiry, that these orders of the committee are sanctioned by the great body of the subscribers, and sincerely hope that, for the sake of an institution calculated for much usefulness, the first annual meeting will discountenance a system of management calculated only to overthrow it.

I remain, Sir,
Your obedient servant and constant reader,
Archibald Christie.
Dorchester, Dorset, Sept. 4.

SURGERY AT THE ROYAL FREE HOSPITAL.

[To the Editor of the Medical Times.]

Sir,—I am not one of those literary characters called Fellows, neither do I reside in that atmosphere of science which exists, as a matter of course, nowhere but in the great metropolis and its suburbs, but I am a poor benighted country practitioner, and, as such, may no doubt lay claim to your generous sympathy.

Being myself no critic, I will ask your opinion upon some cases, published by Mr. Weedon Cooke, of injury to the head treated by Mr. Wakley, jun.; and if you should agree with me that they have been carelessly reported and miserably mismanaged, however much Mr. Wakley, sen., from his atrocious conduct towards you and the *Medical Times* on all occasions, may have incurred your displeasure, do not let that induce you to be unjustly severe in your censures on the practice to which I shall draw your attention.

In a journal of July 3rd there is a report from the Royal Free Hospital, containing two cases treated by Mr. Wakley, jun. To the first of these I shall make no allusion, except in so far as to remind you that Dr. Lockhart Robertson has made some remarks upon it in reference to insanity. The second case is that of Wm. R., aged ten, who was "knocked down by a horse and chaise. The wheel passed over his head." It is stated that "on the right side of the head, in the situation of the parietal eminence, there was a straight wound of the scalp, an inch and a half in length, and gaping about half an inch; small quantities of brain were oozing from it; the finger discovered a fracture, with depression of a portion of bone, nearly an inch square, and the middle meningeal artery was felt pulsating distinctly."

It must be remembered that the accident occurred on the 8th; that the trephine was not used until the 15th; that bread and butter were allowed on the 9th, and no preventive treatment had recourse to. The symptoms on his admission I must admit were not very urgent; but, considering all the circumstances of the case, I will ask you—1. Whether it was treated according to the established principles of surgery?—2. What could the arteria meninges media be doing opposite the parietal eminence?—3. Supposing it or any of its branches to have been there, was it wise, in a case of compound fracture of the skull, with depression to such an extent as to allow of the pulsation of the artery being felt, to leave the bone pressing upon and irritating the dura mater for seven days, until symptoms supervened, without applying the trephine, and this without using any preventive measures?—4. Was it safe and judicious to give bread and butter on the second day?—5. Is it possible that any brain could have escaped at the time of the accident, and the dura mater be found sound at the time of the operation, and after the bone had been pressing upon it for seven days?

What would the great and ever-to-be-admired Sir Astley Cooper say, if he could make his appearance once again, on finding the principles which he laid down for our guidance in such cases totally disregarded?

Your obedient servant,
A Country Practitioner.
Gotham, Sept. 8.

NATIONAL CONVENTION OF POOR-LAW DOCTORS.

[To the Editor of the Medical Times.]

Sir,—In my last letter I dwelt on the inadequacy of my salary to the amount of duty performed towards the paupers in the district over which I have been appointed medical officer. I shall now consider the salary and duties of the union workhouse doctor, and show, by reference to my own, that in these houses of industry, as they are called, we have an equal excess of duty, an equally parsimonious remuneration.

In large unions the houses for the reception of, and testing, destitution are necessarily coextensive; and in proportion to the ever-changing inmates does disease exist of every description to which flesh is heir to. Fever of a malignant and fatal character is now the prevailing epidemic, dealing death to many of the attendants—surgeons, relieving officers, nurses, masters, matrons. And, in the past year, how many epidemics have reigned triumphant in these over-crowded, ill-ventilated pesthouses! Call we to mind our last year's trouble, anxiety, and care—our journeys without end, our patients without number. The wards have been filled with the worst class of cases with which medical men have to deal: destitution in the first place, and inflammatory attacks superseding. The over-crowded state of the houses has necessarily entailed great increase to our duties, yet we have no guardians volunteering an increase—no thanks from the community. We may visit the beds of sickness from hour to hour, and imbibe the poison emanating from the dead and dying; we may sacrifice health, and even life, for £1[illegible] per annum! God save the mark. For this magnificent sum is a perfect hospital maintained; concentrated, in fact, are several hospitals, for we have our *fever, lying-in, lock, smallpox, itch,* and *idotic wards;* and maintained, too, in all their completeness, as far as advice and drugs are concerned. I believe, if I were to add together the number of patients in the sick wards during the past year afflicted with every kind of disease, from open facial cancer to

gangrene of the foot, I should find 400 regular hospital cases, though of a far worse description. Do these diseases require no medicines? Far more than the ordinary complaints we meet without of doors. For the long-continued depression after fever, we want our quinine; for the pain of cancer, our morphia; for chronic enlargements, our potass. iodid.: all expensive drugs, and to be freely used. To be successful, we want our leeches and every convenient appliance, and yet we have no more allowed to us than will actually repay the cost out of our pocket. We have established fully our position, that our present salaries are totally unfit for the performance of such onerous duties, and I, for one, will gladly volunteer to join any movement which may be made to form a National Convention of Medical Men connected with the various unions throughout England. Something must be done, and that soon, for so long as the present dastardly system is upheld—until a thorough revision of it takes place—the sinews of the labouring poor will be wasted through inattention, or weakened by neglect. Raise the medical men to a proper level, give them the wherewithal to exert their utmost with, and we shall soon find less pauperism resulting from disease—more happiness amongst our poorer brethren. I feel pretty sure that the medical men are not at fault for accepting these offices, because in all advertisements the guardians carefully keep back from view the extent of duties to which the office is liable: they give the salary and the number of parishes, but never state the average number of patients, or the average number of acres to be ridden over. Thus the medical man, before I took to the district, had about eighty patients a quarter; but in the first six weeks I had actually 250 orders on me for medical attendance. If a district does contain such an extensive pauper population as to render the medical man liable to such an excessive amount of attendance, the fact should be advertised openly, and then I am sure the competition for these appointments would not be so great as to excite the ridicule of the guardians. How difficult it is to please all parties may be instanced by the fact, that two medical men have been dismissed from this district for inattention. Now, I believe the fact of the matter which led to this untoward result was their real inability to provide horses of good mettle enough for the work; and after they had held the district some time, they disregarded the patients, seeing the total absurdity of being able to repay themselves for their excessive exertions. *If a man is not a "bankrupt" before he takes to a union, he will stand so long as his druggist will give him credit, and no longer.* It is no disgrace to be dismissed from the poor-law commission, as surgeon, for in every case I have known, sympathy has been excited in the surgeon's favour, and one exclamation alone is uttered, "How could he be expected to work for nothing!" After dismissal an interest is excited, and the surgeon generally does better without than with the appointment. I am afraid I have exceeded my limits, so conclude with a fervent wish that some influential members will commence a movement toward the formation of a National Convention of Poor-law Medical Officers; and, should any venture to the fight, you are at liberty to enrol my name amongst the number.

I remain, Sir, your obedient servant,
A Poor Union Surgeon.

THE FIRST WRITER ON SMALLPOX AS A DISTINCT DISEASE.

[To the Editor of the Medical Times.]

Sir,—In a late number of the *Medical Times*, a correspondent wished to be informed who was the first medical writer in England of any note that mentioned smallpox. I had this reply ready to send the following week, but, having to leave town, was prevented posting it. In the mean time, some reader had replied that Sydenham was the first who treated it as a distinct disease from measles. Of this there is no doubt, but I do not think it a reply to the question: for there were many who wrote about it long previous to that great man's time. A few I shall mention below, but I may remark that no writers previous to the thirteenth century wrote about smallpox, at least no works have come down to us; and this may justly be considered the time when it was first noticed in England.

One of the earliest, if not the earliest writer on this disease in this kingdom, was Bernard Gordon, a man of much reputation; he was a Scotchman, and practised at Montpellier. He wrote about the commencement of 1300. His "Lilium Medicinæ de Morbibus propo omnium Curatione," &c. &c., is well known; and in another work by him, called "Practicæ Gardonii," there is a chapter on smallpox, which, as usual with all writers previous to Sydenham, as your correspondent justly observes, he treats as only a variety of rubeola. His works must have been much

must own, was to all intents a thorough quack; he lived in 1320. He was educated at Merton College, Oxon, and there took his M.D.; he was like many of the present day—so long as he made money, he cared not by what means. Besides his writings, which treat of everything, either in medicine, cookery, or the treatment of the hair, we have an instance of his mode of treating smallpox. When sent for to a son of either Edward I. or II., and who had this disease, he effected a "perfect cure without a mark," by rolling his patient in red cloth, and hanging red cloth about the bed! However, he was no small person in his time, and even Chaucer speaks of him as a clever man!

Another early writer, though of a latter date, was Tobias Whitaker, M.D., physician to Charles II.; he wrote a book in 1661—"An Elenchus of Opinions concerning the Cure of the Smallpox," &c.

And a very few years after (1666) the immortal Sydenham published his first work, being "Observations on Fevers."

Dr. Clinch, in 1724, speaks of a curious manuscript by "Mr. John Arden, surgeon to Richard II. and Henry IV.," noticing smallpox.

In 1593, Simon Kellwaye, gentleman, wrote and published "for the love and benefit of his countrie," a work entitled "A Defensative against the Plague," &c., "and whereunto is annexed a short Treatise on Smallpox, showing how to serve and help those that are affected with it."

But here I must stop, with many apologies for taking up so much valuable space in your journal.

I remain, your obedient servant,
J. Robinson Chapman.

STRAIGHT SPLINT IN FRACTURES OF THE THIGH.

[To the Editor of the Medical Times.]

Sir,—Having observed in the number of the *Lancet* for July 10 a description of an extending straight splint, for the treatment of fracture of the thigh, by Mr. Bottomley, surgeon of Croydon, I beg leave to remark, that as long ago as the year 1841, I published in "The Provincial Medical Journal," an account of a similar apparatus, if I may judge, at least, from that gentleman's illustrative drawings.

It was constructed, as will be seen by my descriptive paper in that journal, by Mr. Laundy, formerly a surgical-instrument maker in the Borough, who highly approved of my suggestion, and requested his name might be mentioned as the maker of the apparatus.

I did not publish it, however, as the account of an invention, being aware that the peculiar mechanism for extension by the endless screw had been employed, although in a different manner, by M. Boyer; but mainly for the purpose of describing an additional small splint, which I thought would be useful in preventing the excurvation of the femur, which sometimes follows these accidents. I also suggested the substitution of a padded leather crutch-band, in lieu of a circular band round the chest (as represented in Mr. Bottomley's drawings), which I had previously tried, but found to fail in producing the necessary counter-extension. An account of both these additions, as well as of the original apparatus, was published in the above-mentioned journal for March 13, 1841.

Since that period, I have constantly employed the apparatus in the Royal Berkshire Hospital, and have, moreover, had several similar ones constructed for some medical friends in London and different parts of the country, who approved of this method of treating fractures by extension.

In the year 1846, finding that extension *only* by the foot, in several cases which I had treated in this manner, had appeared to produce a consecutive weakness or looseness of the knee-joint, by the long-continued stretching of its ligaments, I adopted a means of dividing the necessary amount of traction between the foot and the broken femur, by fixing a band round the lower part of the thigh, just above the patella, from which a strap passed to the foot-board or shoe, and was there fastened; and thus, on extension being made by the screw, an equal amount of traction was exerted upon the foot and upon the femur, which seemed to prevent the inconvenience in question. This alteration was the subject of a paper read before the Berkshire Pathological Society, and was duly recorded in the Annual Retrospect, in which it is thus mentioned(a):—

"Mr. F. A. Bulley exhibited an apparatus, which he had lately constructed for the more efficient treatment of fractures of the thigh-bone. The mechanical extensile power in this apparatus, by means of a footpiece moving on an endless screw, was so arranged that the necessary traction should be equally divided between the foot and the lower end of the fractured bone, because he had found that in many cases he had witnessed, where the extension had been practised wholly by the foot, the knee-joint, from its having been kept for a long time upon the stretch, had remained inflexible and useless long after the bone had been united; which constituted, he thought, a serious objection to this mode of treatment. He, therefore, proposed to remedy these inconveniences by a division of the tractile forces, so that half should be expended upon the thigh-bone itself, and half upon the foot. The peculiar mechanism of the apparatus would ensure these effects."

I beg to apologize for having trespassed thus much upon your valuable columns; I should not have done so, however, if I had not considered that I had a claim by priority of publication to this invention (if such it may be called), and the credit of introducing it to the notice of the profession, in point of time, long before the appearance of Mr. Bottomley's paper.

I have the honour to remain,
Your obedient servant,
F. A. Bulley,
Surgeon to the Royal Berks Hospital, Reading.

(a) "Provincial Med. Journal," vol. ix., p. 449.

BURIAL IN TOWNS.

On Wednesday evening last a public meeting was held at the Crown and Anchor Tavern, in the Strand, for the purpose of petitioning the Legislature for the abolition of intramural interments. The attendance was very large. B. B. Cabbell, Esq., M.P., occupied the chair, and, after briefly stating the object contemplated, called on G. A. Walker, Esq., to propose the first resolution.

Mr. Walker entered into many details in reference to the practices in London graveyards, and, in the course of his address, stated that whereas a hundred and thirty-six adults were universally acknowledged to be the maximum number which an acre is capable of adequately

containing at one time, there were cases in London where three thousand bodies had been buried in that space. After citing numerous burial statistics, he moved the first resolution, condemning burial in towns as a violation of right feeling, and injurious to the public character, morals, and health.

Mr. Charles Shaw followed, and compared the practice of the present day with the old Roman law, "No dead man shall be buried in the city."

Mr. T. P. Healey supported the resolution. He condemned the prevalent practice of churchyard burial as exhibited every day in the public thoroughfares as out of harmony with the sacred and salutary feelings peculiar to the hour when we consigned the remains of a loved object to the tomb. The privileges of Christian interment as now possessed were harshly contrasted with the strong probability of speedy succeeding disinterment, a proof of the system of removal of surplus population from the graveyard. The four hundred burying-places in the metropolis might be regarded as so many conspiracies against the public health, which they were daily destroying by their continual exhalations. These poisonous vapours, where not sufficiently concentrated to cause immediate death, were productive of disease; and, as all impairment of health was an impairment of weekly wages, in the end the working man was carried to the grave whence he drew his death, leaving his family to the adverse chances of a world in which he had been so deeply wronged. It was a duty to rescue the families of the poor from such a fate, which was only the symbol of graver moral evils.

Sir C. Aldis moved the second resolution, declaratory of the increase of intermural interments, and demanding a supervision of burial-places, and insisted upon the danger to be apprehended from the practice.

Mr. Stevens, Mr. George Ross, Mr. Richard Taylor, Mr. Rogers, and other gentlemen, addressed the meeting. A resolution appointing places to receive subscriptions was passed, and a petition to Parliament agreed to, when the meeting separated with a vote of thanks to the chairman.

GOSSIP OF THE WEEK.

The Funeral of Sir Richard Dobson, Knight.—This distinguished and much lamented officer, Sir Richard Dobson, Knight, M.D., F.R.S., &c., Knight of St. Vladimir of Russia and also of Dannebrog of Denmark, and Inspector of Hospitals and Fleets, was, on the 9th inst., buried with due honours at St. Mary's Church, Chatham, in the presence of a large concourse of people. The body was brought from London by a special steam-boat, accompanied by a distinguished circle of private friends as mourners; and the party having disembarked at the Sun pier the body was placed in a hearse drawn by four horses, the friends following in four mourning coaches with four horses each. At the church the body was met by the Rev. G. E. Nash and the Rev. H. T. Stimpson, and the following distinguished officers of the Royal Marine corps in full-dress uniform, namely:—Colonel John Wright, K.H., Commandant of the Royal Marines; Colonel Charles Menzies, K.H., second in command of the battalion; Dr. W. Rae, deputy inspector of hospitals and fleets, and chief medical officer of Melville Hospital; Dr. Warden, senior surgeon of the navy; Captain Alexander Anderson and Captain P. Trant Payne, of the Royal Marines. These six officers officiated as pall-bearers. There were also upwards of thirty officers of the Royal Marines in full-dress uniform stationed at the entrance of the church gates; and on the approach of the body they formed into open line for the corpse to pass through, and at the close of the procession they closed and walked two abreast into the church, when the funeral service was impressively read by the Rev. G. E. Nash. The body was at the conclusion removed to the family vault. The deceased, owing to his distinguished character in the service, was much respected by the principal officers of the garrison. This gallant officer's service commenced in May, 1796, at Haslar Hospital, and in October, 1796, he was appointed to the Tickler, and in succession to the Arrow, Sans Pareil, Prince of Wales, Virginie, Swift, and Lively; and in 1809 he was appointed to the Trusty hospital ship, stationed in Gillingham-reach of the river Medway, where he had charge of upwards of 1600 prisoners of war of all nations for five years. At the conclusion of that service he received the above orders of knighthood from the Emperor of Russia and King of Denmark, and also two magnificent diamond rings of the value of £1000; and in 1814 he was appointed surgeon of the Chatham division of the Royal Marines; and, upon his appointment to Greenwich Hospital in 1824 he was presented by the officers of the Royal Marines with a valuable service of plate. He continued as chief medical officer and surgeon of Greenwich Hospital until June, 1844, when he retired on full pay. From the time of his entering the service to his retirement was forty-nine years and one month, during which he was forty-eight years in active service.

Jenny Lind and Hypnotism.—On Friday last, the 3rd instant, Mlle. Jenny Lind, accompanied by Mr. and Mrs. S. Schwabe, and a few of their friends, attended a *séance* at Mr. Braid's, for the purpose of witnessing some of the extraordinary phenomena of hypnotism. There were two girls who work in a warehouse, and who had just come in their working attire. Having thrown them into the sleep, Mr. Braid sat down to the piano, and the moment he began playing, both somnambulists arose and approached the instrument, when they joined him in a trio. Having awoke one of the girls, Mr. Braid said, although she was ignorant of the grammar of her own language when awake, that when in the sleep she would prove herself competent to accompany any one in the room in singing song, in any language, giving both notes and words correctly—a feat which she was quite incompetent to perform in the waking condition. He requested any one in the room to put her to the test, when Mr. Schwabe sat down to the instrument, and played and sang a German song, in which she accompanied him correctly, giving both notes and words simultaneously with Mr. Schwabe. Another gentleman then tried her with one in Swedish, in which she also succeeded. Next the queen of song, the far-famed Jenny Lind, sat down to the instrument, and played and sang most beautifully a slow air, with Swedish words, which the somnambulist accompanied her in, in the most perfect manner both as regarded words and music. Jenny now seemed resolved to test the powers of the somnambulist to the utmost by a continued strain of the most difficult roulades and cadenzas, for which she is so famous, including some of her extraordinary *sostenuto* notes, with all their inflections from pianissimo to forte crescendo, and again diminish to thread-like pianissimo, but in all these fantastic tricks and displays of genius by the Swedish Nightingale, even to the shake, she was so closely and accurately tracked by the somnambulist that several in the room occasionally could not have told, merely by hearing, that there were two individuals singing—so instantaneously did she catch the notes, and so perfectly did their voices blend and accord. Next, Jenny having been told by Mr. Braid that she might be tested in some other language, this charming songstress commenced "Casta Diva," and the "Ah Bell a mi Ritornella," in which the fidelity of the somnambulist's performance, both in words and music, was most perfect, and fully justified all Mr. Braid had alleged regarding her powers. She was also tested by Mlle. Lind in merely imitating language, when she gave most exact imitations; and Mr. Schwabe also tried her by some most difficult combinations of sound, which he said he knew no one was capable of imitating correctly without much practice, but the somnambulist imitated them correctly at once, and that whether spoken slowly or quickly. When the girl was aroused she had no recollection of anything which had been done by her, or that she had afforded such a high gratification to all present, by proving the wonderful powers of imitation which are acquired by some patients during a state of artificial somnambulism; she said she merely felt somewhat out of breath, as if she had been running.

Obituary.—On the 12th inst., at his residence, 28, Bedford-square, George Darby Dermott, Esq., aged 45, the eminent lecturer on anatomy and surgery, deeply lamented by his bereaved widow and friends.—Aug. 10th, David Barry, Esq., M.D.—Aug. 20th, at Roscommon, of fever, Stephen H. Browne, Esq., M.D., surgeon to the Infirmary and County Goal, Roscommon.—Aug. 28th, Kenrick Watson, Esq., of Stourport, F.R.C.S.

War-office, Sept. 10.—Hospital Staff: Peter Henry Roe, gent., to be Assist.-Surg. to the Forces.

Death from an Impure Atmosphere.—A long investigation took place a few days since before Mr. Baker, in Rosemary-lane, on the body of Mary White, aged two years, the child of a labourer, in Hayes-court, Rosemary-lane, whose death was the effect of fever and diarrhœa, brought on by the impure state of the atmosphere of the neighbourhood, in consequence of the want of drainage. The inquiry was called by the medical officer of the Whitechapel union, in consequence of the many deaths which have taken place from a similar cause. Mr. John Liddle, surgeon of Whitechapel union, who was called to attend the deceased, said that he prescribed remedies, but they would not act as they would have done in a healthy state of the atmosphere. Witness has now six patients in that court. He has no doubt that the same effect will arise with them. Verdict—"That deceased died of diarrhœa and fever, caused by the noxious and poisonous effluvium in Hayes-court, from want of drainage." The coroner said that he would write to Lord Morpeth, and forward a copy of the depositions to his lordship.

MORTALITY TABLE.

For the Week ending Saturday, Sept. 11, 1847,

Causes of Death.	Total.	Average of 5 Summers.
All Causes	1040	940
Specified Causes	10[illegible]	935
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	372	226
Sporadic Diseases.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	121	103
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	143	157
Diseases of the Lungs, and of the other Organs of Respiration	175	226
Diseases of the Heart and Blood-vessels	32	25
Diseases of the Stomach, Liver, and other organs of Digestion	91	94
Diseases of the Kidneys, &c.	16	8
Childbirth, Diseases of the Uterus, &c.	9	[illegible]
Rheumatism, Diseases of the Bones, Joints, &c.	8	7
Diseases of the Skin, Cellular Tissue, &c.	1	[illegible]
Old Age	4[illegible]	[illegible]
Violence, Privation, Cold, and Intemperance	30	[illegible]

No. [illegible] **SUMMARY.** SEPT. 25.

STUDENTS' NUMBER.

THE RULES AND REGULATIONS OF EXAMINING MEDICAL BODIES IN ENGLAND, SCOTLAND, IRELAND, FRANCE, AND GERMANY.

ROYAL COLLEGE OF PHYSICIANS, LONDON.

According to the regulations of this College, no one will be admitted as a candidate for the license, unless he shall have attained the age of six-and-twenty, and shall present a certificate of good moral conduct. His medical education must comprise Anatomy, the Theory and Practice of Medicine, Forensic Medicine, Chemistry, Materia Medica, Natural History (principally Botany), Midwifery, and the principles of Surgery, and must extend over the period of five years. Practical Medicine must be studied for three years in a hospital containing at least 100 beds, and having a complete staff of physicians and surgeons. Those who have studied abroad, in addition to giving proof of five years' medical education according to the usual course of study, are required to present testimonials of a twelve-month's medical practice at any hospital in Great Britain, having the qualifications as above.

No one will be admitted as a Licentiate (*Permissus*) who is accustomed to use any secret medicine or nostrum in the treatment of disease, unless previously to his first examination he make known to the president and censors its composition and the manner in which it is employed. Every candidate must undergo three examinations, each conducted at different times, before the president and censors in *comitia minora*. The first examination comprises Physiology, the second Pathology, and the third Therapeutics. After the first examination, the president may inquire of the candidate where he studied polite literature and the principles of science, and what honours he has obtained, whether in Philosophy, Arts, or Medicine, in order that the answers may be recorded by the registrar. The candidate will also be examined in Greek works on medicine, to wit, Hippocrates, Galen, or Aretæus. Passages from the aphorisms of Hippocrates or Galen will be brought forward during the first examination; and during the second and third, passages from Hippocrates, Galen, or Aretæus, which must be translated into Latin, and illustrated with a brief commentary. If the candidate be deficient in his knowledge of Greek, he will be required to translate parts of Celsus or Sydenham, or some other Latin work on Medicine, into English. The examinations are conducted in Latin or English at the pleasure of the censors.

Whenever a candidate has passed the prescribed examinations, and has been approved, he will be proposed at the next *comitium majus* (a meeting of the Fellows at large), to be admitted as a licentiate; and, if the majority present consent, he will be admitted accordingly. If, however, the candidate be rejected, he cannot present himself for re-examination for a twelvemonth.

Before the licentiate is admitted, he is required to plight his faith to the College according to a formula, pronounced by the President before the Fellows assembled in *comitiis majoribus*.

If any one holding the license of the College practise Pharmacy afterwards, or engage in merchandise, he is liable to expulsion; and any person practising medicine in London, or within seven miles thereof, without having previously obtained the collegiate license, is to be admonished by letter to cease his practice, until after he has passed the required examinations; and if he continues to practise, despite this admonition, then *legibus regni cognoscendus erit*.

Persons who have attained their fortieth year, seeking to become Licentiates of the College, but whose medical education is not altogether in accordance with the regulations already stated, must present testimonials of professional knowledge and good moral conduct, and if these are satisfactory, they will be admitted to examination, the same as for licentiates in general.

The old regulation restricting the fellowship, as a matter of right, to the graduates of Oxford, Cambridge, and Trinity College, was repealed in the latter part of 1835; and after Easter, 1836, all candidates were declared to be admissible as licentiates only, from which class, when duly qualified, a certain number are to be annually elected fellows in *comitia majora*. The advantage derived by graduates of the English universities, and by the Irish graduate who possesses an *ad eundem* degree from an English university, is, that they are eligible a year after they have obtained the license; the Scotch graduate, being M.A. or B.A., five years later. If the latter does not possess any degree in arts, his eligibility for the fellowship does not occur until after the lapse of seven years. The Irish graduates who do not possess an *ad eundem* degree are not eligible for two years after they are licensed. The president and censors propose the candidates for the fellowship, but the *comitia majora* may reject the proposition, and choose their nominees. The election is by ballot.

The president of the college is *ex-officio* president of the Vaccine Board, a trustee of the British and Hunterian Musea, physician to the Queen, and an elector to the Tancred scholarships. The college has the power of recommending a physician to Christ Church, St. Thomas's, and St. Bartholomew's Hospitals; but if the recommendation succeed, it is then required to pay an annual stipend of £30 or £40 to the physician. The college also appoints the professor of botany to the University of Oxford.

The examinations for the license are conducted by the president and censors. The periods at which they take place are Michaelmas, Christmas, Easter, and in the month of June. The new censors are elected on the 24th of June, when the Harveian oration is delivered. The lectures are delivered in the early part of the year. There are about fifteen delivered: three Gulstonian, three Croonian, and three Lumleian, so called from the names of those who left endowments to the college for the purpose; and six lectures on Materia Medica. The museum and library are attached to the institution, to which the fellows send, by permission, their friends have access.

The president may each year propose one candidate for the license, he being an M.D., but not otherwise eligible; and he may also name annually a licentiate of ten years' standing for the fellowship. The fellows have also the power of proposing a licentiate of seven years' standing, who is thirty-six years of age, for the fellowship; but this has been done so rarely as to be, in fact, obsolete.

The college fees are £56. 17s. for the license; the fellow pays in addition £1. 1s. annually to the collegiate fund.

If any fellow or licentiate can be proved, to the satisfaction of the president and censors, to have wilfully accused any other fellow or licentiate of professional ignorance, &c., unless it be before the legally-constituted judges, he shall be fined £4 for the first offence, and £8 for the second; if he offend a third time, if a fellow he shall be expelled, and if a licentiate, fined £20. This last fine is to be enforced every time afterwards the licentiate shall so offend. If any fellow or licentiate shall offer his professional assistance to any patient whom he shall know to be under the care of another physician, whether fellow or licentiate, without having been called in to see the patient professionally, he shall be fined £[illegible].

If any fellow be proved to have made any arrangement with a druggist, to share with him the proceeds in his prescriptions, he shall be expelled; if a licentiate have entered into a similar arrangement, he shall be fined £10 every time he shall so offend.

Every physician, whether fellow or licentiate, shall attach to each prescription which he writes the day of the month, the name of the sick man, and his own initials. When a consultation takes place, it is to be carried on with modesty, not in the presence of the sick; and if any difference of opinion occurs, it is to be stated with prudence and moderation, so that it may not be noticed by the patient or the friends, but, if requisite, should be mentioned by the ordinary medical attendant. Whoever infringes these regulations will be fined £5 by the president and censors.

No fellow or licentiate may consult, in London, or within seven miles thereof, with a physician who does not belong to the college, under a penalty of £5 fine.

All fines are to be paid immediately.

The president and court of the college have the power of committing individuals contemning their authority to Newgate. This power has been exercised by the court, but not of late years.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Regulations for Candidates for the Fellowship of the Royal College of Surgeons of England.

1. That every candidate for the fellowship, whether a member of the college or not, shall produce certificates satisfactory to the court of examiners,—

That he is twenty-five years of age.

That he is (if found qualified upon his examination) a fit and proper person to be admitted to the fellowship, and the certificate of which shall be signed by three fellows.

That he has attained a competent knowledge of the Greek, Latin, and French languages, and of the elements of mathematics.

That he has been engaged for six years in the acquirement of professional knowledge in recognised hospitals or schools of surgery and medicine within the United Kingdom of Great Britain and Ireland, or in foreign countries; and that three of such years at least have been passed in one or more of such recognised hospitals or schools in London.

That he has attended the surgical practice of a recognised hospital or hospitals during four years, and the medical practice of a recognised hospital or hospitals for one year.

That he has studied anatomy and physiology by attendance on lectures and demonstrations, and by dissections, during three winter sessions of not less than six months each, at one or more recognised school or schools.

That he has attended lectures on the theory and practice of medicine, and on clinical medicine, and also on the theory and practice of surgery, and on clinical surgery, during two sessions of six months each, at one or more recognised school or schools.

That he has attended one course of lectures on each of the following subjects, viz.: chemistry, materia medica, midwifery, medical jurisprudence, and comparative anatomy, at one or more recognised school or schools. And that he has served the office of house-surgeon or dresser in a recognised hospital in the United Kingdom. Every such candidate (except in the case and instances hereinafter provided for to the contrary) shall also present for examination clinical reports, with observations of six or more surgical cases taken by himself at a recognised hospital or recognised hospitals within the United Kingdom,

with sufficient certificates of their authenticity and genuineness, and shall leave such reports at the college.

3. That as to any candidate who shall have taken the degree of bachelor of arts in an English university, and shall produce satisfactory evidence thereof, it shall, instead of the certificate or certificates that he has been engaged for six years in the acquirement of the professional knowledge as before mentioned, be sufficient for him to produce a satisfactory certificate or certificates that he has been engaged for five years in the acquirement of professional knowledge in recognised hospitals and schools of surgery and medicine within the United Kingdom, or in foreign countries, and that three of such years at least have been passed in one or more of the recognised hospitals or schools of London; and that it shall not be necessary for any candidate having so taken the degree of bachelor of arts to produce any certificate of his having acquired a competent knowledge of the Greek, Latin, and French languages, and of the elements of mathematics.

4. That upon the 1st day of January, 1850, or at any earlier period which may be thought proper, the council shall, under such regulations, and for such time or period, as to them shall seem proper (but always subject to removal at the pleasure of the council), appoint three persons, and being, or not being, and either all, or in part, members of the college, as the council shall think proper, for the purpose of examining persons intending to become candidates for the fellowship, and required to be examined in the Greek, Latin, and French languages, and in the elements of mathematics; and the said council, from time to time after the first appointment of such persons for such purpose as aforesaid, and as often as shall be necessary, or to the said council shall seem proper in their behalf, shall appoint such other person and persons as to them shall seem fit and proper to succeed or supply the place or places of any person or persons previously appointed for such purpose; and that, from and after the first appointment of any such persons for the purpose of making such examination as aforesaid, no certificate of a candidate having competent knowledge of the Greek, Latin, and French languages, and of the elements of mathematics, shall be received or allowed by the court of examiners, except the certificate or certificates of the persons for the time being so appointed as aforesaid.

5. That all members of the college, future as well as present, shall be entitled to be admitted to the examination for the fellowship according to the foregoing by-laws and ordinances.

6. That any person who shall have been a member of the college on the 14th day of September, 1844, shall, after the expiration of eight years from the date of his diploma, also be entitled to be admitted to the examination for the fellowship upon the production of a certificate signed by three fellows that he has been eight years in the practice of the profession of surgery, and that he is a fit and proper person to be admitted a fellow, if upon examination he shall be found qualified.

7. That any person who shall have become a member of the college after the said 14th day of September, 1844, shall, after the expiration of twelve years from the date of the diploma, also be entitled to be admitted to the examination for the fellowship upon the production of a certificate signed by three fellows that he has been for twelve years in the practice of the profession of surgery, and that he is a fit and proper person to be admitted a fellow, if upon examination he shall be found qualified, and also if he have not taken the degree of Bachelor of Arts in an English university, of a certificate or certificates that he has a competent knowledge of the Greek, Latin, and French languages, and of the elements of mathematics.

EXAMINATION OF CANDIDATES FOR THE FELLOWSHIP.

1. The examination for the fellowship shall be held three times in the year, at or within such periods as the council shall from time to time determine.

2. Each candidate shall be examined on two days, either successive or at such an interval as the Court of Examiners may appoint.

3. The subjects for the first day's examination shall be anatomy and physiology; those of the second, pathology, therapeutics, and surgery.

4. The time allowed for examination each day shall be from ten o'clock in the forenoon until five o'clock in the afternoon.

5. The examination shall be conducted in the following manner. Each candidate shall, upon going in for examination, have delivered to him a written or printed copy of such questions as shall have been previously determined upon by the Court of Examiners, and to which questions he shall give written answers, and which answers shall be considered by the Court of Examiners.

The court may, however, if they should think fit, interrogate any candidate on any matters connected with the questions or answers. In the anatomical examination, the candidate shall also perform dissections and operations on the dead body in the presence of the Court of Examiners, or of such members thereof as may be deputed by the court to superintend the same. Candidates whose qualification shall be found insufficient shall not be allowed to present themselves a second time until after the expiration of one year from their first examination.

The Court of Examiners shall report in writing to the council the names of such persons as they shall have found upon examination to be qualified for the fellowship.

*** Members of the college will pay ten guineas besides charges for status, and non-members thirty guineas.

Regulations of the Council respecting the Professional Education of Candidates for the Diploma who commenced their Studies before the year 1838.

I. Candidates will be required to bring proof—1. Of being twenty-two years of age. 2. Of having been engaged five years in the acquirement of professional knowledge. 3. Of having studied anatomy and physiology, by attendance on lectures and demonstrations, and by dissections, during two anatomical seasons. 4. Of having attended at least two courses of lectures on surgery, delivered in two distinct periods or seasons; each course to comprise not less than sixty lectures. 5. Of having attended lectures on the practice of physic, on chemistry, and on midwifery, during six months, comprising not less than sixty lectures respectively, and on botany and materia medica during three months. 6. Of having attended during twelve months the surgical practice of a recognised hospital in London, Dublin, Edinburgh, Glasgow, or Aberdeen; or for six months in any one of such hospitals, and twelve months in any recognised provincial hospital.

Regulations of the Council respecting the Professional Education of Candidates for the Diploma after the termination of the Session 1839-1840.

I. Candidates will be required to bring proof—1. Of being not less than twenty-one years of age. 2. Of having been engaged in the acquirement of professional knowledge for not less than four years, three of which shall have been passed in a recognised school or schools of surgery; three months of vacation being allowed in each year, and in the event of absence or absences from such school or schools during the said term of three years (exclusive of the vacations), the full term being completed in a subsequent year. 3. Of having studied anatomy and physiology, by attendance on lectures and demonstrations, and by dissections, during two anatomical seasons. 4. Of having attended at least two courses of lectures on surgery, delivered in two distinct periods or winter seasons of six months, each course to comprise not less than seventy lectures. 5. Of having attended one course of lectures on the practice of physic, and one on chemistry, during six winter months, comprising not less than seventy lectures respectively; one course on materia medica with medical botany, during six months, and one on midwifery during six months, each comprising not less than sixty lectures; and at least twenty-five lectures on medical jurisprudence. Certificates of attendance on these lectures during the summer season will be received, provided they are equally divided over a period of four months. The lectures on medical jurisprudence may be delivered three days in the week. 6. Of having attended, during twenty-one months, the surgical practice of a recognised hospital in London, Dublin, Edinburgh, Glasgow, or Aberdeen; or for twelve months in any one of such hospitals, and twelve months in any recognised provincial hospital. 7. Of having attended the medical practice of a hospital or dispensary during six months.

II. Members and licentiates in surgery of any legally-constituted college of surgeons in the United Kingdom, and graduates* in surgery of any university, requiring residence to obtain degrees, will be admitted for examination on producing their diploma, license, or degree, together with proofs of being twenty-two years of age, and of having been occupied five years in the acquirement of professional knowledge.

N.B. Certificates will not be recognised from any hospital unless the surgeons thereto, or a majority of them, be members of one of the legally-constituted colleges of surgeons in the United Kingdom; nor from any school of anatomy, physiology, or midwifery, unless the respective teachers be members of some legally-constituted college of physicians or surgeons in the United Kingdom; nor from any school of surgery, unless the respective teachers be members of some legally-constituted college of surgeons in the United Kingdom. Certificates will not be received on more than two branches of science from one and the same lecturer; but anatomy and physiology—demonstrations and dissections—materia medica and botany—will be respectively considered as one branch of science.

Regulations of the Council respecting the Professional Education of Candidates for the Diploma. August 15, 1843.

1. Candidates will be required, in addition to a certificate of being not less than twenty-one years of age, to bring proof - 1. Of having been engaged in the acquirement of professional knowledge for not less than four years; during which period they must have studied practical pharmacy for six months, and have attended one year on the practice of surgery at a recognised hospital or hospitals in the United Kingdom;—three months being allowed for a vacation in each year. (By a resolution of the council, on the 7th of November, 1839, no provincial hospital will, in future, be recognised by the college which contains fewer than 100 patients, and no metropolitan hospital which contains fewer than 150 patients.) 2. Of having studied anatomy and physiology, by attendance on lectures and demonstrations, and by dissections, during three winter sessions, of not less than six months each. 3. Of having attended at least two courses of lectures on the principles and practice of surgery, delivered in two distinct periods or seasons; and one course on each of the following subjects—viz., the practice of physic, chemistry, and materia medica, and midwifery, with practical instruction.

Certificates will not be received unless the candidate have duly registered his tickets. The other regulations are virtually the same as before.

These three forms of regulations are in force respecting candidates for the diploma, according to the period when they commenced their studies.

Fee for the diploma (including stamp), £22; for an articled student (allowed in the diploma fee), £10. 10s.; for a certificate of having had the diploma, £5. 5s.; for being enfranchised, £10. 10s.; a certificate for a surgeon in the Royal Navy, or East India Company's service (allowed in diploma fee), £5. 5s.; for an assistant-surgeon, £2. 2s.; for a candidate calling a special court, £5. 5s.

Studentships in Anatomy.—Three studentships

in human and comparative anatomy have been instituted by the college, to be held by each student for the term of three years, at a salary of one hundred pounds per annum. And with the view of promoting the objects of the college, in the institution of these studentships, the Commander-in-Chief of the army, the Lords Commissioners of the Admiralty, and the Court of Directors of the East India Company, have placed at the disposal of the president and the council an assistant-surgeoncy of each service, once in three years, for such of the said students as may be considered worthy of the honourable distinctions. 2. Candidates to be members of the college, under twenty-six years of age. 3. The council will determine annually whether one or more of such appointments shall take place during the current year; and will notify its resolution by public advertisement. 4. The appointment is made in the month of June, or as soon after as possible. 5. The students are subject to such duties and restrictions as the council shall from time to time direct; and in case of misconduct are liable to dismissal. 6. Candidates are required to transmit to the secretary, on or before the 1st of May, their applications for the appointment, together with certificates of general good character, and of fair acquirements in general learning, signed by two qualified members of the medical profession. 7. A meeting of the museum committee will be held as soon after the 1st of May as conveniently may be, at which the applications of the persons offering themselves will be examined, and, if approved, the applicants will be admitted as candidates. 8. The museum committee will determine the merits of the several candidates, and report to the council which, in their opinion, possess the highest merit. 9. The students are required to attend in the museum daily (Sundays excepted) from ten till four o'clock, and are under the immediate direction of the museum committee.

The *museum* is opened to visitors on Monday, Tuesday, Wednesday, and Thursday, from 12 till 4, except during the month of September; on Friday, to gentlemen for studying in it; and on Saturday, from 10 till 1, to gentlemen desirous of comparing specimens with those in the museum. The *library* is open to members and students of the college, and visitors having tickets of admission, daily (Sundays excepted), from the 1st of October to the 1st of April, from 10 till 4; and from the 1st of April to the 1st of September, from 10 till half-past 5.

The lectures at the college by the professors are delivered in the spring of the year, the Hunterian oration on the 14th of February.

APOTHECARIES' HALL.

Every candidate for a certificate of qualification to practise as an apothecary will be required to produce testimonials:—1. Of having served an apprenticeship of not less than five years to an apothecary. 2. Of having attained the full age twenty-one years. 3. Of good moral conduct. 4. And of having pursued a course of medical study, in conformity with the regulations of the court.

Course of Study.

Every candidate whose attendance on lectures commenced on or after the 1st of October, 1835, must have attended the following lectures and medical practice during not less than three winter and two summer sessions: each winter session to consist of not less than six months, and to commence not sooner than the 1st nor later than the 15th of October; and each summer session to extend from the 1st of May to the 31st of July.

First Winter Session.—Chemistry; Anatomy and Physiology; Anatomical Demonstrations; Materia Medica and Therapeutics; this course may be divided into two parts of fifty lectures, each one of which may be attended in the summer.

First Summer Session.—Botany and Vegetable Physiology; either before or after the first Winter Session.

Second Winter Session.—Anatomy and Physiology; Anatomical Demonstrations; Dissections; Principles and Practice of Medicine.

Second Summer Session.—Forensic Medicine.

Third Winter Session.—Dissections; Principles and Practice of Medicine.

Midwifery, and the Diseases of Women and Children, two courses in separate sessions, and subsequent to the termination of the first Winter Session. Practical Midwifery, at any time after the conclusion of the first course of Midwifery Lectures.

Medical Practice during the full term of eighteen months, from or after the commencement of the second Winter Session; twelve months at a recognised hospital, and six months at a recognised hospital, or a recognised dispensary; in connection with the hospital attendance, a course of Clinical Lectures and instruction in Morbid Anatomy will be required.

The sessional course of instruction in each subject of study is to consist of not less than the following number of lectures:—One hundred on Chemistry—One hundred on Materia Medica and Therapeutics—One hundred on the Principles and Practice of Medicine—Sixty on Midwifery and the Diseases of Women and Children—Fifty on Botany and Vegetable Physiology.

Every examination of an hour's duration will be deemed equivalent to a lecture. The lectures required in each course must be given on separate days. The lectures on Anatomy and Physiology, and the Anatomical Demonstrations, must be in conformity with the regulations of the Royal College of Surgeons of London in every respect. Students must also produce testimonials of attendance on a course of Clinical Lectures; of instruction in Practical Chemistry and Morbid Anatomy; and of having dissected the whole of the human body once at least; without which testimonials the candidate cannot be admitted to examination.

The above course of study may be extended over a longer period than three winter and two summer sessions, provided the lectures and medical practice are attended in the prescribed order and in the required sessions.

Those gentlemen whose attendance on lectures commenced before the 1st of October, 1835, will be allowed to complete their studies in conformity with the previous regulations of the court.

No member of the court of examiners will be recognised as a lecturer on any branch of Medical Science. The court will not recognise any lecturer unless he lectures in connection with a recognised medical school; nor will they recognise a lecturer on more than *two* branches of medical science; nor until he has produced very satisfactory testimonials of his attainments in the science he purposes to teach, and of his ability as a teacher thereof, from at least two persons of acknowledged talents and distinguished acquirements in the particular branch of science in question; and also given a public course of lectures on the subject he proposes to teach; but if, after such preliminary course, the lecturer shall be recognised, certificates of attendance on that course will be received.

Satisfactory assurance must also be given that the teacher is in possession of the means requisite for the full illustration of his lectures, viz., that he has, if lecturing—On Chemistry, a laboratory and competent apparatus—On Materia Medica, a museum sufficiently extensive—On Botany, a hortus siccus, plates or drawings, and recent plants—On Midwifery, a museum, and such appointments in a public institution as may afford the means of practical instruction to the pupils.

No hospital will be recognised by the court unless:—1. It contain at least one hundred beds. 2. It be under the care of two or more physicians, members of the Royal College of Physicians of London, or graduated doctors of medicine of a British university. 3. The physicians give a regular course of clinical lectures and instruction in Morbid Anatomy. 4. The apothecary be legally qualified, either by having been in practice prior to the 1st of August, 1815, or by having received a certificate of qualification from this court. No dispensary will be recognised by the court unless it be situated in some town where there is a recognised medical school, and be under the care of at least two physicians and an apothecary legally qualified. No medical practice will be available unless it be attended in conformity with the course of study prescribed for pupils.

Names of Gentlemen having the Care of the Registers.

Birmingham: W. Sands Cox, Esq., Lecturer on Anatomy. Bristol: Dr. Wallis, and Henry Clark, Esq., Lecturers on Anatomy. Hull: Edward Wallis, Esq., Lecturer on Anatomy. Leeds: Thomas Nunneley, Esq., Lecturer on Anatomy. Liverpool: Dr. Malins, Medical Jurisprudence. Manchester: Thomas Turner, Esq., Anatomy. Newcastle: William Dawson, Esq., Midwifery. Sheffield: W. Jackson, Esq., Anatomy. York: John Hopps, Esq., Anatomy.

Registration of Testimonials.

All testimonials must be given on a printed schedule (a), with which students will be supplied at the time of their first registration:—

In London, at this hall.

In Edinburgh, Messrs. M'Lachlan and Stewart's, booksellers.

In Dublin, at Messrs. Hodges and Smith's, booksellers.

In the provincial towns, from the gentlemen who keep the registers of the Medical Schools.

All students in London are required *personally* to register the several classes for which they have taken tickets; and those only will be considered as complying with the regulations of the court whose names and classes in the register correspond with their schedules.

Tickets of admission to Lectures and Medical Practice must be registered in the months of October and May; but no ticket will be registered unless it be dated within *seven* days of the commencement of the course; and certificates of attendance must be registered in the months of April and August. Due notice of the days and hours of such registration will be given from time to time.

The court also require students of the Provincial Medical Schools to register their names in their own handwriting, with the registrar of each respective school, within the first twenty-one days of October, and first fourteen days of May; and to register their certificates of having duly attended Lectures on Medical Practice within fourteen days of the completion of such attendance.

The registrars are requested to furnish the court of examiners with a copy of each registration *immediately* after its close, as those students only will be admitted to examination whose registrations have been *duly* communicated to the court.

Examination.

Every person intending to offer himself for examination must give notice in writing to the clerk of the society on or before the Monday previously to the day of examination, and must at the same time deposit all the required testimonials at the office of the beadle, where attendance is given every day, except Sunday, from ten until four o'clock.

The examination of the candidate for a certificate of qualification to practise as an apothecary will be as follows:—

(b) In translating portions of the first four books of "Celsus de Medicinâ," and of the first twenty-three chapters of Gregory's "Conspectus Medicinæ Theoreticæ."

In Physicians' Prescriptions, and the "Pharmacopœia Londinensis."

In Chemistry.

In Materia Medica and Therapeutics.

In Botany.

In Anatomy and Physiology.

In the Principles and Practice of Medicine, in-

(a) It is particularly requested that the lecturer himself will fill up the blanks in the schedule, specifying the mode of attendance.

(b) By an order of the court, in future the Latin language will form part of the general examination.

cluding Midwifery and the Diseases of Children.

The examination of the candidate for a certificate of qualification to act as assistant to an apothecary, in compounding and dispensing medicines, will be as follows:—

In translating Physicians' Prescriptions, and the "Pharmacopœia Londinensis."

In Pharmacy and Materia Medica.

By the 22nd section of the Act of Parliament, no rejected candidate for a certificate to practise as an apothecary can be re examined *until the expiration of six months* from his former examination; and no rejected candidate as an assistant *until the expiration of three months.*

The court meet in the hall *every Thursday*, where candidates are required to attend at a quarter before four o'clock.

The act directs the following sums to be paid for certificates:—

For London, and within ten miles thereof, ten guineas.

For all other parts of England and Wales, six guineas.

Persons having paid the latter sum become entitled to practise in London, and within ten miles thereof, by paying four guineas in addition.

For an assistant's certificate, two guineas.

By an order of the Court.

HENRY BLATCH, Sec.

Apothecaries' Hall, Aug., 1845.

UNIVERSITY OF OXFORD.

Full term is understood to begin on the first day of the week after the congregation has been held; so that, if the congregation be held on the Monday, the Sunday after is considered the first day of full term.

According to the lately-altered statute respecting medical degrees, a candidate for the degree of Bachelor in Medicine, before he can be admitted to examination for that degree, must have kept four whole years, or sixteen terms, in the university, in like manner as is required by candidates for a degree in arts (a); must have passed the examination for the degree of bachelor in arts; and subsequently to that examination must have studied medicine during three whole years, or twelve terms; and must also have completed seven years, or twenty-eight terms, from his matriculation.

The medical examination takes place only once in the course of the year—namely, in the second week of full Trinity term, commencing usually on the *second Tuesday* after Trinity Sunday. The candidates are examined, principally "vivâ voce," but partly in writing, in the theory and practice of medicine, in anatomy, physiology, pathology, and materia medica; and also in chemistry and botany, as far as they elucidate the art of medicine. He is required to be conversant with the entire works of Aretæus and Celsus; the aphorisms and epidemics of Hippocrates; and that portion of Galen's writings entitled "De Usu Partium;" in two, at least, of which authors, the statute directs that the examiners fail not to test the candidate's attainments. He must send, fourteen days before the day of examination, certificates of three years' attendance on the medical practice of a hospital, with the usual lectures.

Certificates are required for two courses of anatomy and physiology, each extending from October till the following April or May; two courses on the theory and practice of medicine, each course of the same extent; one course in materia medica; one course in botany; one course in chemistry, provided the course extend through the usual winter session, otherwise two courses will be required.

A candidate for the degree of doctor in medicine must have pursued the study of medicine during three years after he has graduated as bachelor in medicine, and must give at least a fortnight's previous notice of his intention to the professor of medicine, at the same time submitting to approbation a subject for a medical dissertation, which dissertation must be read in the public schools of the university within a few days of taking the degree of M.D., and delivered to the professor immediately after it has been read. No graduate in medicine from another university can be incorporated at Oxford unless he produce testimonials by which it may clearly appear that he has kept by residence terms equal to those required to be so kept in this university; he has completed all the exercises prescribed by the university from which he migrates for the degree of bachelor of arts; and shall have previously undergone the medical examination above described; and shall have fulfilled all the other conditions of the present statute. The fees for a bachelor of medicine are £23; for a doctor in medicine, £40.

The University of Oxford is in possession of the Bodleian library (librarian, B. Bandinel, M.A.); of the Radclyffe library (librarian, Dr. Kidd); of the Ashmolean museum (keeper, P. B. Duncan, M.A.); and of the botanic gardens, founded by the Earl of Derby in 1632. All these are open to students under certain restrictions.

Radclyffe Travelling Fellows.—Dr. Radclyffe left by will an endowment of £600 per annum, to be paid to two persons, to be chosen out of the University of Oxford, when they are M.A., entered on the study of physic, for their maintenance for ten years, and no longer, the half of which time, at least, they are to travel in parts beyond sea, for their better improvement. In case of vacancy by death, or at the expiration of the ten years, a new election is to take place within six months.

UNIVERSITY OF CAMBRIDGE.

Dr. Haviland delivers a course of fifty lectures on the principles of pathology and the practice of physic; £5. 5s. first course, afterwards gratis. The professor of chemistry delivers thirty lectures, on the general principles of that science, during Lent term, and twenty lectures, principally on organic chemistry, during Easter term. Lectures on experimental philosophy, to illustrate the laws of hydrostatics, pneumatics, and optics, with particular reference to the mathematical theories of light and sound, are delivered in Easter term. About fifty lectures on anatomy, by Dr. Clark, are delivered in Michaelmas and Lent terms. The terms of attendance are £5. 5s. for each of two courses, afterwards gratis. The people have the opportunity of dissecting in private. Botanical lectures are given during the Easter term, with herborising excursions occasionally. Professor Willis's lectures on natural and experimental philosophy are during the Michaelmas term; the subjects being statics, dynamics, and mechanism, with their practical illustrations: first course, £3. 3s.; second, £2. 2s.; afterwards gratis. The Downing professor of physic delivers a course of fifty lectures on some medical subject. A certificate of attendance is required of persons proceeding to the degree of M.B. Lectures are also delivered on crystallography and mineralogy during the Lent term. Addenbrooke's Hospital, which is connected with the university, is recognised by the Colleges of Physicians and Surgeons, and by Apothecaries' Hall. It contains 100 beds, and has a department reserved for cases of midwifery.

A student, before he can become a bachelor of physic, must have entered on his sixth year, computed from the date of his first admission at the university, have resided nine terms, and have passed the previous examination.

A bachelor of arts may become a bachelor of physic after having entered on his sixth year, computed from the date of his first admission at the university, provided that one year at least has intervened between his final determination in arts and his admission to the degree of bachelor of physic.

The exercises for this degree are one act and one opponency.

Candidates for the degree of bachelor of physic must, in addition to the examination by the regius professor of physic, be examined by the professors of anatomy, chemistry, and botany, and by the Downing professor of medicine. This examination must not take place before the fifth year after admission. They must have diligently attended the lectures of the regius professor of physic for two terms, and must bring to him certificates of examination by the above professors, and of attendance on their lectures, in case the course of lectures of the professor of botany consist of not less than twenty lectures, and the courses of lectures of the professors of anatomy and chemistry, and of the Downing professor of medicine, of not less than fifty lectures each. They must also deliver to the regius professor of physic certificates of having been diligently employed in attendance on medical lectures, and the practice of some well-known hospital, for two years, or for as long a time as they have been absent from the university during their undergraduateship. Fee, £10. 16s.

A license *ad practicandum in medicina* may be granted to a bachelor of physic in the term subsequent to that in which he has taken the degree, or a master of arts of two years' standing.

Candidates for a license *ad practicandum in medicina*, being previously bachelors of physic, are required to produce to the regius professor of physic certificates of their having attended on hospital practice for three years, exclusive of the nine terms which they kept by residence for the degree of bachelor of physic, and of their having attended lectures on the following subjects—practice of physic and pathology, anatomy and physiology, chemistry, botany, medical jurisprudence, materia medica and pharmacy, principles of surgery, principles of midwifery, practical anatomy, for two seasons.

Candidates for a license *ad practicandum in medicina*, being previously masters of arts, are required to bring satisfactory evidence to the regius professor of physic of their having been employed in the study of physic for five years after they became bachelors of arts; and to produce to him certificates of their having attended on hospital practice for three of the said five years, and of their having attended lectures on the subjects before mentioned.

Every candidate for a license *ad practicandum in medicina* is required to pass an examination to the satisfaction of the regius professor of physic, the professor of anatomy, the Downing professor of medicine, and a doctor of physic, to be nominated by the vice-chancellor, and approved by the senate, at the first congregation after the 10th of October in each year.

There are two such examinations in every year; one in the week immediately preceding that in which the division of the Michaelmas term falls; the other in the week immediately preceding that in which the division of the Easter term falls.

A candidate for a license *ad practicandum in medicina*, being previously bachelor of physic, cannot be examined for the said license until the examination which shall occur next but one after his having passed the examination required for the degree of bachelor of Physic. Fee, £11. 6s.

M.D.—The degree of doctor of physic is granted to a bachelor of physic of five years' or to a master of arts of seven years' standing.

The exercises for this degree are two acts and one opponency.

Every candidate for the degree of doctor of physic, who has not previously obtained a license *ad practicandum in medicina*, is required to produce to the regius professor of physic the same certificates, and pass the same examination, as are required in the case of candidates for a license *ad practicandum in medicina*. Fee, £11. 12s.

The university possesses an anatomical museum, to which has been added the valuable collection of the late Dr. Macartney, the Fitzwilliam, Mesman, Mineralogy, and Geological Museums, an extensive botanic garden, and the university library. To all these the students have access.

UNIVERSITY OF EDINBURGH. (1582.)

Matriculation.—Every student in the faculties

(a) That is, he must be of sixteen terms' standing, and have actually resided in the university twelve terms.

of arts, law, and medicine, before entering with any professor, must produce a matriculation ticket for the ensuing session. Tickets will be issued at the matriculation office, in the colleges every lawful day, from ten till three. Enrolment in the general album is the only legal record of attendance in the university.

Library.—The library will be open for the purpose of giving out books to students, either on loan or for reference, in the hall appropriated for that purpose, every lawful day during the winter session, from ten a.m. till four p.m., except on Saturdays, when it will be shut at one precisely.

Every student applying for books must present to the librarian his matriculation ticket for the session, with the ticket of at least one professor.

Every book taken out must be returned within a fortnight, uninjured.

Fee for each course, £4. 4s. For graduation, £25.

STATUTES OF THE UNIVERSITY OF EDINBURGH RELATIVE TO THE DEGREE OF M.D.

Sect. I. No one shall be admitted to the examinations for the degree of doctor of medicine who has not been engaged in medical study for four years, during at least six months of each, either in the University of Edinburgh, or in some other university where the degree of M.D. is given; unless, in addition to three Anni Medici in a university, he has attended, during at least six winter months, the medical or surgical practice of a general hospital, which accommodates at least eighty patients, and during the same period a course of practical economy, in which case three years of university study shall be admitted.

Sect. II. No one shall be admitted to the examinations for the degree of doctor who has not given sufficient evidence—1. That he has studied, once at least, each of the following departments of medical science, under professors of medicine, in this or some other university, as already defined -viz.:—

During Courses of Six Months.—Anatomy, chemistry, materia medica and pharmacy, institutes of medicine, practice of medicine, surgery, midwifery and the diseases peculiar to women and children, general pathology, practical anatomy (unless it has been attended in the year of extra-academical study allowed by Sect. I.).

During Courses of Six Months, or Two Courses of Three Months.—Clinical medicine, that is, the treatment of patients in a public hospital, under a professor of medicine, by whom lectures on the cases are given.

During Courses of at least Three Months.—1. Clinical surgery, medical jurisprudence botany, natural history, including zoology 2. That in each year of his academical studies in medicine he has attended at least two of the six months' courses of lectures above specified, or one of these and two of the three months' courses. 3. That, besides the course of clinical medicine already prescribed, he has attended, for at least six months of another year, the medical or surgical practice of a general hospital either at Edinburgh or elsewhere, which accommodates not fewer than eighty patients. 4. That he has attended for at least six months, by apprenticeship or otherwise, the art of compounding and dispensing drugs at the laboratory of a hospital, dispensary, member of a surgical college or faculty, licentiate of the London or Dublin Society of Apothecaries, or a professional chemist or druggist. 5. That he has attended for at least six months, by apprenticeship or otherwise, the out practice of a hospital, or the practice of a dispensary, or that of a physician, surgeon, or member of the London or Dublin Society of Apothecaries.

Sect. III. No one shall obtain the degree of doctor who has not studied, in the manner already prescribed, for at least one year previously to his graduation, in the University of Edinburgh.

Sect. IV. Every candidate for the degree in medicine must deliver, before the 24th of March of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine—1. A declaration, in his own handwriting, that he twenty-one years of age, or will be so before the day of graduation, and that he will not be then under articles of apprenticeship to any surgeon or other master. 2. A statement of his studies as well in literature and philosophy as in medicine, accompanied with proper certificates. 3. A medical dissertation, composed by himself, in Latin or English, to be perused by a professor, and subject to his approval.

Sect. V. Before a candidate be examined in medicine, the medical faculty shall ascertain, by examination, that he possesses a competent knowledge of the Latin language.

Sect. VI. If the faculty be satisfied on this point, they shall proceed to examine him, either *vivâ voce* or in writing,—1. On anatomy, chemistry, botany, institutes of medicine, and natural history bearing chiefly on zoology; and 2. On materia medica, pathology, practice of medicine, surgery, midwifery, and medical jurisprudence.

Sect. VII. Students who profess themselves ready to submit to an examination on the first division of these subjects, at the end of the third year of their studies, shall be admitted to it at that time.

Sect. VIII. If any one, at these private examinations, be found unqualified for the degree, he must study, for another year, two of the subjects prescribed in Section II., under professors of medicine, in this or in some other university, as above defined, before he can be admitted to another examination.

Sect. IX. Should he be approved of, he will be allowed, but not required, to print his thesis; and, if printed, forty copies of it must be delivered, before the 25th day of July, to the Dean of the Medical Faculty.

Sect. X. If the candidate have satisfied the medical faculty, the dean shall lay the proceedings before the Senatus Academicus, by whose authority the candidate shall be summoned, on the 31st of July, to defend his thesis; and, finally, if the senate think fit, he shall be admitted, on the first lawful day of August, to the degree of doctor.

Sect. XI. The Senatus Academicus, on the day here appointed, shall assemble, at ten o'clock a.m., for the purpose of conferring the degree; and no candidate, unless a sufficient reason be assigned, shall absent himself, on pain of being refused his degree for that year.

Sect. XII. Candidates for graduation shall be required to produce evidence of their having conformed to those regulations which were in force at the time they commenced their medical studies in a university.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.

The members of the college are respectively entitled Ordinary Fellows, Non resident Ordinary Fellows, and Licentiates.

Ordinary Fellows.—No one shall be elected an ordinary fellow of the college till he has obtained the degree of doctor of medicine.

Every motion for the election of a fellow shall be made, at a quarterly meeting, by one of the fellows present, seconded by another, and determined by ballot—a majority of three-fourths being necessary to carry it in the affirmative.

No physician residing in Edinburgh shall be proposed for a resident fellowship till he has been a licentiate for nine months, or, in case of his not being a licentiate, till nine months after his petition to be admitted a resident fellow shall have been presented, unless an urgent reason be assigned; in this case, he may be proposed even on the same day on which he becomes a licentiate, or at any other quarterly meeting, or at a meeting specially called for the purpose, if this proposal shall be agreed to by every member present.

No fellow shall engage himself to any candidate before the ballot; nor shall he reveal to any person in what manner he did ballot, under the pain of being considered as one who has broken his faith and honour to the college.

No fellow shall take his seat in the college till the quarterly meeting after that on which he is elected, intimation to attend being then sent to him by the clerk.

The fellows shall be placed on the roll according to the dates of their admissions; and, when two or more fellows are admitted on the same day, they shall be entered on the roll according to the dates of their diplomas; and, if their diplomas be of the same date, they shall be enrolled according to their ages.

Every fellow before taking his seat in the college must sign a promissory engagement.

It shall be in the power of any fellow of the college to move that a candidate having a foreign degree be admitted without a previous examination; and, if the motion shall be seconded, it shall be determined by ballot at next quarterly meeting, a majority of three-fourths of the fellows present being necessary to carry it.

If an examination shall take place, it shall consist of three trials: the first by two fellows appointed by the college, on any part of medicine; the second, by two other fellows, on two aphorisms of Hippocrates; and the third, by two other fellows, on two medical cases. All these trials shall be in the presence of the college, and in the Latin language.

Non-resident Fellows.—No physician residing in Edinburgh is eligible for a non-resident fellowship.

The mode of election of a non-resident fellow is the same as that of a resident fellow; and the laws regarding examination, in the case of a foreign degree, also apply to him.

Fees.—The fee to be paid by a resident licentiate is £100.

The fee to be paid by a non-resident licentiate £55.

The fees are exclusive of any tax payable to government now existing, or which may hereafter be imposed.

ROYAL COLLEGE OF SURGEONS, EDINBURGH. (1505.)

Regulation for Fellows.—The candidate is required—To present an essay on some surgical subject, which, if approved of, he must print for circulation among the fellows. He must then undergo three examinations—1. On anatomy and surgery; 2. On chemistry, materia medica, &c.; 3. On the essay he has written. If these are satisfactorily passed, he is admitted to the fellowship. Fee, £250; to apprentices of fellows, £100.

School of Medicine.—Every candidate for a surgical diploma must have followed the course of study, to be specified afterwards, in a university; or at the seat of an established school of medicine, as defined below; or in a provincial school, specially recognised by the college.

Under the title, established school of medicine, are comprehended all places in this kingdom where diplomas in surgery are granted, and such foreign schools as are acknowledged by the constituted authorities of the countries in which they exist.

The extent and period of study allowed to be gone through at a provincial school will be regulated by the means and facility of study which the college receive evidence of its affording; but the lectures delivered at a provincial school will be held as qualifying for only one year's course of study, unless specially recognised for more.

Qualifications of Teachers.—The following classes of persons shall be entitled to give lectures, which may be attended as part of the course of study:—1. In the universities of Great Britain and Ireland, and in University College and King's College, London, the professors of these institutions. 2. In Edinburgh, resident fellows of the Royal College of Physicians of Edinburgh, and fellows of the Royal College of Surgeons of Edinburgh. 3. In London, fellows and licentiates of the Royal College of Physicians of London, and members of the Royal College of Surgeons of London, whose status as teachers has been admitted by that college. 4. In Dublin, fellows of King's and Queen's College of Physicians in Ireland, and members of the Royal College of Surgeons in Ireland. 5. In Glasgow,

members of the Faculty of Physicians and Surgeons of that city. 6. In recognised provincial schools, teachers whose status as such has been admitted by the college, on special application. 7. In any of the above schools teachers who, having acquired a status as such in one of the four established schools, in conformity with the above regulations, shall have been subsequently admitted, on application to the college, to the enjoyment of the same privileges in another school. (a)

The following branches of instruction may be conjoined:—Anatomy and practical anatomy, chemistry and practical chemistry, practice of medicine and clinical medicine, practice of surgery and clinical surgery, mathematics and mechanical philosophy; and, for the present, clinical medicine or clinical surgery may be taught in conjunction with any one of the other courses of education prescribed in the curriculum, by a physician or surgeon qualified according to the regulations of the college, and attached to a public hospital of the size which these regulations prescribe.

Course of Study—Preliminary Instruction.—Every candidate for the diploma of the Royal College must, either previously to or during his medical education, have received regular instruction in the elements of mathematics; and must have subsequently attended a course of mechanical philosophy of at least three months' duration, and of not fewer than sixty lectures.

Professional Instruction.—The candidate must have been engaged in attending the following separate and distinct courses of lectures during a period of not less than twenty seven months, in which must have been included three winter sessions of six months' duration each: Anatomy, two courses of six months each. Practical anatomy, twelve months. Chemistry, one course of six months. Practical chemistry (the number of pupils in each class being limited to twenty-five), one course of three months. Materia medica and pharmacy, one course of six months. Practical pharmacy, one course of six months. Institutions of medicine, or physiology, one course of six months. Practice of medicine, one course of six months. Clinical medicine, one course of six months, or two courses of three months each, during the period of his attendance at the hospital where they are delivered. Principles and practice of surgery, two courses of six months each, or principles and practice of surgery and military surgery, one course of six months each. Clinical surgery, one course of six months, or two courses of three months each, during the period of his attendance at the hospital where they are delivered. Midwifery and diseases of women and children, one course of three months. Medical jurisprudence, one course of three months.

The six months' courses delivered in Edinburgh must consist of not fewer than 110 lectures, with the exception of clinical medicine, clinical surgery, and military surgery. The three months' courses must consist of not fewer than sixty lectures. Two London courses of three months each on any of the above subjects will be taken as equivalent to one six months' course.

The candidate must also have attended for twenty one months a public general hospital containing at least eighty beds.

Fees payable by Candidates.—For a diploma, ordinary candidates pay the sum of £7. 6s. (Apprentices of fellows of the Royal College, bound for the freedom, pay 25s.; their other apprentices pay £2. 16s. 6d. Assistant-surgeons in the navy, having previously obtained certificates from the college, pay £2. 11s. 6d. Surgeons in the navy, having obtained certificates from the college, pay 15s. 6d.)

For the certificate of qualification to act as assistant-surgeon in the navy, candidates not having paid for any previous qualification pay £4. 19s. 6d.

For the certificate of qualification to act as full surgeon in the navy, assistant-surgeons who have already obtained certificates from the college pay £3. 18s. 6d., and those who have previously obtained the diploma of the college pay £2. 17s. 6d.

(a) The only lectures expected from this law are those on mechanical philosophy and on chemistry. The former may be professors in universities, lecturers in public institutions, or teachers specially recognised by the college; and the latter may be persons not medical, if recognised by the college on special application, in conformity with a resolution of the college on the 25th October, 1838. In all cases of special recognitions, proof of capability, and of the applicant possessing the requisite apparatus for illustrating his lectures will be required.

UNIVERSITY OF GLASGOW.—REGULATIONS REGARDING DEGREES IN MEDICINE AND SURGERY TO CANDIDATES ENTERING THE UNIVERSITY IN, OR SUBSEQUENT TO, 1839-40.

Medicine.—Every candidate for a medical degree must lodge with the clerk of senate—

1. A certificate of moral character, by two respectable persons, with evidence of having attained the age of twenty-one.

2. Evidence of having attended, for four years, a university in which medicine is regularly taught, or medical lectures delivered in London or Dublin; and at least one year of the four must be spent at the University of Glasgow. In each year he must have attended at least two courses of lectures of six months' duration; but if he shall spend one year only at the University of Glasgow, then he must attend three courses of lectures delivered there, two of them, at least, being of six months' duration.

3. Certificates of having attended one or more courses of lectures on the following subjects, each course, except forensic medicine and botany, being of six months' duration; if of less extent, then two courses shall be deemed equivalent to one of six months:—Anatomy and physiology; chemistry; the theory or institutes of medicine; practice of medicine; materia medica and pharmacy; midwifery; surgery; forensic medicine; botany(a); anatomical dissections; and two years' practice of a general hospital, containing eighty beds, and in which the student must spend at least one-half of the period of attendance in the physicians' wards. Neither hospital attendance nor anatomical dissections shall be considered as equivalent to a course of lectures.

4. Each candidate must lodge with the clerk of senate, with the above certificates, a schedule of his course of study, properly filled up, together with an English essay on some medical subject chosen by himself, two months before the time of graduation—that is, on or before the 1st of March, or the 10th of June, yearly, otherwise he cannot be admitted for examination till the following term. All tickets of attendance lodged by candidates must be certified, not excepting those of the current session; but the certified botanical tickets of the current session shall not be received until the 1st of April.

5. No student entered in any medical class later than the 1st of December, without special permission of the senate. And it is strictly required of every candidate for graduation that he produce evidence of his name having been enrolled in the library-book, on or before that day, as well as an express certificate of his regular attendance by each professor on whose lectures he attends. In order, further, to ensure attendance, all students must inscribe their names, once a fortnight, in a register kept for the purpose, stating the lectures, &c., which they attend.

6. Every candidate shall prove that he has a competent knowledge of Latin, and shall undergo full examinations on all the subjects included in the curriculum.

Surgery.—The regulations respecting certificates of age and moral character are the same as those under the head of degrees in medicine.

(a) No course of botany attended previously to 1839-40 is received, unless it shall have been delivered in a university.

Candidates for the degree of master of surgery shall produce evidence that they have attended medical lectures in one or other of the universities or schools already specified for four years, during which they must have attended one or more courses on the following subjects, the extent of each course, with the exception of forensic medicine, being six months, or the equivalent two courses of a shorter duration. The candidate must have attended not less than three courses of medical lectures in the University of Glasgow. In each year of his study he shall have attended at least two or more courses of lectures, of six months' duration, on anatomy, surgery, chemistry, theory or institutes of medicine, practice of medicine, midwifery, materia medica and pharmacy, forensic medicine, anatomical dissections, and two years' practice of a general hospital, in which the student must attend one-half of the prescribed period in the surgical wards, and the other half in the medical.

The regulations as to lodging certificates of attendance, and an essay in English, and as to the candidate's knowledge of Latin, are the same as under the head of medical degrees, only the essay is to be on a surgical subject. The days of graduation are the last Wednesday of April and the first Wednesday of August.

Fee to the library, &c., for the degree of M.D.	£15	0	0
Duty on stamp for ditto	10	3	0
	£25	3	0
Fee for the degree of Chirurgiæ Magister	£10	10	0

N.B. Candidates for degrees who attended classes in the University of Glasgow previously to 1839-40 admitted to examination, according to the regulations which existed at the time when they began to study medicine.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

Regulations for the Surgical Diploma.—The faculty recommend that candidates should attend elementary courses of study in mathematics and natural philosophy. These branches, however, are not imperative. Every candidate's knowledge in Latin should be tested at his examination, by being required to construe some part of Gregory's "Conspectus Medicinæ Theoreticæ."

Curriculum.—Anatomy, two courses of six months. Practical anatomy, one course of six months; enacted 7th June, 1830. Surgery, two courses of six months. Chemistry, one course of six months. Practical chemistry, one course of three months; enacted 8th November, 1831. Theory of medicine, one course of six months. Practice of medicine, one course of six months. Materia medica, one course of six months. Midwifery, one course of six months. Clinical medicine, one course of six months; enacted 7th June, 1830. Clinical surgery, one course of six months; enacted 7th June, 1830. Medical jurisprudence and police, one course of six months; enacted 4th April, 1811. Botany, one course of three months; enacted 3rd February, 1834. A public hospital, eighteen months; enacted 3rd February, 1834. A surgeon's or apothecary's shop, six months; enacted 3rd February, 1834.

The above lectures must have been delivered by professors or lecturers in a university; or by resident members of the Royal Colleges of Physicians or Surgeons respectively of London, Edinburgh, or Dublin; or by means of the faculty. Every candidate must have been employed in the above course of studies for four winter sessions, or for three winter sessions and two summer sessions, so that the whole period of attendance shall not be less than three years complete. An essay, the subject to be fixed by the examiners, to be written by the candidate, in his own handwriting; and no essay to be submitted for a shorter period than twenty-four hours. Specimens of bones, or other anatomical or surgical preparations, or specimens from the materia medica, shall be used at the discretion of the examiners. The fee of seven guineas shall be deposited with the president previous to the examination, and at the same time satisfactory

documents shall be produced that the above curriculum of education has been duly completed by certified attendance.

N.B. Those branches, whose dates are speci fied, are not required by those students who commenced their studies anterior to these enactments. The commencement of education is ascertained by the date of the first ticket.

The fees for the diploma are £7. 7s. The president, visitor, collector, box-masters, and seal-keeper, form, along with the assistant-examiners, the examining court. The diploma of the faculty is recognised by all the licensing bodies in the three kingdoms, and by the poor-law commissioners in England and Ireland.

KING'S COLLEGE, ABERDEEN.—REGULATIONS TO BE OBSERVED IN GRANTING DEGREES IN MEDICINE AT KING'S COLLEGE.

All candidates for the degree of M.D. must be of the age of twenty-one years, and must produce satisfactory certificates of moral character, and exhibit the diploma of A.M. from some university.

All candidates, with the exceptions mentioned below, must have been engaged in the study of medicine for at least four years, one of which must be passed in Aberdeen, and must produce evidence of having attended, in some recognised school of medicine, the following courses of lectures:—Six months' courses: anatomy, two courses; chemistry, one course; materia medica, one course; surgery, one course; institutes of medicine and physiology, one course; practice of medicine, one course; midwifery, one course. Three months' courses: dissections, two courses; practical chemistry, one course; medical juris prudence, one course; clinical surgery, one course; bota[illegible]one course; clinical medicine, two courses.

In addition to the above, the candidate must have attended for two years the wards of a hospital containing 100 beds; and, during three months, a shop or dispensary for the compounding of medicine.

The preceding regulations are strictly enforced in the case of all students who shall commence their medical studies at a period subsequent to 1st October, 1810. But gentlemen who possess a license or diploma from any of the royal colleges of physicians or surgeons, and who have been engaged for at least five years in the practice of medicine, may be admitted to examination on producing their license or diploma, along with satisfactory evidence of sufficient preliminary education and of good moral character.

Previously to examination each candidate must lodge with the secretary £26 5s. 6d., the same to be returned to him should he not obtain his degree.

Degrees in medicine are conferred at two stated periods annually—viz., at the end of April, and at the end of July.

REGULATIONS FOR GRANTING MEDICAL DEGREES IN MARISCHAL COLLEGE AND UNIVERSITY, ABERDEEN.

Curriculum.—Four years of attendance on medical classes, of which one year may be passed at any recognised medical school; but three, at least, must be passed in a university, including one, at least, in this university. The attendance in each year to embrace not fewer than two medical classes of six months each; or one of six months, with two of three months each. But it will be held equivalent to *one* of four years of such attendance in a university—1st, in a master of arts, to have attended one medical class while passing through the curriculum of arts; or, 2ndly, in any student, to have attended a medical class, in each of two years, along with classes in the curriculum of arts. The university attendance to include the following eight classes, each for a course of six months:—Anatomy, practical anatomy, chemistry, materia medica, institutes of medicine, surgery, practice of medicine, midwifery, and the following three classes, each for a course of three months—botany, practical chemistry, medical jurisprudence.

Eighteen months of attendance on the medical and surgical practice of a hospital containing not fewer than eighty beds, along with attendance for six months on lectures on clinical medicine, and for three months on lectures on clinical surgery.

Six months of compounding and dispensing medicines in the laboratory of a hospital, or of a public dispensary, or of a licensed general practitioner, or of a regular dispensing druggist.

Exemption to Practitioners.—It will be held equivalent to the curriculum prescribed in the three foregoing regulations to have obtained, upon examination, a diploma or a license, in medicine or in surgery, from a university or other authority established by law within the United Kingdom, and to have subsequently attended medical classes in this university during one winter session.

Examinations.—The examination terms to be two in each year—the *first* to commence on the 20th of April, if a Wednesday, but if not, on the first Wednesday thereafter; the *second* on the 13th of October, if a Wednesday, but if not, on the first Wednesday thereafter.

Every candidate to undergo at least three separate professional examinations—the first, pharmaceutical; the second, surgical; the third, medical: to be conducted partly in writing, as well as *vivâ voce*, and partly by demonstration. The *first* to include chemistry, botany, materia medica, pharmacy, and the doctrines of physics relating to specific gravities, to gases and vapours, and to climate. The *second* to include anatomy, institutes of medicine, surgery, and the doctrines of chemistry and physics illustrative of animal structure and function. The *third* to include the practice of medicine, midwifery, and medical jurisprudence.

Every candidate not a master of arts must undergo a preliminary examination on the Latin language (the book to be used being *Celsus de Medicina*), and on the etymology of such terms in the medical sciences as are derived from the Latin and the Greek.

Any candidate that so desires shall be admitted to each one, or to any two, of his three professional examinations, at different terms; but not to the first examination until the beginning of his third year of medical classes; nor to the second until the end of his third year; nor to the third until the end of his fourth year, and until he be twenty-one years of age; nor shall a greater interval than eighteen months be allowed between two successive professional examinations without a full renewal of the previous one or two. The preliminary examination must be passed at the same term as the first professional examination.

In order to be received for examination, certificates must have been lodged with the professor of medicine on the first day of the month of the examination term, showing that the candidate is of the required age, that he is of good moral character, and that he has passed through the requisite course of professional education. Along with such certificates must be lodged a schedule, filled up in his own handwriting, containing a list of them, and specifying such additional branches of education, professional and general, as he may have studied.

UNIVERSITY OF ST. ANDREW'S. (1412.)—REGULATIONS FOR GRANTING MEDICAL DEGREES.

The candidate must produce evidence of unexceptionable moral character, and before being admitted to examination must subscribe a declaration that he is twenty-one years of age.

The candidate must have had a liberal classical education, and, if he be not in the possession of the degree of A.M., must be ready to undergo an examination as to his proficiency in the Latin language.

The candidate must produce certificates that he has regularly attended lectures delivered by professors in some university, or by resident fellows of the Royal Colleges of Physicians or Surgeons of London, Edinburgh, Glasgow, Aberdeen, or Dublin, for at least four complete winter sessions, or three winter and three summer sessions, on the following branches:—1, anatomy, two courses of six months each; 2, practical anatomy, twelve months; 3, theory of medicine, or physiology, one course of six months; 4, chemistry, one course of six months; 5, practical chemistry, one course of three months; 6, materia medica and pharmacy, one course of six months; 7, surgery, one course of six months; 8, clinical medicine, one course of six months; 9, practice of medicine, one course of six months; 10, clinical surgery, one course of six months; 11, midwifery[illegible] diseases of women and children, one course[illegible] three months; 12, an apprenticeship, or six months' attendance in the shop of an apothecary, or in the laboratory of a public hospital or dispensary; 13, attendance at a public hospital, containing not less than eighty beds, for at least eighteen months.

These regulations will be invariably observed, except when the candidates are possessed of a surgeon's diploma or license from the Colleges of London, Edinburgh, or Dublin, or the Faculty of Physicians and Surgeons of Glasgow, or a license from the Apothecaries' Company, in which case they have merely to present such diploma or license previous to their examination for M.D.

UNIVERSITY OF DUBLIN (TRINITY COLLEGE). 1591.

Chancellor, his Majesty the King of Hanover; *Vice-Chancellor*, his Grace the Lord Primate of Ireland; *Provost*, Dr. Sadleir.

The days of graduation are, Shrove Tuesday, and the first Tuesday in July. The degree of bachelor of medicine may be obtained in two modes:—

1. Graduates in arts can obtain the degree at any of the half-yearly periods of graduation, provided the requisite medical education and examination shall have been accomplished. Fee for entrance, £16; fees for study in arts during four years, £7. 10s. each half year; fees for graduation in arts, £8. 17s. 6d.

2. Candidates are admissible to the degree of M.B., without previous graduation in arts, at the end of five years from the July following the Hilary examination of the first undergraduate year, provided the usual education and examinations in arts of the first two years of the undergraduate course shall have been completed, as also the medical education and examinations, as in the case of other candidates. Fees for two years' study in arts (besides the usual entrance payment of £16) are £7. 10s. each half year. The graduation fees for the degree of bachelor of medicine are £11. 15s. The standing of the first undergraduate year may be obtained by attending the October examination of that year, if the student has entered not later than the first Monday of the July of the same year, and has completed the payments due since the ordinary period of entrance in the preceding November. The medical education of a bachelor of medicine comprises attendance on the following courses of lectures in the school of physic established by act of Parliament, provided that one, and not more than three, of the courses which begin in November be attended during each of four sessions. Three of these courses, at the discretion of the candidate, may be attended at the University of Edinburgh. The courses are on—anatomy and surgery, chemistry, botany, materia medica and pharmacy, institutes of medicine, practice of medicine, midwifery (by the professor to the College of Physicians), clinical lectures at Sir Patrick Dun's Hospital, during at least one session (six months), as delivered by the professors in the school of physic; the attendance on such clinical lectures by the professors to be extended to three additional months of a summer session commencing in May. This regulation to affect all students commencing their medical studies after 17th July, 1841, and to be in lieu of attendance on the hospital from 1st May to the 1st November following. The fees for attendance on the clinical lectures are £3. 3s. to the professors for each three months' attendance, and (provided the student be of two years' standing in the university) £3. 3s. to the treasurer of the hospital for the first year, with a proportionate

sum for any longer period. The fee for each of the other courses is £4. 4s. The examinations are conducted by the regius professors of physic of the university, the six professors of the school of physic, and the professor of midwifery to the King and Queen's College of Physicians. No further examination is requisite for the degree of doctor of medicine, which may be taken at the expiration of three years from having taken the degree of M.B., provided the candidate shall have graduated in arts. The fees for the degree of doctor of medicine are £22. The degrees are publicly conferred by the vice-cha[illegible]llor, in the senate or congregation of the univ[illegible]y.

COLLEGE TERMS.

Hilary begins January 10, ends March 25.
Trinity „ April 15, „ June 30.
Michaelmas. October 10, „ December 20.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

Qualifications of Candidates for License.—Candidates must produce evidence of having been engaged in the study of medicine for four years, and of having attended two at least of the required courses in each year. Candidates, except those who have taken a medical degree prior to 1840, must produce certificates of attendance on one or more courses of lectures on the following subjects, each course being of six months' duration, with the exception of botany and forensic medicine, which must include at least fifty lectures:—Anatomy and physiology, chemistry, materia medica and pharmacy, botany, institutes of medicine, practice of medicine, principles and [illegible]

[illegible] institutes of medicine, a[illegible] of medicine are required to have been delivered by the respective professors of the school of physic in Dublin, or in a university. The lectures on surgery are required to have been delivered on at least three days in the week, during four months, by a professor of surgery in a university or college of physicians or surgeons in the United Kingdom, or by the surgeon of a medico-chirurgical hospital recognised by the college. These lectures must not form a part of a course of lectures on anatomy. The lectures on midwifery are required to have been delivered by a professor of midwifery in a university or college of physicians or surgeons in the United Kingdom, or by the master of the Lying-in Hospital, Dublin. The lectures on medical jurisprudence are required to have been delivered by a professor in a university or college of physicians or surgeons in the United Kingdom. Certificates must also be produced of six months' attendance on anatomical demonstrations and dissections, and of at least two years' hospital practice; one year in the hospital of the school of physic in Dublin or Edinburgh, the other in any recognised medico-chirurgical hospital. The certificates must include attendance on the entire practice of the hospital, and on all the clinical lectures delivered in the hospital during such attendance. Candidates who have taken a medical degree in a university shall be admitted to examination upon such degree alone. Every candidate for license, except those who have taken a medical degree prior to 1810, is examined on two separate days: on the first day on anatomy and physiology, chemistry, botany, materia medica, and pharmacy; and on the second day, on acute and chronic diseases, midwifery, and non-naturals, and on the translating of one or more of the following books from the original Greek, viz.: Hippocrates, Aretæus, and Galen. Graduates in medicine are only required to undergo the second day's examination. The examinations, which are public, are conducted in the English language; but every candidate, except graduates in arts at Oxford, Cambridge, or Dublin, is required to translate medical cases from the English into the Latin language, before he is admitted to examination as to his professional acquirements. Fee for license, £30. The license of this college is equivalent to a medical degree, and it confers privileges which a degree does not.

The fellows are chosen from the licentiates of three years' standing; they are required by statute (40 Geo. III., cap. 84, sect. 42) to have taken the degree of M.D. in one of the universities of Dublin, Oxford, or Cambridge; or to have taken the degree of A.B. in one of these universities, and to have received the medical education requisite for obtaining the license, for which a degree in medicine is not necessary. Fee to the college on election to the fellowship, £20, with an additional stamp duty of £25.

The act of Parliament provides that these qualifications may be dispensed with whenever, at any time, the number of fellows is reduced to six.

The college has the power of conferring the honorary fellowship on any of its own licentiates who have not the statutable qualifications; on such of its fellows as resign or vacate the fellowship; and on such eminent medical men, not licentiates, as it may wish to distinguish by its approbation.

ROYAL COLLEGE OF SURGEONS IN IRELAND.
(1784—1828.)

By-laws respecting the Registry of Pupils.—Every person requiring to be registered as a pupil on the college books shall be so registered, if he shall have laid before the court of censors the following documents, viz.:—

Provided he be an apprentice, and shall have paid any apprentice fee:—1. A receipt showing he has lodged, to the credit of the president and for the use of the college, in the Bank of Ireland, the registry fee of ten guineas. 2. A receipt showing that the member or licentiate to whom he is indentured has lodged a similar sum of ten guineas. 3. A declaration, subscribed by the member or licentiate to whom he is indentured, stating that he has really and *bonâ fide* received the usual fee of one hundred and fifty guineas, or value to that amount. 4. His indenture of apprenticeship, duly executed, and bearing the requisite stamp.

Provided he be an apprentice, and shall not have paid an apprentice fee, he shall lay before the court: 1. A declaration, subscribed by the member or licentiate to whom he is indentured, that he has not received, or that he does not expect to receive, any apprentice fee. 2. A receipt, showing that he has lodged, to the credit of the president and for the use of the college, in the Bank of Ireland, the sum of fifty guineas. 3. His indenture of apprenticeship, regularly executed and registered.

Provided he be an apprentice, and be the son, brother, or nephew of the member or licentiate to whom he is indentured, or the son of some other member or licentiate of the college, and shall not have paid an apprentice fee, he shall lay before the court:—1. A declaration, subscribed by the member or licentiate to whom he is indentured, that he has not received, or that he does not expect to receive, any apprentice fee. 2. A receipt, showing that he has lodged, to the credit of the president and for the use of the college, in the Bank of Ireland, the sum of ten guineas.

Provided he shall not be an apprentice to a member or licentiate of the college:—1. A receipt, showing that he has lodged, to the credit of the president and for the use of the college, in the Bank of Ireland, the registry fee of ten guineas.

By-laws relating to Education and the Qualification of Candidates for Letters Testimonial.—Every registered pupil or apprentice shall be admitted to an examination for letters testimonial, if he shall have proved and showed that his professional education has been, in all respects, conformable and agreeable to the provisions and enactments of the by-laws and rules of the college, and shall have laid before the court the following documents:—1. A receipt, showing that he has lodged, as a registry-fee, the sum of ten guineas in the Bank of Ireland, to the credit of the president and for the use of the college, previously to his being admitted to any examination. 2. A receipt, showing that he has lodged a sum of twenty guineas in the Bank of Ireland, to the credit of the president, and for the use of the college, previous to his final examination for letters testimonials. 3. A certificate, signed by the president or vice-president, and two of the court of censors, that he has passed an examination as to his acquaintance with the Greek and Latin languages. 4. Certificates, showing that he has been engaged in the study of his profession for not less than four years, three of which shall have been passed in attendance on lectures or hospitals, during the winter sessions, in Dublin, London, Edinburgh, or Glasgow. 5. Certificates of attendance on a surgical hospital where clinical instruction is constantly given, containing fifty patients at least, for a period of not less than twenty-four months. 6. Certificates of attendance on the medical practice of a recognised hospital or dispensary, where clinical instruction is constantly given during twelve months. 7. Certificates of attendance on three courses of lectures on anatomy and physiology, three courses of lectures on the theory and practice of surgery, and of the performance of three courses of dissections, accompanied by demonstrations; also certificates of attendance on two courses of lectures on chemistry, or one course of lectures on general, and one on practical, chemistry; one course of lectures on materia medica; one course of lectures on the practice of medicine; one course of lectures on midwifery, and one course of lectures on medical jurisprudence. 8. A thesis, essay, or dissertation, in Latin or English, or any of the following subjects:—Anatomy, physiology, surgery, the practice of medicine, chemistry, materia medica, midwifery, or medical jurisprudence; or, in the place of such dissertation, a series of cases collected in the hospital in which the candidate has attended, illustrated by comments or observations.

A candidate, being a regist[illegible]pupil, shall be allowed to pass the first of the two days' examination above mentioned, on anatomy and physiology, on laying before the court of censors the following documents:—1. A receipt, showing that he has lodged a sum of ten guineas in the Bank of Ireland, to the credit of the president and for the use of the college. 2. Certificates, showing that he has been engaged in the study of his profession for not less than three winter sessions in Dublin, London, Edinburgh, or Glasgow. 3. Certificates of attendance on three courses of lectures on anatomy and physiology, and of the performance of three courses of dissections, accompanied by demonstrations; such candidate not being admissible to the second day's, or the final, examination, on the other subjects above specified, until he shall have lodged a further sum of ten guineas in the Bank of Ireland, to the credit of the president and for the use of the college, and shall have laid before the court of censors all the documents enumerated in the by-laws relative to "qualifications for the letters testimonial." Notice of every examination for letters testimonial is posted in the hall, and the secretary also, by regular summonses, gives notice of such examination to the members resident in Dublin. The examination takes place in the presence of such members and licentiates as choose to attend. The candidate is examined on two several days in anatomy and physiology, on the practice of medicine and surgery, and on any other branch of medical science, and shall perform such surgical operations or dissections, and explain such anatomical preparations, as the court may require.

Fee for letters testimonial or diploma, £31. 10s.; and for admission as member (which takes place by ballot after three years' standing as a licentiate, and confers corporate rights) £31. 10s.

APOTHECARIES' HALL OF IRELAND. 1791.

Laws regarding the Education of Apothecaries.—Every candidate must undergo two separate examinations—one for the certificate of apprentice, the other for the license to practise.

Every candidate for the certificate of apprentice must have attained the age of fifteen years, and will be examined in the following books:—The works of Sallust; the first six books of the Æneid of Virgil; the Satires and Epistles of

Horace; the Greek Testament; the Dialogues of Lucian; the first four books of Homer's Iliad the first six books of Telemachus, or the History of Charles the Twelfth (in French); the first two books of Euclid; and algebra—to simple equations.

Every candidate for the license to practise an apothecary must lay before the court the following documents:—1. The certificate of apprentice. 2. The indenture of apprenticeship, enrolled according to the act of Parliament and bearing the certificate of the licentiate apothecary to whom he has been indented, that he is of good moral character, and has fulfilled the period of his apprenticeship. 3. Certificates duly signed that he has diligently attended at least one course of lectures on each of the following subjects, delivered at the school of Apothecaries' Hall, or at some other school of medicine recognised by the court (the order of the study here laid down is recommended for the guidance of students):—Chemistry, anatomy, and physiology, six months; practical chemistry and botany, three months; materia medica, demonstrations, and dissections, theory and practice of physic, surgery, midwifery and the diseases of women and children, six months; medical jurisprudence, three months.

A certificate of twelve months' attendance on the entire practice of a medico-chirurgical hospital, recognised by the court, containing not less than fifty beds, and where clinical instruction is regularly given.

Also, a certificate of having assisted in at least thirty cases of midwifery practice, twenty of which must be attended in a recognised hospital.

The examination for the license to practise as an apothecary will be as follows: In translating and explaining the process of the Britishp harmacopœias and extemporaneous prescriptions; in chemistry and general physics; in materia medica and therapeutics; in natural history and medical botany; in anatomy and physiology; in the theory and practice of medicine; in midwifery; in medical jurisprudence.

The examination for the license to act as assistant to an apothecary in compounding and dispensing medicine will be confined to the following subjects:—To translate the Dublin Pharmacopœia, and extemporaneous prescriptions; pharmacy, botany, materia medica, and mechanical philosophy.

The candidate for the assistant's license may present himself for examination at the termination of five years' apprenticeship.*

The court of examiners sit every Friday, at two o'clock, and proceed with the examination of candidates in the order in which their names appear on the list.

A rejected candidate cannot be readmitted to examination until the expiration of six months, and, after a second rejection, can appeal to be examined by the King and Queen's College of Physicians.

All lecturers are required to furnish the court of examiners with a list of such gentlemen as have taken out admission tickets on or before the 1st day of January; also a similar list of those who have obtained certificates of having attended their respective courses, with the number of lectures in each course, on or before the 10th of May, annually.

REGULATIONS OF THE ARMY MEDICAL DEPARTMENT, 13, ST. JAMES'S-PLACE.

A candidate for an assistant-surgeoncy in the army is required to fill up a blank form of certificate, which may be obtained at the office by written application to the director-general, specifying by whom he is recommended, his Christian and surname at full length, with the course of study he has pursued. The candidate is, in addition, to sign and forward the following declaration:—

"I, [Christian and surname at full length], ... years of age, a candidate for employment in the medical department of the army, do hereby attest my readiness to engage for general service, whether at home or abroad, and to proceed on duty immediately on being gazetted. I declare my age not to exceed twenty-six years, that I am unmarried, and that I labour under no mental or constitutional disease, nor physical disability, that can interfere with the most efficient discharge of the duties of a medical officer in any climate." [Signature] . . .

In selecting from among the candidates for the medical department of the army, a preference is given to those who can fill up all the blanks in the printed form; but the name of no gentleman can be placed on the list who does not possess the diploma of either of the colleges of surgeons of London, Edinburgh, or Dublin, and who cannot produce the following testimonials:—Eighteen months' attendance at an hospital of celebrity, where the average number of in-patients is not less than one hundred; twenty-four months' anatomy; twelve months' practical anatomy; twelve months' surgery, or (what is preferred) six months' surgery, and six months' military surgery; eight months' clinical surgery, a complete course of two or three lectures during the week; twelve months' practice of physic, or six months of practice of physic, and six months of general pathology; eight months' clinical lectures on ditto, the same as required in surgery; twelve months' chemistry; six months' practical chemistry; three months' botany; four months' materia medica; three months' practical pharmacy, or apprenticeship; five months' natural history; five months' midwifery; five months' natural philosophy.

The candidates must be unmarried, not beyond twenty-six years of age, nor under twenty-one years.

Candidates who have had a university education, and have the degree of A.B. or A.M., as well as that of M.D., will be preferred; but a liberal education, and a competent knowledge of the Greek and Latin languages, are indispensably requisite in every candidate; and the greater the attainments of the candidates in various branches of science, in addition to competent professional knowledge, the more eligible will they subsequently be deemed for promotion in the service; for selections to fill up vacancies will be guided more by reference to such acquirements than to mere seniority. Before promotion from the rank of assistant-surgeon to any higher rank, every gentleman must be prepared for such other examination as may be ordered before a board of medical officers.

Although the British schools are specified, it is to be understood that candidates who have received regular education in approved foreign universities or schools will be admitted to examination.

With the exception of practice of physic and clinical medicine by one teacher, candidates must have attended separate lectures for each branch of the science. The certificate of the teacher of practical anatomy must state the number of subjects or parts dissected by the pupil. Certificates of lectures and attendance must be from physicians or surgeons of the recognised colleges of physicians and surgeons of the United Kingdom, or of foreign universities. A certificate that the candidate is acquainted with the art of cupping is required.

Diplomas, tickets of attendance on lectures, and certificates of regular attendance by each professor or lecturer, must be lodged at this office for examination and registry at least one week before the candidate appears for examination, and likewise certificates of moral conduct and character, one of them by a clergyman, and that of the parochial minister, are desirable. Baptismal certificates are required at the same time; if the parish register cannot be resorted to, an affidavit from one of the parents, or some person who can attest the fact, will be accepted.

All communications to be forwarded "unsealed," under cover, to "the Right Honourable the Secretary at War," with the words "Army Medical Department" at the corner.

Although, in the examination of candidates, gentlemen are expected to be qualified in every branch of study required, they are requested to be particularly conversant in the knowledge of —1. Tropical diseases, and the diseases to which soldiers are most liable. 2. Military surgery, and works on the habits of soldiers and rules of the service. 3. "Cullen's Nosology" being that adopted in all returns and reports. 4. "Willan's Classification of Cutaneous Diseases." 5. The latest authors on the diseases of the eye. They are expected readily to translate a passage from a Greek or Latin author; to be conversant with Baillie and the later authors on morbid anatomy; with Cullen's, Mason Good's, and Gregory's Practice of Physic," the latter giving an account of tropical diseases, and those most commonly met with in the army; with the works of Hunter, Hennen, Dr. John Thomson, Guthrie, Samuel Cooper, Millengen, Ballingall, Marshall, and Baron Larrey, on "Military Surgery;" with the works of Chisholm, Bancroft, Lind, Blane, Burnet, Johnstone, and Annesley, on "The Diseases of Warm Climates;" but Baillie's "Morbid Anatomy," Hennen's and Ballingall's "Military Surgery," 3rd edition, with his valuable work on "Medical Topography," Guthrie on "Gun-shot Wounds and on the Eye," and Gregory's "Practice of Physic," should form part of the baggage of every military surgeon.

Candidates, after passing their examination, will not have any leave of absence granted, but will be stationed at Chatham for two or three months, previously to being gazetted; and on their conduct there will depend their obtaining their commissions. The appointment of army-assistant surgeons rests with the director-general, Sir James M'Grigor, Bart., by whom the examinations are generally conducted.

NAVAL MEDICAL DEPARTMENT.—ADMIRALTY-OFFICE, SOMERSET-HOUSE.

Director-General of the Medical Department of the Navy, Sir William Burnett, M.D., Knt., K.C.H., F R S.

Qualifications.—The Right Hon. the Lords Commissioners of the Admiralty having been pleased to direct "that no person be admitted as an assistant-surgeon in the Royal Navy who shall not produce a certificate from one of the Royal Colleges of Surgeons of London, Edinburgh, or Dublin, of his fitness for that office; nor as a surgeon unless he shall produce a diploma or certificate from one of the said royal colleges, founded on an examination to be passed subsequently to his appointment of assistant-surgeon, as to the candidate fitness for the situation of surgeon in the navy, and, in every case, the candidate producing such certificate or diploma shall also undergo a further examination before the director-general of the medical department of the navy, touching his qualifications in all the necessary branches and points of medicine and surgery for each of the steps in the naval medical service," the inspector-general doth hereby signify, for the information of those persons to whom it may relate, that these regulations and directions will be strictly adhered to; and further, that, previously to the admission of assistant-surgeons into the navy, it will be required that they produce proof of having received a preliminary classical education, and that they possess, in particular, a competent knowledge of Latin; also, that they are of good moral character, the certificate of which must be signed by the clergyman of the parish, or by a magistrate of the district. That they have served an apprenticeship, or have been engaged for not less than six months in practical pharmacy. That their age be not less than twenty years, nor more than twenty-four, and that they are unmarried. That they have actually attended a hospital in London, Edinburgh, Dublin, Glasgow, or Aberdeen, for two years, after the age of eighteen, in which the average number of patients is not less than 150. That they have been engaged in actual dissections of the human body twelve months; the certificates of which, from the teacher, must state the number of subjects or parts dissected by the candidate. That they have attended lectures, &c., on the following subjects, at established schools of eminence,

by physicians or surgeons of the recognised colleges of physicians or surgeons in the United Kingdom, for periods not less than hereunder stated, observing, however, that such lectures will not be admitted if the teacher shall lecture on more than one branch of science, or if the lectures on anatomy, surgery, and medicine be not attended during three distinct winter sessions of six months each:—

Anatomy (or general anatomy, twelve months; and comparative anatomy, six months), eighteen months. Surgery (or general surgery, twelve months; and military surgery, six months), eighteen months. Theory of medicine, six months. Practice of medicine, twelve months. If the lectures on the theory and practice of medicine are given in conjunction, then the period required is eighteen months (six months' lectures on pathology, if given at a university where there may be a professorship on that branch of science, will be admitted in lieu of six months' lectures on the practice of medicine). Clinical lectures, at a hospital as above (or the practice of medicine, six months; and the practice of surgery, six months), twelve months. Chemistry (or lectures on chemistry, three months; and practical chemistry, three months), six months. Materia medica, six months. Midwifery (accompanied by certificates stating the number of midwifery cases personally attended), six months. Botany (or general botany, three months; and medical botany, three months), six months.

In addition to the tickets for the lectures, certificates must be produced from the professors, &c., by whom the lectures were given, stating the periods (in months) *actually* attended by the candidates. The time, also, of actual attendance at a hospital or infirmary must be certified, and the tickets as well as certificates of attendance, age, moral character, &c., must be produced by the candidate immediately on his being desired to appear for examination.

Although the above are the only qualifications which are absolutely required in candidates for the appointment of assistant-surgeon, a favourable consideration will be given to the cases of those who have obtained the degree of M.D. at either of the universities of Oxford, Cambridge, Edinburgh, Dublin, Glasgow, or London, or who, by possessing a knowledge of the diseases of the eye, and of any branch of science connected with the profession, such as medical jurisprudence, natural history, natural philosophy, &c., appear to be more peculiarly eligible for admission into the service, observing, however, that lectures on these or any other subjects cannot be admitted as compensating for any deficiency in those required by the regulations.

By the rules of the service, no assistant-surgeon can be promoted to the rank of surgeon until he shall have served three years in the former capacity, one year of which must be in a ship actually employed at sea; and it is resolved that not any diploma or certificate of examination from either of the aforesaid royal colleges shall be admitted toward the qualification for surgeon unless the diploma or certificate shall be obtained on an examination passed after a period of not less than three years' actual service, observing that no one can be admitted to an examination for surgeon unless he be a member of one of the above-named royal colleges; and whenever assistant-surgeons already in the service (whose professional education may not be in accordance with the above) obtain leave to study previously to their passing for surgeon, they will be required, on their examination, to produce testimonials of their having availed themselves of the period of leave to complete their education, agreeably to these regulations.

It is also to be observed, that candidates who may be admitted into the naval medical service must serve in whatever ships, &c., they may be appointed to, and that, in the event of their being unable to do so from sea' sickness, their names cannot be continued on the naval medical list, nor can they, of course, be allowed half-pay.

ORDNANCE MEDICAL DEPARTMENT.—63, PALL MALL.

Regulations for the Admission of Candidates.—Provisional List.—Medical students who have completed their twentieth year, who have been well instructed in the Latin and Greek languages, the elements of mathematics and natural philosophy, and who can produce satisfactory proofs of being of good moral character, and diligent in the study of their profession and the sciences connected with it, may be entered in the provisional list of gentlemen desirous to be admitted candidates for employment in the Ordnance Medical Department. A knowledge also of modern languages, though not indispenable at the time of provisional reception, is highly desirable, and will be duly appreciated.

Candidates.—No applicant is to be received on the list of candidates before he is twenty-two, or retained on it after he is twenty-five years, of age. The age of every individual must be verified by a certificate of his baptism, if it can be procured. He must be also unmarried, and in the full enjoyment of health, both bodily and mental.

Qualifications.—Every candidate must produce a diploma from one of the colleges of surgeons of London, Edinburgh, or Dublin; and a certificate of qualification from the Society of Apothecaries in London. He must also bring proof of having diligently gone through the following branches of professional education, nearly all of which are required to enable him to take out the above-mentioned diploma and certificate—viz., of having served an apprenticeship of five years to a surgeon and apothecary, if educated in England; but if not, qualification in the practice of medicine and pharmacy equivalent thereto;—of having attended the practice of surgery in a recognised hospital hospitals, where clinical instruction is constantly given for three years, three months being allowed for a vacation in each year;—of having attended the under-mentioned lectures, &c.:—

Anatomical lectures. Ditto—demonstrations. Ditto—dissections	Three anatomical seasons or sessions.
Morbid anatomy and pathology	one course.
Lectures on the principles and practice of surgery, delivered in two distinct periods	two courses, each comprising seventy lectures, or one course of surgery, and one of military surgery.
Natural history, or comparative anatomy	one course
Chemistry	one course of a hundred lectures.
Botany	one course.
Materia medica and therapeutics	one course of a hundred lectures.
Lectures on the principles and practice of medicine	two courses, each 100 lectures; second and third winters.

Medical practice, with clinical lectures, eighteen months, commencing the second session, viz., twelve months in a recognised hospital, and the remaining six months either in a recognised hospital or a dispensary.

Medical jurisprudence, with toxicology	one course of fifty lectures.
Midwifery	two courses, each of lectures, second and third sessions.
Practical midwifery (not less than thirty cases)	After the conclusion of the first course of midwifery lectures, a certificate of having passed the usual examination is to be produced.
Diseases of the eye	with attendance on patients of that class. one course.

He must produce a diploma from either of the colleges in London, Edinburgh, or Dublin, and, if not a graduated M.D. of Scotland or Ireland, after having actually passed an examination in the university where he has obtained his degree, a certificate of qualification also from the Society of Apothecaries in London. It is likewise expected that candidates shall have attended establishments for the cure of diseases of the ear and skin, and for the treatment of patients affected with mental derangement. Certificates will not be received on more than two branches of science, from one and the same lecturer; but anatomy and physiology, demonstrations and dissections, materia medica and botany, will be respectively considered one branch of science. In the certificates of attendance on hospital practices, and on lectures, the dates of commencement and termination are to be inserted in words at full length. The moral conduct and character of each individual must be certified by the gentlemen to whose care his education was confided; and also by a clergyman, who, if practicable, should be the incumbent or officiating minister of the parish in which the applicant usually resides. The documents above detailed are to be inspected by a board, to consist of not less than five medical officers, after which they are to examine the candidate as to his professional acquirements. If his education has been chiefly medical, the examination will be principally in practical surgery; but if surgical, in the theory and practice of physic, including pharmacy. The full qualification being required on admission, a second examination is deemed unnecessary.

EAST INDIA COMPANY'S SERVICE.—REGULATIONS FOR THE ADMISSION OF MEDICAL GENTLEMEN INTO THE EAST INDIA COMPANY'S SERVICE AS ASSISTANT-SURGEONS FOR INDIA.

Age.—The assistant-surgeon must not be under twenty-two years, in proof of which he must produce an extract from the register of the parish in which he was born.

Qualifications in Surgery.—The assistant-surgeon, upon receiving a nomination, will be furnished with a letter to the Court of Examiners of the Royal College of Surgeons, to be examined in surgery, and their certificate will be deemed a satisfactory testimonial of his qualification; but should the assistant-surgeon be previously in possession of a diploma from the Royal College of Surgeons of London, or of the College of Surgeons of Dublin or Edinburgh, or of the College and University of Glasgow, or of the Faculty of Physicians and Surgeons of Glasgow, either of them will be deemed satisfactory as to his knowledge of surgery, without any further examination. He is also required to produce a certificate from the cupper of a public hospital in London, of having acquired and being capable of practising with proper dexterity the art of cupping.

Qualifications in Physic.—The assistant-surgeon will also be required to pass an examination by the Company's examining physician in the practice of physic, and to produce satisfactory proof of his having attended at least two courses of lectures on the practice of physic; and, above all, that he should produce a certificate of having attended diligently the practice of the physicians at some general hospital in London for six months.

The assistant-surgeon is also required, as a condition to his appointment, to subscribe to the Military or Medical and Medical Retiring Fund at his respective presidency, and also to the Military Orphan Society, if appointed to Bengal.

The assistant-surgeon is required, by a resolution of court of the 21st of May, 1828, to apply at the office for cadets and assistant-surgeons for his orders for embarkation, and actually proceed under such orders within three months from the date of being passed and sworn before the committee for passing military appointments; he will then be furnished with an order to obtain the certificate of his appointment, signed by the secretary, for which he will pay a fee of £5 in the secretary's office.

Assistant-surgeons who shall fail to apply at the cadet department for their orders within three months from the date of their being passed and sworn before the committee, or shall not actually proceed under such orders, are considered to

have forfeited their appointments, unless special—circumstances justify the court's departure from—this regulation.

A SESSIONAL SYNOPSIS FOR LONDON

	Anatomical Demonstrations.	Anatomy, Descriptive and Surgical.	Structural and General Anatomy and Physiology.	Chemistry.	Materia Medica and Therapeutics	Theory and Practice of Medicine.	Principles and Practice of Surgery.	Midwifery, and the Diseases of Women and Children.	Botany.	Medical Jurisprudence.	Comparative Anatomy.
Aldersgate-st. School		Mr. Chance	Mr. Holthouse	Mr. Holmes	Dr A B Garrod	Dr. Lacock and Dr. Goodfellow	Mr. Alfred Smee, FRS	Dr. Hall Davis	Dr. Arlidge	Dr. John J. Snow	Dr. Rayner FSA, AKC Mr. S. R. Pittard
Bartholomew's School and Medical College	Mr. Holden and Mr. Cootes	Mr. F. C. Skey, FRS	Mr. Paget	Mr. T. Griffiths	Dr. Leith Roupell, FRS	Dr George Burrows	Mr. Lawrence, FRS	Dr. Rigby, FRS	Dr. Farre, FLS	Dr. Baly	Mr. M'Whinnie
Charing-cross Hospital	Mr. Hird and Mr. E. Canton	Mr. Hird	Mr. Wharton Jones, FRS	Dr. P. B. Ayres	Dr. Steggale and Dr Willshire	Dr. Shearman and Dr. Rowland	Mr. Hancock	Dr. Chowne	Dr. Willshire	Dr. Chowne and Dr. Gavin	
Hunterian Institute of Medicine and Surgery.	Mr. W. P. Skipton.	Mr. Hilles	Mr. Hilles	Mr. Holmes.	Dr G. Smyth	Dr. C. J. B. Aldis	Mr. Riadore	Dr. T. Smith	Rev. Mr. Hincks	Dr. R. Barnes	
Guy's Hospital School	Mr. J. Birkett & Mr. A. Poland	Mr Cock and Mr. Hilton	Mr J. Birkett	Mr. Aikin and Mr. Taylor	Dr. Addison and Dr. G. Bird	Dr. Addison	Mr Morgan and Mr. B. Cooper	Dr. Lever and Dr. Oldham	Mr. Johnson	Mr. Taylor	Mr. Gull
King's College	Mr. Simon and Mr. Bowman	Prof. Richard Partridge, FRS	Dr. R. B. Todd, FRS	Dr. W. A. Miller, J. Bowman, Esq. (Demonstrator)	Dr. J. F. Royle, FRS	Prof. G. Budd, MD, FRS	Prof. W. Ferguson, MD, FRS	Prof. A. Farre, MD, FRS	Prof. E Forbes FRS, FLS	Prof. W. A. Guy, M.D.	T. R. Jones, FRS
London Hospital School	Mr. Critchett and Mr. Ward	Mr. Adams	Dr. Carpenter, FRS	Dr. Letheby	Dr. Pereira, FRS	Dr. Little	Mr. Luke and Mr. Curling.	Dr. Ramsbotham		Dr. Ramsbotham and Dr. Frampton	
Middlesex Hospital School	Mr. Charles H. Moore	Mr. Campbell, Dr. Morgan, and Mr. H. M. Rowdon	Mr. H. Rowdon and Mr C De Morgan	Dr. Ronalds	Dr. Latham and Dr. Ronalds	Dr Crawford and Dr Thompson	Mr. Arnott, FRS, and Mr. Shaw	Dr. West	Mr. Henfrey, FLS	Dr. Latham	
School adjoining St. George's Hospital	Dr. W. V. Pettigrew and Mr. G. E. Blenkins	Mr. Lane, Dr Pettigrew, and Mr. Blenkins	Mr. Lane, Dr. Pettigrew, and Mr. Blenkins	Mr. Rodgers	Dr. Lankester, FRS, FLS	Dr. Goolden and Dr. T. Thompson	Mr. Lane and Mr. Pilcher	Mr. Bloxam	Dr. Lankester, FRS	Mr. Ancell and Mr. Warder	
St. George's Hospital School	Dr. H. Jones and Mr. Athol Johnson	Mr. Prescott Hewett	Dr. Handfield Jones	Mr. Brande, FRS, and Mr Brodie.	Dr. Pitman	Dr. Nairne and Dr. Page	Mr. Cæsar Hawkins and Mr. Tatum	Dr Robert Lee, FRS	Mr. Henfrey, FLS	Dr. Bence Jones FRS, and Mr. H. C. Johnson	
St. Thomas's Hospital School	Mr. J. Rainey	Mr. F. Le Gros Clark	Mr. Grainger	Dr. Leeson and Mr. Heisch	Dr. Risdon Bennett	Dr Barker and Dr George Gregory	Mr. Green and Mr. B. Travers	Dr. Waller	Mr. G. Luxford	Dr. Leeson and Dr. Risdon Bennett	Mr. E. Meryon
University College Medical School	Mr G. V. Ellis and Mr. Marshall	Mr. Richard Quain, FRS	Dr. Sharpey, FRS	Mr Graham, FRS, and Mr Fownes, FRS	Dr. A. T Thompson, FLS	Dr. C. J. B Williams, FRS	Mr S. Cooper, FRS, and Mr. Liston, FLS	Dr Murphy	Dr. Lindley, FRS	Dr. A. T. Thompson	Dr. Grant

Westminster Hospital School—Shut up for this year in consequence of the Westminster improvements.

PROVINCIAL SCHOOLS.

Bristol Medical School	Mr. Prichard and Mr. J. G Swaine	Mr. Prichard	Mr. Hetting and Dr. W. Nicholson	Mr. Herepath	Dr. Staples and Dr. Fairbrother	Dr. Budd and Dr. G. Fripp	Mr. Clark and Mr. Greig	Mr Swayne and Mr. J. Swayne	Mr. Thwaites	Dr. Kay	
Leeds School of Medicine		Mr. Price, Mr Radclyffe, and Mr. Stanland	Mr. Teele, Mr. Nunneley, Mr. Ikin, and Mr. S. Hey	Mr. Morley and Mr. E. Joy	Dr. Pyemont Smith and Dr. Heaton	Dr. Chadwick	Mr Hey and Mr. Garlick	Mr. Smith and Mr. Braithwaite	Dr. Heaton	Dr. Pyemont Smith.	
Manchester School of Medicine and Surgery	Mr. W. Smith	Mr. W. Smith	Mr. Turner	Mr. F. C. Calvert	Dr. Ainsworth	Dr. Howard	Mr. Ransome	Mr. Heath	Mr. Just and Dr. Hardy	Dr. H. Browne	
Queen's College, Birmingham	Mr. D. Bolton	Mr. W. Sands Cox, FRS	Mr. Langston Parker	Mr. J. G. Tilley	Dr. James Johnston and Mr. G. B. Knowles	Dr. John Eccles	Mr. W Sands Cox, FRS	Mr. Sam. Berry	Mr. G. B. Knowles, FLS	Dr. J. Brit Davies	
Newcastle-upon-Tyne School of Medicine	Messrs. Shiell, Gibson, Gibbs, and Pearse	Messrs. Potter and Heath	Dr. Embleton and Mr. G. Heath	Dr. Richardson	Dr. Glover and Mr. Newton	Dr. Charlton	Mr. Potter	Dr. Dawson	Mr. Thornhill	Dr. Robinson.	
Liverpool Infirmary School of Medicine	Mr. R. H. Radcliffe	Dr. Formby and Mr. Cooper	Dr. Formby and Mr. Long	Dr. H. R. Brett	Dr. Duncan	Dr. Dickenson	Mr. Cooper	Mr. Batty	Dr. Dickenson and Dr. Inman	Dr. H. R. Brett and Dr. Inman	

LONDON HOSPITALS.

WESTMINSTER HOSPITAL; *Physicians:* Drs. Bright, Roe, Kingston, Basham. *Practice*, £21. —*Surgeons:* Messrs. White, Lynn, Hale Thomson, Phillips. *Practice*, £31.—ST. GEORGE'S HOSPITAL; *Physicians:* Drs. Seymour, Wilson, Macleod, Nairne, and Page. *Practice*, 24 guineas., —*Surgeons:* Messrs. Keate, Hawkins, Cutler, Tatum, H. J. Johnson, and H. C. Johnson. *Practice*, 50 guineas.—ST. THOMAS'S HOSPITAL; *Physicians:* Drs. Roots, Burton, Barker, Leeson, Goolden, Risdon Bennet. *Practice*, £24. 3s. *Surgeons:* Messrs. Green, South, Macmurdo, Solly, B. Travers, and F. Le Gros Clark. *Practice*, £26. 6s.—KING'S COLLEGE HOSPITAL; *Physicians:* Drs. Watson, Budd, Todd, Farre, and Guy. *Practice*, £21.—*Surgeons:* Messrs. Arnott, Fergusson, Partridge, Simon, and Bowman. *Practice of both*, £36. 15s.—MIDDLESEX HOSPITAL; *Physicians:* Drs. Hawkins, Wilson, and Crawford. *Practice*, for eighteen months, £12. 12s.—*Surgeons:* Messrs. Arnott, and Shaw. *Practice*, £21.—UNIVERSITY COLLEGE HOSPITAL; *Physicians:* Drs. C. J. B. Williams, Thompson, Taylor, and Walshe. *Surgeons:* Messrs. Cooper, Liston, Quain, and Morton. *Practice for both*, £26. 5s.—BARTHOLOMEW'S HOSPITAL; *Physicians:* Drs. Roupell, Hue, Burrows, Farre, Jeffreson, and Black. *Practice*, 30 guineas.—*Surgeons:* Messrs. Vincent, Lawrence,

Stanley, Skey, Lloyd, and Wormald. *Practice*, 25 guineas.—LONDON HOSPITAL; *Physicians*: Drs. Cobb, Frampton, Little, Pereira, Fraser, and Herbert Davies. *Surgeons*: Messrs. Andrews, Luke, Hamilton, Adams, Curling, and Critchett. CHARING-CROSS HOSPITAL; *Physicians*: Drs. Shearman, Golding, and Chowne. *Practice*, 15 guineas.—*Surgeons*: Messrs. Hancock and Avery. *Practice*, 15 guineas.—GUY'S HOSPITAL; *Physicians*: Drs. Bright, Addison, Babington, Barlow, Hughes, Owen Rees, and Golding Bird. *Pupil*, for eighteen months, £15. 15s.; for longer period, £24. 4s.—*Surgeons*: Messrs. B. Cooper, Key, Morgan, Callaway, Cock, and Hilton. *Practice*, 50 guineas.

SYNOPTICAL TABLE OF HOSPITALS AND DISPENSARIES.

PROVINCIAL HOSPITALS, &c.

	Physician Practice.	*Surgical Practice.*
Bath Hospital		Dresser and pupil...... £26 5
Bedford General Infirmary		
Birmingham General Hospital	18 months .. £12 0	3 years 50 0
" Queen's Hospital	12 months .. 10 10 Perpetual.... 12 12	12 months .. 16 16 Perpetual.... 21 5
" Lying-in Hospital	3 months 5 5	
Brighton—Sussex County Hospital		
Bristol Infirmary	1 year 15 0	1 year ...... 25 0 Dresser...... 52 10
" St. Peter's Hospital	" 20 0	1 year 20 0
Bury St. Edmund's—Suffolk General Hospital. .	In-door pupils £52.	10s. per annum.
Cambridge, Addenbrooke's Hospital	1 year ...... £10 10 Perpetual ... 15 15	1 year ...... £10 10 " 15 15
Canterbury and Kent Hospital		
Cheltenham Hospital		
" Dispensary		
Chester Infirmary		
Chichester Infirmary		
Colchester and Essex Hospital		
Derbyshire General Infirmary		
Devon and Exeter Hospital	1 year 31 10	1 year 31 10
Gloucester Infirmary	" 10 10	" 31 10
Hereford Infirmary		
Huddersfield Infirmary		
Hull General Infirmary	Perpetual, £23.	
Leeds Infirmary	18 months.... 15 15 Perpetual.... 21 0	2 years...... 15 0 Perpetual.... 21 0
Leicester Infirmary		
Liverpool Infirmary	3 years to both £42 0	Dresser, 1 year 21 0
" Northern Hospital	" " 31 10	
Kent, West, Infirmary		
Manchester and Salford Lying-in Hospital		
" Royal Infirmary	3 years 15 15	3 years...... 21 0
Newcastle Infirmary	12 months to both £5 5	
Norwich—Norfolk Hospital		
Northampton General Infirmary	12 months to both 30 0	
Nottingham General Hospital		
Reading—Royal Berks Hospital		
Salisbury Infirmary		
Shrewsbury—Salop Infirmary	12 months to both 21 0	
Sheffield General Infirmary	1 year 10 0	3 years...... 21 0
Staffordshire General Infirmary	" 5 5	1 year 5 5
Stockport Infirmary		
Stratford-on-Avon Infirmary		
Sunderland Infirmary		
Swansea Infirmary		
Winchester County Hospital		
Worcester Infirmary		1 year 31 10
Yarmouth Hospital		
York County Hospital	Perpetual.... 15 15	Perpetual.... 15 15

HOSPITALS AND DISPENSARIES IN SCOTLAND.

	Medical Practice.	*Surgical Practice.*
Edinburgh:		
Royal Infirmary	1 year .. £ 5 7 6 Perpetual 12 17 0	
Surgical Hospital		3 months.... £3 3 6 months.... 5 5
Maternity Hospital	6 months £1 3	
Lock Hospital		3 months.... 1 1
Royal Dispensary	1 year £11 11	
New Town Dispensary	6 months 3 5	
Minto House Hospital and Dispensary	Perpetual £6 6	
Eye Infirmary	3 months £1 1	
" Dispensary	" 1 1	
Glasgow:		
Royal Infirmary	Fee to both for 2 years £7 7 Perpetual............ 8 8	
Aberdeen:		
Royal Infirmary	Perpetual £7 7	

HOSPITALS AND DISPENSARIES IN IRELAND.

	Medical Practice.	*Surgical Practice.*
Dublin:		
Sir P. Dunn's Hospital	12 months ... £10 10	
Meath	Perpetual to both £25 0	

FOREIGN UNIVERSITIES.

FRANCE.

ROYAL UNIVERSITY OF FRANCE.

The faculty confers two degrees, viz., doctor in medicine, and doctor in surgery. Sixteen inscriptions, constituting four years' study, are required for either degree. The candidate must previously have obtained the degree of bachelor of letters, and bachelor of sciences; must produce a certificate of both, and the consent of his father or tutor, if under twenty-one years of age; also of good moral character from the civil authority. There are five examinations for the degree of doctor, which take place at stated periods throughout the four years. The winter session begins in November; the summer session in April. Fees for the degree, £44. Foreign graduates are required to pass five examinations, and to defend a thesis. Six years' study in a foreign university ranks as equivalent to four years' study at a French university. They are also required to present the diploma of bachelor of letters and of sciences, or else the dispensation for those degrees.

The *officiers de santé* are, by the new law, to be abolished. Englishmen desirous of attending the practice of the Hôtel Dieu at Paris can obtain admission by presenting the diploma of the College of Surgeons of London, Edinburgh, or Dublin, to the surgeons. By application at the Ecole de Médecine, a provisionary card, admitting to the practice of all the other hospitals free of expense, may be obtained. Those who are desirous of graduating must inscribe their names in a book every three months; each inscription costs fifty francs, for a French diploma; if for a foreign one, thirty. The schools of medicine are open to students gratuitously, but diligent attendance is required. Subjects are very cheap, being obtained for a few shillings. This faculty possesses a library, botanic garden, dissecting-room, and a museum. The library is open every day in the week, except Thursday, from eleven to three; it is closed during September and October. The museum contains a valuable collection of anatomical preparations, specimens of natural history and materia medica, and an extensive series of surgical and other instruments. The beautiful collection of wax models of pathology has been placed in the Musée Dupuytren, at the School of Practical Medicine. The museum is open to the public every Thursday from eleven to three; to pupils on other days of the week, on presenting their cards of admission to lectures.

PRUSSIA.

There are six universities in Prussia, with faculties of medicine connected with them—namely, Berlin, Breslau, Konigsberg, Grieswald, Halle, and Bonn on the Rhine. The medical studies are pursued for four years; and during that time the students attend lectures on medicine and the preliminary sciences. The bodies of criminals, and those from the neighbouring houses of correction, supply the means of dissection. The medical students intended for the service of the army are lodged and boarded at La Pépinière, at Berlin, and the poorer class of native students are made bursars. After four years the candidates are required to print and publicly defend a dissertation in the Latin language, and to undergo an examination in logic and the above-mentioned sciences, after which they receive the diploma of doctor, the fee for which is £25. This, however, does not give them the power of practising. In order to this, they must undergo the examination in surgery, medicine, and midwifery, which continues several months; and they will be required during that time to perform operations, and to treat diseases.

UNIVERSITY OF MUNICH.—Foreigners who do not intend to practise in Bavaria, or to seek for

	Medical Practice.	Surgical Practice.
Dublin:		
Jervis-street Hospital	12 months	10 10
City of Dublin Hospital	„	10 10
St. Vincent's Hospital	„	10 10
Steeven's Hospital	„	[illegible]13
Mercers' Hospital	„	[illegible]10
Richmond Hospital	„	13 13
Dublin Lying-in-Hospital	6 months .... £10 10 In-door pupil. 21 0	
Anglesey Lying-in-Hospital	6 months .... 7 7 In-door pupil. 13 13	
South-Eastern Lying-in-Hospital	6 months .... 4 4 In-door pupil. 10 10	
Coombe Lying-in-Hospital	6 months .... 4 4 In-door pupil. 10 10	
Wellesley Lying-in-Hospital	6 months .... 6 6 In-door pupil. 12 12	
Western Lying-in-Hospital	6 months .... 6 6 In-door pupil. 12 12	
Victoria Lying-in-Hospital	6 months .... 4 4 In-door pupil. 10 10	
Cork:		
North Infirmary		6 months £5 5 12 „ 8 8
South Infirmary		Fees the same.
Lying-in Hospital	1 year £5 5	
Eye Infirmary		1 year........ £2 2
Belfast Hospital		6 months £1 1 12 „ 2 2
Limerick:		
Barrington's Hospital		1 year 8 8
Maryborough:		
Queen's County Infirmary		1 year 8 8

FRANCE.

Paris:

Hôtel Dieu Hôtel Dieu, Annexe Hôpital la Pitié „ la Charité „ Saint Antoine „ Cochin „ Necker „ Beaujon „ St. Louis „ du Midi „ de Lourcine Hospital for Children Clinical Hospital	These hospitasl are free to foreigners on presenting their diplomas or passports, with their medical titles inscribed.

Government medical appointments, may be matriculated on presenting certificates of moral conduct and of the necessary scientific knowledge, particularly in philology. To be admitted to the examination *pro gradu*, they must have studied medicine for three years, and have attended lectures on anatomy, physiology, chemistry, botany, pharmacy, materia medica, pathology, therapeutics, surgery, and midwifery. Also clinical hospitals and lectures; but it does not matter at what university they have studied. The fee for the degree is about £20, and does not include the expense of printing the dissertation. It is never conferred *in absentiâ*.

GIESSEN.—Poor students can here obtain free admission to all the public lectures by making proper application at the university. For the other lectures the fees are from six to twelve florins for each half year, according to the number of hours occupied in the delivery. After five years, candidates are admitted to examination. The fee for the diploma is £22. 10s., which is not now granted without the candidate presenting himself in *propria persona*.

ERLANGEN.—The course of medical study at this university continues for three or four years. Foreigners, on producing certificates of lectures on anatomy, physiology, &c., no matter from what university or medical school, will be admitted to the strict examination, which will be conducted in French or English. Diploma fee, £21.

JENA.—Candidates for the degree of doctor of medicine, surgery, and midwifery, must deliver certificates of the completion of the course of medical studies, of good moral conduct, the certificates of matriculation, which cost 18s.; a medical dissertation in Latin, and the fee for the doctorate, £23; with £3 more for the diploma in midwifery. The examination is conducted in German or Latin. The candidate must also defend his thesis in public, and afterwards print it.

ROSTOCK.—The course of medical study is continued for four or five years before graduation. The expense of graduation is about £27. Practitioners may obtain the diploma without personal attendance.

HEIDELBERG.—The examination is conducted, *vivâ voce*, in German, Latin, English, or French. The candidate must present certificates of attendance on anatomy, physiology, &c., and of having attended medical and surgical hospital practice. The candidate must also translate an aphorism of Hippocrates into Latin. Fee for diploma, &c., £23.

GOTTINGEN.—Regulations as Heidelberg.

KIEL.—Regulations as Giessen.

TRICKERY IN LEECHES.—The Correctional Tribunal of the Seine has just given judgment in the affair of Martin against Laurens and Vauchelet, for selling a quantity of officinal leeches mixed with spurious ones, to Martin. Laurens and Vauchelet were condemned to a month's imprisonment each, and a fine of 125 francs. They were also to pay 500 francs to Martin for the deception.

CHOLERA IN RUSSIA.—The cholera is making rapid advances in Russia. From Tiflis it has penetrated into the middle parts of the country. At Taganrock, Marianopoli, and Rostof, it has made fearful ravages. At Quart, Olti, and Tchildir, although there have been several victims, it has not been so severe as in the midland parts.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.*

Viator, Guy's, *sends us a bill which was put into his hand on London-bridge. It is headed, "Mr. Wright, Surgeon-Accoucheur, 108, Blackman-street, opposite to the Dover-road." Amongst other things, Mr. Wright informs the public that, "except for midwifery, he declines to visit, unless for a fee, having had many [illegible] that fully prove*

'Three faces wears the doctor—when first sought,
An angel's; a god's the second, when the cure's half wrought;
But, that cure complete, the doctor seeks his fee,
The devil looks then less terrible than he!'

still medicines are requisite to mankind occasionally, as will be found upon reference to the 30th chapter of Ecclesiasticus, ver. 4, viz., 'The Lord hath created medicines out of the earth, and he is not wise who abhors them.'" Truly the bill is a sad specimen of defective education.

Dr. Hector Gavin, 5, Thurlow-place, Hackney-road.—*Communication received.*

Mr. J. B. G. Tidman, Whittlesea, Cambridge, *is thanked for the information.*

Mr. J. B. Budgott, 274, Strand.—*The communication, under present circumstances, inadmissible.*

An Observer, R.N.—*The letter must stand over till next week.*

French, Higham Ferrers, *will find the information he seeks in the present number.*

Mr. J. Jackson, Long Clawson, Liecestershire.—*The communication received.*

Mr. H. Morris.—*Communication received.*

Mr. Buchanan.—*The request will be attended to.*

E. D. H., Oxford.—*We are unable to say.*

Chirurgus.—*The fact of such methods being resorted to, in order to obtain practice, is truly humiliating to the profession. We shall have an opportunity of adverting more fully to the subject.*

Justicia, Birmingham, *is thanked for his communication.*

Assistant-Surgeon, R.N.—*Communication received.*

If the writer of the article, headed "Facts in the Internal Conduct of the Royal Free Hospital," will give his name, we will publish his letter.

H. S. Ball.—*The first number of the* Pharmaceutical Times *will be published next Saturday.*

We shall make use of Mr. G.'s letter on the poor-law in our next.

Senex, *who has written so largely against the injustices of a union with which he was connected, would have done the cause much more service by appending his name.*

A Pupil.—*The school of Mr. Dermott in Bedford-square will be continued, and, as far as we can judge, most efficiently. It deserves the more professional support, inasmuch as the widow—who has been left quite unprovided for—has an interest in its success.*

Other correspondents next week.

Letters and communications have been received from Dr. Veitch, Galway; Mr. Phillips, Hales Owen; Mr. Stobo, Tortola; Mr. Abbott, Bray; Mr. Tulloch, Fortrose; Mr. Costello, Portsmouth; Mr. Moyle, Chacewater; Mr. Stephens, Merthyr Tydvil; Mr. Mennie, Plymouth; Mr. Edwards, Liverpool; Mr. Foster, Birmingham; Mr. Brazier, Rye; Mr. Kershaw, Southport; Mr. Astley, Edinburgh; Mr. Kirkbride, Penrith; Mr. Rigg, Greenford; Mr. Halyoake, Manchester; Mr. Clisby, Hitchin; Mr. Malins, Chipping Norton; Mr. Simpson, Creetown; Viator, Guy's; Dr. H. Gavin, 5, Thurlow-place, Hackney-road; Mr. J. B. G. Tidman, Whittlesea, Cambridge; Mr. J. B. Budgett, 274, Strand; French, Higham Ferrers; Mr. J. Jackson, Long Clawson; Leicestershire; An Observer, R.N.; H. S. Ball; Senex; A Pupil; Mr. H. Morris; Mr. Buchanan; E. D. H., Oxford; Chirurgus; A Constant Reader; Justicia, Birmingham; Assistant-Surgeon, R.N.

THE MEDICAL TIMES.

SATURDAY, SEPTEMBER 25, 1847.

INCOME TAX AND MEDICAL MEN.

"You'll be whipp'd for taxation one of these days."—SHAKSPERE.

We should very much like to know what Parliament and its tailpieces are intending to do with that precious iniquity the INCOME-TAX! If the ordinary run of events continue as aforetime, the period will shortly arrive ● the walls of St. Stephen's to bear witness to the usual farcical phenomena yclept legislation. All the old pantomimic tricks within doors will come into play again with an air of freshness and pleasantry quite enchanting. Gentlemen of all ages, and of every variety of stature, both bodily and mental, will congregate together to play at dignity, and superintend the working of the machinery of the State. Some, in that expressive gravity of phiz which becometh senatorial wisdom, will bend their mighty minds to the task of telling the rest of the world how they must behave, and what they must pay; whilst others, treating life and all that appertaineth thereto as a capital joke, will fill their several offices in the State vessel with an air of jollity worthy any jack-tar in the service. The usual amount of personalities, complimentary and the converse, will have to be gone through with proper variations. The aforesaid ship will occasionally be treated to a bit of delicious quietude, or, in plainer phraseology, will be allowed to make no head at all; whilst certain honourable gentlemen are engaged in telling their parliamentary similars what very fine fellows they are, and how desirable it is that the world should be made acquainted with the fact. The flattered gentlemen will then have to look as modest as if merit were no part of their constitution; and, whilst doubting their own claims to the praises lavished on them, swear there is no doubt at all about these said acceptables being abundantly due to their honourable friends on the right and the left.

Then, by way of variety, sundry little tempests will be kicked up by sundry little nobody M.P.'s, who think the best way of becoming popular is to affect to be pugnacious. "Armed to the teeth" with that sort of ferocity which represents anything but courage, and ticklish on certain points of honour which are connected with anything but virtue, one of these verbal belligerents fancies somebody opposite has said or done something personally offensive, and hurls the insinuation at him in a tone to which an ordinary tempest is a zephyr; whilst the suspected party, with a you're another sort of a scowl in his face, makes a reply in the most martial and unmitigated style imaginable. Snarls and snaps then become the "order of the day," until the principals receive the aid of other wordy warriors, who encourage them to proceed, and of certain anti-pistol-and-prize-ring men, who beg them to desist. They continue the farce, however, until they have fully illustrated that old adage suggestive of "one frightened and the other durstn't," and then they discover that they have both been mistaken, and, after smiling blandly and shaking hands, subside into a calm that is about as much allied to bloodshed as the original threats were to the probability of fulfilment.

Then there are certain other gentlemen who, neither possessed with modesty to keep them quiet, nor with ability enough to make their exertions desirable, are yet determined to do something, though, like Lear, they are not quite sure what it will be. They ask leave to bring in certain bills, the passing of which is about as likely as necessary; but, the courtesies of the "first assembly of gentlemen in Europe" not being denied to even the most insignificant of their number, permission is granted, of course. Then comes the struggle between the senator and the scheme he has got in his head, for raising on his own behalf a blaze of parliamentary triumph. Intense is the anxiety, and killing the effort, for getting the items of this said scheme fairly into letter-press. This at last is done: the parturient throes are over, and the produce is a *mole*. The conception was a false one, and abortion was the result. In the hope of "better luck another time," the father of the piece of failure covers it up and carries it off, with the gratifying promise that on a future occasion he hopes to be able to present them with another specimen of his vigorous paternity.

Now, we do not complain of innocent recreations like these when nobody is concerned in the absurdity but the perpetrators of it. The affair, however, takes a very different complexion in the fact that those who are in front of the scenes have as great a stake in the performance as those who are behind. The good or bad deeds done upon the stage of Parliament are equally felt wherever the influence of that Parliament extends. Men may trifle with their own time, and be prodigal with their own purses, but they have no right to take similar liberties with these said properties of other people. When a set of officials meet together, with the country's approval, for the duties of legislation, they ought to keep an eye upon the necessities of undivided duty. But obligation, and the performance thereof, are sometimes very different things, as the history of the House of Commons not rarely illustrates. Representatives may compliment one another, or quarrel with one another, or even go the almost impossible length of fighting, or may play at framing bills in the absence of the better business of paying them—they may do all these things, and as many other such as they like, but it must be out of school hours. We have an objection to any such Tom-foolery occupying time and attention that ought to be devoted to other objects. Faith, there is enough for ministers and members to do, if they would only do their duty! We throw out these hints for their especial service, preliminary to next session: we hope then to find them as steady and industrious as they ought to be. To prove that they are really so, let them reverse the good old plan of one ministry improving upon another by increasing taxation. Just let them try for once, if it be only for the novelty of the thing, if they cannot take a tax off, instead of putting one on. There is a great bugbear at once to try their strength at—that offensive, inquisitorial Income-tax! Why it was ever imposed, nobody can tell; and why it has been so long submitted to, is as great a mystery. It produces a larger income than the Property-tax of Pitt—rendered necessary by a disastrous war, which we have not seen the semblance of for years. There is no authority whatever for the continuance of an impost like that Income-tax, and we invite the whole press to aid us in putting it down. Upon no man does it fall so heavily and hardly as upon the medical man, in whose behalf we are determined to use every effort to get the nuisance abolished. Let the organs of other parties, and the press generally, do the same, and the offensive plague will soon be stayed. A succession of shots will bring it to its proper level in the dust, like a dirty thing as it is.

Somewhere in the East, in a certain valley, is a monument, said to have been erected to himself by a king's son, named Absolom, notorious for certain acts of infidelity and undutifulness. At this monument every passer-by casts a stone, in contempt of the individual to whose memory it relates.

The solitary shocks are nothing, but their succession is a cannonading which the structure fails to resist. Slowly, and by piecemeal, it crumbles under the indignity of the several pilgrims who level at it their missiles, and erelong will be hurled the last stone which shall find a mark for scorn to aim at. Let us take a lesson from an Eastern custom, and see if we cannot, with a different weapon, batter down a different nuisance. The Press is the power of this kingdom; let it turn its mighty energies against the evil in question, and the Income-tax will soon cease to exist. For ourselves, it is of little concern how the monster is to be moved; "castigat ridendo mores" is a motto that has "done the state some service," and, in accordance with it, the fun may not be amiss of trying to laugh the evil down. Let every man, or every set of men, when the opportunity serves, whether in high places or low ones, give the impost a regular cachinnatory greeting, indicative at once of its impertinence and absurdity. Let ridicule be thrown upon it by wholesale, and by common consent, and see whether the dirty bargain cannot be shamed out of the hands of the wily authors of it. Moreover, let every man provide himself with anecdotes, names of course omitted, illustrative of the various means by which the imposition is to be evaded. Here is one amongst many that the writer of this article could give. He is physician to an institution which used to pay its resident medical officer one hundred and fifty pounds a year. The man was worth double the sum, and would have had it, but the institution was poor. So was the house-surgeon, for he had a wife, and on the sum aforesaid he could barely manage to live in the manner becoming his station. But the charitable income-tax came to help the poor hard-worked fellow out of his difficulty, by taking the best part of a five-pound-note out of his yearly hard earnings. So the managers took a step in advance of the generous income-tax. They reduced the surgeon's salary to one hundred and forty pounds a year, and gave his wife the odd ten for a Christmas-box. Which was the robbery—the impost or its evasion? Ask the poor fellow's poverty and industry, and you will find a ready answer! How many are there in our profession realizing not more than three guineas a week, and compelled to live at the rate of four, whose delicate family and business secrets are pryed into by impudent officials, as extortionate as any Jew on 'Change! A sad tale, indeed, it would be were every item of overcharge for income against the medical man made public! Many have been the convictions for petty larceny on terms more excusable.

If laughter and ridicule will not avert the abomination, let us try the opposite reasoning. Let it be shown to Government what are a medical man's difficulties in the outset of life—how necessary to success is a concealment of the want

of it—how poor is his remuneration at the best—how much he does for a little recompense, and how much more he does for none: let these things be related, and supported by petition, and presented in due form to the makers and managers of our laws. Such a course could not be without its influence. We know from various communications how severely the tax in question is felt, and by those least capable of bearing it and therefore we urge a speedy and energetic movement for its removal. Let the profession act in concert, and the evil will be overthrown To that desirable end we will gladly contribute our best efforts.

THE NATIONAL INSTITUTE.

It is a satisfaction to us, considering the advocacy we have given to the National Institute since its formation, to find that it advances in professional favour, and is now firmly established. We nursed, or aided to nurse, it with solicitude during its early days of tentative struggling infancy; and we are now rejoiced to see, from the tenor of the resolutions published in our advertising columns this day, that it feels self-confidence enough to advance its step with the vigour and decision of approved and conscious manhood. It stands alone:—it repudiates all extraneous support, save that which it derives from public opinion—the only source of strength to a voluntary body. Doubtless, the old institutions look on with a jaundiced eye, and envy the sturdy vigour and bold carriage of the society they had flattered themselves would be strangled by a convulsion, or would perish as surely, though more gradually, by exhausting inanition. These bodies unquestionably recognise a rival, and, if the Council of the Institute work with zeal and discretion, it will not be long before they also confess a victor.

It will be seen, on perusing the advertisement, that the National Institute reminds the Society of Apothecaries of its duty to its licentiates—a duty which the Society has shown a desire to evade, by throwing the odium of conducting prosecutions against illegal practitioners upon the individual licentiates. We trust that this remonstrance from the Council of the Institute, upon a subject so deeply interesting to every member of the profession, will have its due effect in rousing the Court of Assistants of the Society to a sense of their responsibilities. The members of the profession ought not and, so far as we have the power, *shall* not be swindled out of their money by false pretences of protection which it is never intended to grant them; and the Society of Apothecaries, or any other corporate body, shall not shuffle out of the performance of its duties by any special pleading or apologetical deprecations which it may choose to offer.

The Society of Apothecaries holds up its hands and, facetiously enough, beseeches forgiveness for its remissness, by a declaration of its poverty, while it is probably receiving four or five thousand pounds a year for the privilege of conferring licenses under the obligation of granting due protection to the holder which, having received the money, it declares itself unable to afford. Where does the money go? Upon whose fingers does it cling? We approve of services being rewarded proportionately to their deserts: *but where is the balance-sheet?* The profession must inquire into these matters: it must have full information upon them, or they must terminate. The functionaries of the Society may not, for aught we know, be too liberally rewarded; if this be the case, why do they not justify themselves by publishing an annual balance-sheet? Nothing but publicity can save the character of any society in these days of inquiry and public enlightenment: it is a condition that must be complied with, or suspicion, ill will, and hatred will track every act, and undermine and destroy the fairest fabric that was ever built. Publicity implies responsibility, and responsibility self-government; and this is the springhead of all *good* government.

Our columns have recently demonstrated the strong feeling that exists among the members of the profession in reference to the inertness of the Apothecaries' Society; and this body may feel assured that, if it allows this feeling to gain strength and to spread very extensively, it will lose all the credit that it has hitherto claimed and received on the ground of its educational discipline, and that, when the time arrives for remodelling the profession, the members will spurn its co-operation, or, at the best, employ it as they would any other unclean thing whose services may be necessary—with *disgust.*

We have understood that the first meeting of the new Council of the Institute for this year was largely attended, and exhibited much cordiality and confidence in the issue of the cause. There can be no doubt that the bold stand made by the Council against the Registration Bill introduced into Parliament by Thom. Wakley had commanded the respect and reliance of the provincial practitioners, and was mainly instrumental in collecting so large a meeting. We must not forget, also, in estimating the causes of this renewal of interest, the infusion of new blood by the system of election adopted. This periodic introduction of new members cannot fail to maintain an interest in the affairs of the institution, and to give it that vitality, heartiness, and vigour which the decrepit constitutions of the older bodies can neither feel nor receive. It would be useless to put new wine into old bottles: a corpse may be galvanized, but it cannot be reanimated.

The regeneration of the profession is, as we have often told them, in their own hands. Nothing but manliness of assertion and a courageous vindication of right ever yet achieved it, and we are loath to believe that the discrepancies of opinion upon minor points have so far distracted the councils and enfeebled the resolves of the profession that they are incapable of vigorous and honourable action. The profession may rely upon it that another session of Parliament cannot transpire without witnessing another struggle between the advocates of progress, science, and justice, and the jealous bigots and greedy cormorants that fasten upon all the honours of the profession and devour all its emoluments. Even these men would feel happier if the struggle were terminated against them, and they were reduced to their proper level in a new organization. The various vibrations and convulsive efforts which they are obliged to make to sustain their equilibrium in the midst of the jostling, the home-thrusts and the by-thrusts which they receive on every side, must make their possession of arbitrary power as burdensome to themselves as it is hateful to the profession.

THE NATIONAL CONVENTION OF POOR-LAW SURGEONS.

We announce with great satisfaction that the proposal of a general Conference of Poor-law Surgeons has been met with a general and cordial support. In carefully looking through the mass of correspondence with which we have been favoured on this exciting subject, we have encountered but one instance of dissent or opposition. The writer in that case, who is not a poor-law surgeon, bases his protest against a "convention" on such indifferent grounds that they rather add to the force of our appeal than detract from it. The letter is thus worded:—

"Sir,—Ever since the new poor-law has come into operation, the medical public have from time to time been appealed to, by statements of the grievances under which the union doctor groans, in the shape of the arduous duties he has to perform, the inadequate remuneration, and the occasionally offensive conduct on the part of the guardians and the poor-law commissioners. Two letters have lately appeared in your journal from 'A Medical Practitioner,' on the subject of the payment and the duties of a poor-law union doctor (no very respectable title, by the way). Now, Sir, let us inquire how the matter stands between such a person, the public, and the profession, under the present system; and who is to blame—whether the poor-law commissioners, the guardians, or the profession? My opinion is, the only party to blame is the profession. What will be the use of your National Institute? What is the use of your Provincial Associations, or, indeed, any association, if the profession will be traders and cease to be gentlemen? If a man has no respect for himself, does he expect the world will respect him? If he does he will find himself egregiously mistaken. What can justify a man making a greater charge to his private patient than to his public one, bearing in mind the different circumstances of parties? If there is to be any difference, let it be the act of the practitioner, and not be forced upon him. Have not the medical practitioners estimated their own worth? Have they not put their own price upon their services? Have they not degraded themselves? No man who accepts an appointment under any system has cause of complaint; he does so with his eyes open. On the first formation of the unions, did he not contract for his services? Did he try to undersell his neighbour? Did he not tell the world all his former arrangements under the old system were based in cupidity, by accepting the contemptible offers under the new? Then, what right has he to complain, or to call upon his professional brethren to assist him, when at last he finds out he has all along been doing an injustice to himself and them? I think the profession will be most consistent in scouting such complaints for the disgrace the union doctor has brought upon them. Why did he accept the terms he now complains of? He was not forced into it; and if he made an improvident bargain he has himself to blame for it, and has no right to call upon the profession to uphold him: it is by such conduct as this the impudent junta in Lincoln's-inn-fields have dared to insult the profession in the manner they have done: for they believed the general practitioners were all alike (the union doctor a specimen of the whole); and I do hope the respectable part of the profession will not respond to the call of the 'Medical Practitioner,' but let him fight his own battle. I have much more to say upon the subject if the M.P. makes any further appeal.—C."

In much that C. offers us, in relation to the past, we are forced to concur: there is no doubt that there is something to complain of, and more to deplore, in the ready way in which the profession has by one agency or another been made to lend itself to the iniquities of poor-law parsimonies. But the remedy is surely not to leave things as they are. If an amendment be desirable, nay necessary, action is imposed on us as a duty; and we know of no *better*, no *safer*, no *surer* machinery for accomplishing a truly beneficial change than the aggregate deliberations, in

one convention, of all the men who have suffered by the grievance, and know both in theory and practice the whole character of its operations and tendencies. If they accomplish the change which lies in their united power, they win a professional amelioration by which, directly or indirectly, all their brethren will be bettered; and no feeling of jealousy or vindictiveness should prevent any of us from holding out to them, in their really interesting struggle, the right hand of sympathy and good fellowship.

Another of our correspondents sends us a suggestion worth a thought:—

"SIR,—Observing from this week's number of your *Times* that your valuable proposition for a Conference of Union Doctors is likely to take effect, I beg to trouble you with one remark, which is, don't you think Birmingham would be a more desirable point than London? The expense would fall heavily on those who reside in the northern parts; for instance, myself: I have only £10 per year for a very extensive district and arduous duties, and I should be very glad to put my shoulder to the wheel and assist to the utmost of my power to extricate myself and my oppressed brother practitioners at such meeting. Hoping you will continue to press the necessity until you obtain the object,

"I am, Sir, yours much obliged,
"A POOR-LAW MEDICAL OFFICER.
"West Derby, Sept. 21."

We are aware that Derby and Birmingham have been more than once recommended for professional meetings on the score of their centrality, but we doubt the justness or superior policy of the suggestion. London is the true centre of England: all men's business and affections converge there. An eighth portion of the English population inhabits that comparatively small area: it is the centre of government, art, science, commerce, and law; and there is scarcely a respectable person in society who cannot profitably as well as agreeably give two days to the sights and friends and business of the great metropolis. It is also most easy of access. Wherefore we hold that London is of all places the best point for a Convention of all English Union Surgeons.

We must solicit forgiveness if, out of the many letters we have received, we can give publicity to comparatively so few. The following is, however, so good itself, and comes from so good a source, that many of our correspondents will be content to have it taken—in connection with those published in other columns—as fair specimens of their intents and wishes. It is from a gentleman who has highly distinguished himself for the zeal and ability he has frequently shown in this cause:—

"SIR,—The poor-law surgeons owe you a debt of gratitude for the part you are taking. I quite agree that a meeting ought to take place as soon as possible, and, if any gentleman will undertake the office of secretary, I undertake to attend, and induce all I can to do the same, and at all events will collect the opinions, &c., of those who live in my neighbourhood. I would suggest that each union should have a meeting, and appoint a delegate to represent its opinions, and to take with him the needful information as to population, acreage, salary, &c.: for I quite agree with your correspondent, Mr. Prankerd, that a fixed rate per head on the population, taking into consideration the acreage and poverty of the different districts, is the only plan that will give satisfaction to the doctors, paupers, and rate-payers.

"I am, Sir, your obedient servant,
"W. CANTRELL, M.R.C.S.,
and POOR-LAW DOCTOR.
"Wirksworth, Sept. 22."

With such cheering indications of general sympathy and concurrence, there can be as little doubt of the practicability of a *most successful* Convention of Union Surgeons as there has been all along of its expediency. There should be no delay: the sooner some gentleman—why not Mr. Cantrell?—sets himself in communication with every union surgeon the better.

THE NEW SESSION.

THE London machine of Medical Education is again about to be set in motion. The annual work of doctor reproduction is again recommencing. While wishing the affair well, the confession is extorted from us that the process is more respectable in results than in essence. The *schools* are too many for their work: the *lecturers* (several at least) below it: and the *students* too often have both disqualifications. Yet it is in in this way, in the nineteenth century, that we form authorities in whose hands are to be the issues of life and death!

We have heard of many curious parliamentary returns of late: if the inquisitorial principle might be extended, the world would be amused to find the ratio, both in numbers and quality, in which of late years lecturers have stood to students. In *numbers* our metropolis lecturers would unquestionably have the advantage: how far they would aggregately deserve it in other matters is a point on which, luckily for them, we are not compelled to express an opinion.

Yet, with this droll state of matters, we have in London one medical university and three medical colleges. They are legalized, endowed, and supported to prop up medical education: ask them in what way they accomplish their high destiny, and they respond, "We examine those who pay us!" Ay! They *examine!*

There, however, the system is, and, while burdened by it, lecturers and students have nothing for it but to extract all the utilities it may offer: the one by securing fees and credit; the other by imbibing knowledge and experience. The lecturers know so well how to look after their concerns, that we need offer them no apology for devoting a caution to the students alone.

The young man, when he first takes up his residence in the metropolis, is exposed to many temptations, and he is, perhaps, not in the most advantageous position to resist them, just having escaped from authority, which, probably, had been considered irksome. If, however, time is to be improved, temptations must be resisted; and he who is most diligent at his studies will be the most likely to avoid present temptations, and be the most useful in after life. It is a complaint universally made that, while professional knowledge is making progress, there are yet too many amongst us whose education is defective. The present race of students should endeavour by all means to render themselves especially worthy of an exalted station in the medical commonwealth. Zeal, diligence, self-denial, and courage are requisite here, and he who is not prepared to exercise them had far better now, on the very threshold, give up the idea of entering the ranks of medicine. As we shall in succeeding numbers continue this subject of medical education, we shall now merely add that the student should bear in mind that he is now to store his mind with that knowledge which shall make him *useful* in after life, not with that which will be merely sufficient him to obtain a diploma.

Our friends, the students, will find that in the very complete guide we have prepared for them, we have omitted the regulations of the University of London. These are of so much interest in connection with reformed medical education, that we have preferred to wait another week in order that we may give them in full, with that commentary on them which their partial excellence, no less than their partial faultiness, calls for.

MR. DERMOTT.

POOR DERMOTT—plain-spoken and persecuted man—has passed from us, to be evermore beyond the reach of the ireful and wicked. Thinking of their sad arts, and sadder acts, one may *rejoice* at our loss—for with such a life Fortune could have meant him no favour but her *last*. There alone could he hope escape from the troublings of the wicked, and for rest to the weariness of a sad life through!

The career of Mr. Dermott had been cast all through on the shoals and shallows of adversity. Endowed with the qualities of fair talent—great industry, and energy, and temperance—everything the profession had lying apparently open to him—he made no progress in social position, and died as poor a man nearly as on the day he commenced life. The most devoted and one of the most successful cultivators of his science, a mysterious, invisible barrier seemed yet to uprear itself between him and surgical eminence, and an industry of continuous years that would have made him a fortune in any other calling supplied him but at most, and this through years, with his daily bread! In truth a life so useful to others was never so useless to its possessor. The ceaseless activity of a richly-adorned organism was as ill-fated as a very nullity. He has left neither name nor fortune, nor offspring; and, except for his pupils and books, he is as though he had never been!

Mr. Dermott was the son of a medical practitioner of that name, practising for some time in Northamptonshire, but who afterwards left medicine, and entered into holy orders—becoming in the sequel distinguished for his zeal, eloquence, and piety. He is still remembered by his brethren of the Wesleyan Establishment, as a gigantic labourer in the vineyard. His surviving widow arrived in time to see her only child, and one of his oldest friends saw her bending over his emaciated and worn-out frame, ejaculating in the convulsion of grief, "Poor fellow! they have worked him and fretted him to death." Indeed she spoke truly, for never did anatomical teacher work harder—never did one ever so completely fret and gnaw his heart bit by bit—under contumely and injustice!

In following his studies in London, the son became a favourite pupil of Mr. Brookes, and, during this celebrated man's dying illness, supplied his place for six months in the lecture-room. Before his examination at the College of Surgeons, in 1822, the young Dermott derived no inconsiderable pecuniary advantage from his private teachings; and, after that event, he appeared more publicly in connection with a school which he opened in Chapel-street, Wardour-street. The site of the school was changed, first to Great Pulteney-street; then to the Westminster Dispensary, Gerrard-street; and subsequently to Charlotte-street, Bloomsbury, where it remained till 1845, when the Commissioners of Metropolitan Improvements compelled him to dispose of the lease. He then removed to Bedford-square, the scene of his last labours and sufferings.

His health had been failing during the last

three years. He had long been subject to stricture, followed by thickening of the bladder, and had suffered more than one dangerous attack of retention. Latterly, disease of the kidneys made itself felt, and caused him considerable sufferings, which were increased by mental anxieties, caused partly by the conduct of the College of Surgeons, and partly by a curious litigation in which he had become involved through a perverse chain of circumstances. In the year 1843, when the new charter had been given to the College of Surgeons, a medical committee, subsequently known as the Medical Protection Assembly, was formed through the exertions of Mr. Dermott, Dr. Lynch, Mr. Simpson, and a gentleman attached to the staff of this journal. An act of the very basest treachery having transferred the destinies of the "Committee" to the exclusive control of Mr. T. Wakley, Mr. Dermott, resisting tempting overtures and formidable threats, adhered faithfully to the independent principles on which the committee was founded, and to the person through whose aid the body was principally established. Though it was made, in one sense, well worth his while to imitate the conduct of his friends and subscribe to false declarations, support outrageous resolutions, and break closely-bound ties of honour and gratitude, he set his face manfully against the wrong, and among the faithless was found another "Abdiel." He both spoke and wrote against the evil-doing, and at length wholly withdrew himself from the men who were debasing themselves and dishonouring a good cause. His independent conduct, of course, won him bitter hate, and the journal known as "The Lancet" was naturally made, as far as it could be, the instrument of wreaking it. It was while these attacks were going forward that Mr. Dermott gave his students and friends a sessional *fêet* about the month of April, 1845, in the course of which a student, who had become intoxicated, behaved in an outrageous fashion, and, when remonstrated with, replied by bellowing out accusations against the lecturer of the school, and boasting that he had been sent into the school by Wakley as a spy, and that he would ruin Mr. Dermott. The man was removed from the room, given into custody, and finally was expelled from the school. The self-styled "spy"—it is needless to say—used these circumstances to harass his master by actions for false imprisonment on one side, and for the return of the school fees on the other; and these legal wrongs were, of course, industriously seconded by consecutive attacks from the literary ally—the *Lancet*; and, when it is recorded that a person actually lecturing with Mr. Dermott (a member, we need not say, of our unfortunate profession—Dr. T. Smith) thought there was nothing ungentlemanly or dishonouring in continuing the responsible editor of the very journal that was thus weekly injuring his benefactor and brother-lecturer, it is not difficult to see that Mr. Dermott's malady became as much moral as physical, and that in this and similar circumstances there were agencies at work that gave disease a fatal advantage in a struggle wherein, even with the calmest mind and the best regulated body, nature has often but too much to contend with.

For some time previous to his death, Mr. Dermott was under the able treatment of Mr. Stafford, who, when he found the case assuming a more serious aspect, suggested the attendance of Dr. Prout. An attack of dysentery having supervened, opium was freely administered: vomiting followed, accompanied by extreme feverishness and a marked deterioration of health, which led Dr. Prout to form the worst prognosis. The patient sent for his old friend and fellow-labourer, Dr. Collier, on the Thursday, three days before his death, who had the melancholy task of confirming the opinion already given of his approaching dissolution—a death which Dr. Collier had prognosticated to many, at the period of Mr. Dermott's acute suffering under the public insult and indignity offered to him by that corporate body whose business it ought to be to nurture and encourage, not to assassinate, talent and industry.

On Sunday, the 12th instant, up to which time he had preserved a self-possession and consciousness rare in such cases, he breathed his last, dying of Bright's disease of the kidney, in his house in Bedford-square, in the 45th year of his age.

Dermott died of renal disease: true: the event is so described in the cemetery record, and posterity will find it so chronicled in the books of the Registrar-General; but he died the martyr of science none the less for that. With a kinder star in the study he worshipped, and happier accessories in the *confrères* he lived with, he might and would have lived many a year more with distinction to himself and usefulness to others. He was an honest, worthy, valuable man, and he knew it: he was ill used there, where he had staked his all, and he knew that too: *this* was the disease that killed him. He bore about him the undying sense of ill usage and contumely: the rulers of his science had set the mark of disparagement on his brow, and in the world there was a ready fool to give credence to the falsehood. Injured and chafing, outraged and fretting, disappointed and wincing, there was a fever of soul kept up within him, through years that wasted away the sap of life and left the frame without resources or refuge when the hour of trial came. Dermott died of natural disease, but he died still the martyr of an abused science.

The surgical council, in excluding Dermott from their body, and in the still grosser act of omitting him from their list of fellows—a miserable use of a most miserable piece of patronage—were the more execrable in their worse than Fulvian cruelty, because of all men breathing he was the man most devoted to anatomy and surgery. He lived and breathed, and thought only in the narrow circle of his science. He was an anatomist and a surgeon—beyond that, nothing. He neither wrote nor spoke of any other subject. In the best sense of the terms he was a "specialist" and a "pure." Astley Cooper—save one, the *only* gentleman, and *almost* the only *surgeon*, the council has known among its members—rated him as a friend and consulted him as an authority; but the intriguing clique of half-educated and under-bred persons forming the baronet's colleagues turned up their noses at the strange honesty and stranger unpretendingness of that *rara avis* in "pure" surgery—a man that knew his business—and would not allow, indeed they could not afford to allow him, the collegiate position his scientific claims so much outmerited. Being neither a pretended gentleman nor a pretended surgeon, what claims had *he* to office? none, certainly none. In place *there*, he would have been out of place indeed! a good elucidation of the misfortune, in modern chirurgical science, of being "pure" in more than name, and "surgeon" in more than official appointment!

As a teacher, our lost friend Dermott was a model of punctuality—regularity—system. For twenty years he scarcely ever omitted a lecture, and when he did he felt it of his honour to make full restitution for the lesson withheld. During the last session he was often seen in the lecture-room when prudence would have commanded his confinement to a bed; and in the coldest days, with disease more than troublesome, daily was he seen doing his vigilant duty in the dissecting-room. The bread he ate be earned—the engagements he made he performed;—how, then, find a friend in T. Wakley, or colleagues in the Council? Under severe wrongs he did a hard duty, which these wrongs made harder. He died beneath the burden.

The style of his lectures was peculiar and characteristic. He was fond of familiar illustration, and not opposed to a humble, if harmless, joke. He imparted knowledge, not elegantly, nor learnedly, but well, and scientifically; brief and interesting enough for the philosopher, and plain and intelligible enough for the simplest and dullest-minded pupil. He knew his subject—said what he knew—and *taught* what he said. Nobody could, or ever did, make anatomists quicker or better.

As an author he has done little. He was no discoverer, and he had neither rhetorical cleverness nor inclination to occupy himself in dandling about, in new attitudes, the bantlings of other people. The only works we owe to him are—

1. A Treatise on the Arteries.
2. A Manual on the Bones.
3. An extensive Series of Plates, from Dissections.
4. A clever paper on the Reflections of the Peritoneum.

His practical acquaintance with medical government had not, it is needless to say, increased his reverence for the system; and this subject, therefore, won from him many a contribution through the journals, especially through the *Medical Times*. Writing always publicly—his signature attached—he was not the less bold in his onslaughts; and in a homely, forcible, and, though unslovenly, yet accurate style, the public has received from his fertile pen manly denunciations of most of the follies and misdeeds which have increased the need or lessened the chances of that Reform he so ardently desiderated.

His devotion to the cause led to his identifying himself, to some extent, with the *Medical Times* in its infancy, and before it came into the hands of the present management; and to his subsequent attempt at medical journalship, in the shape of the *Medical Record*. If zeal, and earnestness, and energy could suffice to secure success in medical literature, the *Medical Record* might have been still an entity; but Mr. Dermott found after a few months, like others subsequently, that the qualities in which he surpassed his rivals—of whom we were the most friendly—were so few and unimportant, compared with those in which he was matched—that his enterprise might absorb a fortune, without yet establishing a journal. He early, therefore, abandoned the unfortunate project.

The personal appearance of this honest anatomist is so well known to the thousand students whom he fitted for practice, and the many medical men with whom his long surgical career brought him in contact, that we may dismiss it with a very brief recapitulation. In height he was about five feet ten, bulk and shape showing therewith good, though not elegant, proportions. An average-size foot—plainly shod; black trousers, no way remarkable for either "style" or vulgarity; a blue body-coat, closely joined by the intermediation of bright brass buttons; a hat, worn somewhat jauntily; a fair-sized stick in the hand; a large wolf-looking dog hanging on behind; a cool, negligent, devil-may-care sort of ambulation, such were the outward and visible circumstances of the man that won our observation the first time we encountered him about five years since near Covent-garden. Closer acquaintance showed him to be all these symptoms indicated. He was natural, manly, and independent. He cared for nobody, confided in few, and looked up to none. He formed a rapid judgment on everything, and in most of his convictions there entered as much feeling as reasoning. He felt more strongly than he thought, and, in medical politics, was more for action than investigation. He rarely squared himself by the opinions or feelings of others. He accommodated himself to nobody's hobby, and took off his hat to nobody's prejudices. His doings were after the standard of what was right and expedient in his own mind and heart, and he went about them as if the conflicting predilections and prejudices of an artificial society had neither sway nor existence. He thought them nothing, yet they often stood in his way like brass walls. In short, though practising at times a rude diplomacy, he was thoroughly natural; and, though subject to weaknesses of temper, as of character, thoroughly good.

Phrenologically, or after the teachings of Lavater, there was little offered calling for remark. The head, covered with a half-reclaimed growth of plentiful hair, was full sized, with no

remarkable anterior development; the face, a good-looking aggregation of sufficiently plain features, was in keeping with the configuration of the head; and all, while giving assurance that there was a decided and not commonplace character in the possessor, left spectators without the impression of any extraordinary powers beyond those of energy and good sense.

Dermott was the last of the great anatomical teachers: the school of the Hunters, the Brookes, the Carpues, and the Dermotts expires in him. He was truly "Ultimus Romanorum."

DEATH OF MR. DERMOTT.

[To the Editor of the Medical Times.]

SIR,—Having read in your Obituary of the death of my friend, George Darby Dermott, recorded as though he had died in the ordinary course of vital deterioration, I think fit to perform a public and private duty, by announcing to the profession that my friend solemnly assured me that he had been assassinated, and that he was suffering a lingering death from the wounds. Should his early friend, the coroner, or the officers of Lincoln's-inn, call an inquest, I shall be glad to give my evidence, and to name the parties. Sir, your humble servant,

G. F. COLLIER.

32, Spring-gardens, Sept. 23.

A CHART OF CHEMICAL ANALYSIS.

The PHARMACEUTICAL TIMES celebrates the first anniversary of its successful establishment by the gift to its subscribers of a very beautiful and complete Chart of Chemical Analysis. The first number of the new volume will be published on Saturday next: a good opportunity for securing, with the two cheapest volumes published in Christendom, a title to this useful present.

The magnificent course of lectures by Müller (illustrated by more than 500 highly-finished engravings), combined with the attention which this journal pays to every department of chemistry and pharmacy, makes it at once interesting and valuable to medical practitioners, and, indeed, to all cultivators of science. The demand for the work, indeed, has been so great as to necessitate the reprint, already, of several numbers. The subscription is the same as to the *Medical Times*, which it resembles in size and form.

Our readers will oblige us by promoting the extension of this journal: they will find that, while well worthy of its cost, it will do honour to their recommendation.

MEETING OF POOR-LAW UNION SURGEONS.

[To the Editor of the Medical Times.]

SIR,—I am delighted to find that you have wielded your powerful pen against the present system of poor-law medical relief; I and many others are very grateful to you for it. Your able leader of last Saturday has aroused me to a due sense of our many grievances; I am, therefore, induced to suggest the following hints for the consideration of my professional brethren, in the hope they may give the matter their most serious attention.

In the first instance, meetings should be held in every union in England and Wales, of the medical officers, and the aid of other medical gentlemen solicited; secretaries appointed for each union; resolutions framed and adopted; memorials drawn up and presented to every board of guardians, containing a temperate statement of our grievances, and of the justice not only of our claims, but of the claims of suffering humanity. Duplicates of such memorials should in every case be forwarded to the poor-law commissioners, and, if it be competent for Parliament to deal with the question, deputations should wait on the members of the House of Commons in their respective districts, enlisting their aid in our cause.

I think, by these simple means, we should stir up a pretty considerable agitation throughout the length and breadth of the land, and would pave the way for a general conference in London, which should be held soon after; and we should never allow the matter to rest until we are completely emancipated.

If only a dozen gentlemen would meet in London, and form a nucleus for a society, and publish an account of their proceedings, I have no doubt they would soon meet with a quick response in the provinces.

I remain, Sir, yours very respectfully,

A PROVINCIAL MEDICAL OFFICER AND CONSTANT READER.

Sept. 17.

UNION SURGEONS AND THEIR SALARIES.

[To the Editor of the Medical Times.]

SIR,—The list of poor-law medical salaries in your last number has positively made my mouth water. Why, they are magnificent. I served this district for the first five years after the formation of the Spilsby Union for £19, and the population by the last census was 3018. My salary is now £29, having been increased in 1842. I have not thought it worth my while to register all my doings; I have trouble enough without. You will see that my *augmented* salary is less than half that of some of the districts quoted in your paper.

How long! oh how long! &c. &c.

I am, Sir, your most obedient servant,

R. U. WEST.

Hogsthorpe, Alford, Lincolnshire, Sept. 20.

[To the Editor of the Medical Times.]

SIR,—With yourself, I admire much the straightforward and manly letter of Mr. Prankerd, in your last, on the subject of the remuneration (?) to medical officers of unions.

Nearly four years since, a letter from myself on the same subject appeared in "The Provincial Journal" (Jan. 20, 1844), in which I detailed *my* grievances, and my notions of the remedy required. But, Sir, to what purpose pour we out our complaints *one to the other*, or publish them in periodicals whose circulation is for the most part confined to the profession? We read, express our sense of the justice of the remarks of "A.B.," or the injustice of the treatment of "C.D."—perhaps give utterance to the wish that something might be done to mend matters—that somebody may come forward to cause their improvement; but ourselves are content to jog on in our daily task, under our own heavy load of grievance, with the apathetic endurance of the countryman, who, never tired of praying to Jupiter, thought not of putting his own shoulder to the wheel. Would it not be far better for us to cease complaining to, and condoling with, each other, and to join heart and soul in endeavouring to procure a remedy for our ailments?

The idea (may I call it *your* idea?) of a Central Convention of Union Doctors, if carried out, would afford us an opportunity for doing something; but let that something be well considered, and our plans well organized, before we act. Let us not quarrel with local boards, or go much into detail of particular grievance, but take our stand upon the broad principle of *fair remuneration for work done*, and that such remuneration *be equalized throughout the kingdom*.

To whom are we to apply for this boon? Not to local boards, certainly. "Keep down the rates" is the cry there; and, however mistakenly, "keep down the salaries" is thought to be a synonymous watchword. The improvements in our situation, hinted at by Mr. Prankerd, have all emanated from the "board above." The vaccination fees, small though they be, were still *additions*. The fees for fractures and operations, as far as they go, are liberal; and these have again, within the last few weeks, been somewhat extended. *These* additions have been made by the commissioners; and they also uniformly discourage reduction in salaries, and I believe that with them the contrary principle is advocated.

From the Commission, then, or from the Government, must come the alteration we wish; and if a memorial signed by the *whole body* of medical officers acting under the new poor-law, respectfully, but firmly, requesting an inquiry into the present state of medical remuneration, were presented by a deputation to the Commission, or to the Home Secretary, such an inquiry would certainly be afforded; and the facts that would appear (for then would be the time for each of us to unfold the causes for dissatisfaction in his own case) must directly make apparent to the Government and the public the necessity of an alteration in the present state of things.

I am, for myself, inclined to think (I submit my opinion in all humility) that, making us altogether Government officers (we are already paid a moiety of our salaries by Government), and having the remuneration regulated according to the number of cases and their distance, and paying us per case, would be equitable and satisfactory. But, whatever the remedy thought most eligible, *let it be adopted unanimously*. "Doctors differ," and never more than when their interests call for unanimity. But this is a question not of relative rank or degree; no disputed point of etiquette, or medical ethics;—to have become union doctors presupposes us qualified practitioners, and as union doctors let us press our just claims. Let us do so temperately, steadily, and perseveringly, *and in the proper quarter*, and we must eventually overcome all obstacles, the opposition of local boards, and the apathy and indifference of the Government and public generally.

I cannot close this letter without expressing my humble gratitude to the correspondent of the "leading journal of Europe," "S. G. O." A clear-headed and talented man that "S. G. O." The picture drawn in his letter of Sept. 8 is one the original of which has long been known to union doctors, and is a most true and excellent copy from nature. He deserves the thanks of the whole profession for the able manner in which he has brought it before the eyes of the public. To say truth, the medical are not the only subordinates who are hardly worked and miserably paid in the administration of the new poor-law.

Apologizing for the length of this letter, I beg to remain, Sir,

Yours obediently,

HENRY W. LIVETT.

Wells, Somerset, Sept. 22.

WAR-OFFICE, Sept. 17.—22nd Foot: Surg. Samuel Currie, M.D., from 55th Foot, to be Surgeon, vice Campbell, who exchanges.—55th Foot: Surg. Alexander Campbell, from the 22nd Foot, to be Surgeon, vice Currie, who exchanges.

NAVAL APPOINTMENTS.—Surgeon: William Roberts, to the Hecate.—Assistant-Surgeons: Robert P. R. Sparrow, to the Dolphin; James Davidson, to the Kite; T. J. Green, to the Hecate.

APOTHECARIES' HALL.—Gentlemen admitted members on Sept. 16:—George Moseley, Samuel Burgess, and Thomas Parker Rust.

ACCIDENT TO DR. CHINCHALLA.—On the 18th of August Dr. Chinchalla, of Valentia, was wounded in the shoulder by a poniard. The honourable character and well-known moderation of this professor render the outrage inexplicable. Dr. Chinchalla has gained celebrity by the publication of "The Annals of Medicine." We hope that the wound will not prove dangerous.

At a general meeting of the Governors of the Royal General Dispensary, Aldersgate-street, held on Wednesday, the 22nd inst., Dr. Brownless, of Charterhouse-square, physician to the Metropolitan Dispensary, and Dr. Goodfellow, of Bedford-place, Russell-square, were unanimously elected Physicians to the Royal General Dispensary, in the room of Drs. Peacock and Garrod.

No. 418. SUMMARY. Oct. 2.

THE RULES AND REGULATIONS OF EXAMINING MEDICAL BODIES IN ENGLAND, SCOTLAND, IRELAND, FRANCE, AND GERMANY.

UNIVERSITY OF LONDON.

Examinations for the Degree of Bachelor of Medicine.—Candidates for the degree of Bachelor of Medicine shall be required, 1. To have been engaged during four years in their professional studies at one or more of the institutions or schools recognised by this university. 2. To have spent one year at least of the four in one or more of the recognised institutions or schools in the United Kingdom. 3. To pass two examinations.

The first examination shall take place once a year, and commence on the first Monday in August. No candidate shall be admitted to this examination unless he have produced certificates to the following effect:—1. Of having completed his nineteenth year. 2. Of having taken a degree in arts in this university, or in a university the degrees granted by which are recognised by the senate of this university; or of having passed the matriculation examination. 3. Of having been a student during two years at one or more of the medical institutions or schools recognised by this university, subsequently to having taken a degree in arts, or passed the matriculation examination. 4. Of having attended a course of lectures on each of four of the subjects in the following list:—Descriptive and Surgical Anatomy, General Anatomy and Physiology, Comparative Anatomy, Pathological Anatomy, Chemistry, Botany, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Midwifery and Diseases peculiar to Women and Infants, Surgery, Medicine. 5. Of having dissected during nine months. 6. Of having attended a course of Practical Chemistry, comprehending practical exercises in conducting the more important processes of general and pharmaceutical chemistry; in applying tests for discovering the adulteration of articles of the materia medica, and the presence and nature of poisons; and in the examination of mineral waters, animal secretions, urinary deposits, calculi, &c. 7. Of having attended to practical pharmacy during a sufficient length of time to enable him to acquire a practical knowledge in the preparation of medicines.

These certificates must be transmitted to the registrar at least fourteen days before the commencement of the examination. The fee for this examination is five pounds. No candidate can be admitted to the examination unless he have previously paid this fee to the registrar; and if he fail to pass the examination, the fee will be returned to him.

The candidates are examined in the following subjects:—Anatomy, Physiology, Chemistry, Structural and Physiological Botany, Materia Medica, and Pharmacy.

The examinations are conducted in the following order:—Morning, 10 to 1; Monday, Anatomy and Physiology, by printed papers; Tuesday, Chemistry, by experiment and printed papers. Afternoon, 3 to 6: Monday, Anatomy and Physiology, by printed papers; Tuesday, Botany, Materia Medica, and Pharmacy, by printed papers. To commence on Friday at 10. Chemistry, Materia Medica, and Pharmacy, by *viva voce*, and demonstration from specimens. To commence on Monday, in the following week, at 10: Anatomy and Physiology, by *viva voce*, demonstration from preparations, and dissection.

On the Wednesday morning in the week following the commencement of the examination, the examiners will arrange, in two divisions, each in alphabetical order, such of the candidates as have passed: and a pass certificate, signed by the registrar, will be delivered to each candidate. Such candidates only as in the opinion of the examiners are admissible to the examination for honours, shall be placed in the first division.

Examination for Honours.—Any candidate who has been placed in the first division at the first examination, may be examined for honours in any or all of the following subjects:—Anatomy and Physiology (candidates may illustrate their answers by sketching the parts they describe), Chemistry, Materia Medica, and Pharmaceutical Chemistry.

These examinations take place in the week following the commencement of the first examination. They are conducted by means of printed papers; but the examiners are not precluded from putting *viva voce* questions upon the written answers of the candidates when they appear to require explanation. The examinations for honours are conducted in the following order:—Morning, 10 to 1: Thursday, Anatomy and Physiology; Friday, Chemistry. Afternoon, 3 to 6: Thursday, Anatomy and Physiology; Friday, Materia Medica and Pharmaceutical Chemistry.

If in the opinion of the examiners sufficient merit be evinced, the candidate who shall distinguish himself the most in Anatomy and Physiology, the candidate who shall distinguish himself the most in Chemistry, and the candidate who shall distinguish himself the most in Materia Medica and Pharmaceutical Chemistry, shall each receive an exhibition of thirty pounds per annum for the next two years. Under the same circumstances, the first and second candidates in each subject shall each receive a gold medal of the value of five pounds.

Second Examination.—The second examination takes place once a year, and commences on the first Monday in November. No candidate can be admitted to this examination within two academical years of the time of his passing the first examination, nor unless he have produced certificates to the following effect:—1. Of having passed the first examination. 2. Of having, subsequently to having passed the first examination, attended a course of lectures on each of two of the subjects comprehended in the foregoing list, and for which the candidate had not presented certificates at the first examination. 3. Of having, subsequently to having passed the first examination, dissected during six months. 4. Of having conducted at least six labours. (Certificates on this subject will be received from any legally-qualified practitioner in medicine.) 5. Of having attended the surgical practice of a recognised hospital or hospitals during twelve months, and lectures on clinical surgery. 6. Of having attended the medical practice of a recognised hospital or hospitals during other twelve months, and lectures on clinical medicine. 7. Of having, subsequently to the completion of his attendance on surgical and medical hospital practice, attended to practical medicine in a recognised hospital, infirmary, or dispensary, during six months. (Certificates on this subject will be received from any legally-qualified practitioner having the care of the poor of a parish.) The candidate must also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended.

The certificates must be transmitted to the registrar at least fourteen days before the examination begins. The fee for this examination is five pounds.

Candidates are examined in the following subjects:—Physiology (the papers in Physiology including questions in Comparative Anatomy), General Pathology, General Therapeutics, Hygiene, Surgery, Medicine, Midwifery, Forensic Medicine. The examination is conducted in the following order:—First Week. By printed papers. Morning, 10 to 1: Monday, Physiology; Tuesday, Surgery; Wednesday, Midwifery. Afternoon, 3 to 6: Monday, General Pathology, General Therapeutics, and Hygiene; Tuesday, Medicine; Wednesday, Forensic Medicine.—Second Week. By *viva voce* interrogation. To commence on Monday morning at 10.

On the Monday morning in the following week, the examiners will arrange, in two divisions, each in alphabetical order, such of the candidates as have passed; and a certificate under the seal of the university, and signed by the chancellor, will be delivered to each candidate. Such candidates only as in the opinion of the examiners are admissible to the examination for honours will be placed in the first division.

Examination for Honours.—Any candidate who has been placed in the first division at the second examination, and has produced a certificate showing that he has not completed his twenty-fifth year, may be examined for honours in any or all of the following subjects:—Physiology and Comparative Anatomy (candidates may illustrate their answers by sketching the parts they describe), Surgery, Medicine, Midwifery, Structural and Physiological Botany.

The examination for honours will take place in the week following the second examination. It will be conducted by means of printed papers; but the examiners are not precluded from putting *viva voce* questions upon the written answers of the candidates when they appear to require explanation. The examination is conducted in the following order:—Morning, 10 to 1: Tuesday,

Physiology and Comparative Anatomy; Wednesday, Surgery; Thursday, Medicine; Friday, Midwifery. Afternoon, 3 to 6: Tuesday, Physiology and Comparative Anatomy; Wednesday, Surgery; Thursday, Medicine; Friday, Structural and Physiological Botany.

If in the opinion of the examiners sufficient merit be evinced, the candidate who shall distinguish himself the most in Physiology and Comparative Anatomy, the candidate who shall distinguish himself the most in Surgery, and the candidate who shall distinguish himself the most in Medicine, shall each receive an exhibition of fifty pounds per annum for the next two years, with the style of University Medical Scholar. Under the same circumstances, the first and second candidate in each of the preceding subjects shall each receive a gold medal of the value of five pounds. Under the same circumstances, the candidate who shall distinguish himself the most in Midwifery, and the candidate who shall distinguish himself the most in Structural and Physiological Botany, shall each receive a gold medal of the value of five pounds.

Examination for the Degree of Doctor of Medicine.—The examination for the degree of Doctor of Medicine takes place once a year, and commences on the fourth Monday in November. No candidate can be admitted to this examination unless he have produced certificates to the following effect: -1. Of having taken the degree of Bachelor of Medicine in this university, or a degree in medicine or in surgery at a university, the degrees granted by which are recognised by the senate of this university. Those candidates who have not taken the degree in this university shall produce a certificate of having completed their twenty-third year. 2. Of having attended, subsequently to having taken one of the above degrees in medicine, (*a*) to clinical or practical medicine during two years in a hospital or medical institution recognised by this university; (*b*) or, to clinical or practical medicine during one year in a hospital or medical institution recognised by this university, and of having been engaged during three years in the practice of his profession; (*c*) or, if he have taken the degree of Bachelor of Medicine in this university, of having been engaged during five years in the practice of his profession. (One year of attendance on clinical or practical medicine, or two years of practice, will be dispensed with in the case of those candidates who, at the second examination, have been placed in the first division.) 3. A moral character, signed by two persons of respectability.

These certificates must be transmitted to the registrar at least fourteen days before the examination begins. The fee for the degree of Bachelor of Medicine is ten pounds.

Candidates are examined in the following subjects: -Elements of Intellectual Philosophy, Logic, and Moral Philosophy; Medicine. The examinations are conducted in the following order: -By printed papers, Morning, 10 to 1. *Monday*, Elements of Intellectual Philosophy, Logic, and Moral Philosophy. (Candidates who have taken a degree in arts in this university, or in a university the degrees granted by which are recognised by the senate of this university, are exempted from this part of the examination. The degrees in arts of all universities in the United Kingdom are recognised by the senate for this purpose.) *Tuesday*, Medicine. Afternoon, 3 to 6. *Monday*, a Commentary on a case in Medicine, Surgery, or Midwifery, at the option of the candidate. *Tuesday*, Medicine, by *viva voce* interrogation. *Friday* morning, at 10, examination on the answers to the Printed Papers, and on the Commentaries; and the examination for a certificate of Special Proficiency in Medicine, Surgery, or Midwifery, as determined by the candidate's choice of the case for commentary.

On the Monday morning in the following week the examiners will arrange in two divisions, each in alphabetical order, such of the candidates as have passed; and a certificate under the seal of the university, and signed by the chancellor, will be delivered to each candidate. Such candidates only as, in the opinion of the examiners, are admissible to the examination for honours, will be placed in the first division. If, in the opinion of the examiners sufficient merit be evinced, the author of the best Commentary on the Case in Medicine, the author of the best Commentary on the Case in Surgery, and the author of the best Commentary on the Case in Midwifery, will each receive a gold medal of the value of five pounds. Any candidate may present a thesis on a subject of his own choice. If, in the opinion of the examiners, sufficient merit be evinced, a gold medal, of the value of ten pounds, will be given to the author of the best thesis. The examiners are not precluded from examining the author on the subject of his thesis.

Examination for Honours.—Any candidate who has been placed in the first division may be examined for honours in any or all of the following subjects:—Surgery, Medicine, Midwifery. The examinations take place in the week following. They are conducted by means of printed papers; but the examiners are not precluded from putting *viva voce* questions upon the written answers of the candidates when they appear to require explanation.

The examinations for honours are conducted in the following order:—Morning, 10 to 1: Tuesday, Surgery; Wednesday, Medicine; Thursday, Midwifery. Afternoon, 3 to 6: Tuesday, Surgery; Wednesday, Medicine; Thursday, Midwifery.

If, in the opinion of the examiners, sufficient merit be evinced, the first candidate in each subject will each receive a gold medal of the value of five pounds.

Institutions and Schools.—No medical institution or school is recognised by the senate of this university which does not possess ample means of illustrating the instruction given at it. *Forms of Certificates:* The teacher must certify for—*Lectures,*—That in the year 18 , the pupil attended . . . his course of instruction on . . . . . which commenced on . . . . and terminated at . . . . . and which consisted of . . . . . lectures and . . . . examinations. *Practical Anatomy,*—That from . . . to . . . the pupil dissected . . . . . . under his superintendence. *Practical Chemistry,*—That the pupil operated . . . . during his course of Practical Chemistry, which consisted of . . . . lessons. *Practical Pharmacy,*—That the pupil prepared . . . . . medicines under his superintendence from . . . . to . . . . . *Clinical Instruction in Surgery,*—That the pupil attended . . . . . the surgical practice of this hospital, and the course of lectures on Clinical Surgery, consisting of . . . lectures, from . . . . to . . . . *Clinical Instruction in Medicine,*—That the pupil attended . . . . the medical practice of this hospital, and the course of lectures on Clinical Medicine, consisting . . . . . lectures from . . . . to . . . *Practical Medicine,*—That the pupil attended . . . . . . to Practical Medicine at . . . . . . and was intrusted with the treatment of patients under . . . . superintendence, from . . . . to . . . . (Certificates on this subject will be received from any legally-qualified practitioner, having the care of the poor of a parish.) *Practical Midwifery,*—That the pupil conducted . . . . labours under his superintendence. Any legally-qualified practitioner shall be competent to give this certificate.

Regulations relating to Students who commenced their Medical Studies in or before January, 1840.

Degree of Bachelor of Medicine.—Candidates who commenced their professional studies in or before January, 1840, are admitted to the first examination for the degree of Bachelor of Medicine on producing certificates to the following effect:—1. Of having been engaged during two years in their professional studies. 2. Of having attended a course of lectures on each of four of the subjects comprehended in the former list. 3. Of having dissected during nine months. 4. Of having attended to practical pharmacy during a sufficient length of time to enable them to acquire a practical knowledge in the preparation of medicines.

Candidates who commenced their professional studies in or before January, 1840, are admitted to the second examination for the degree of Bachelor of Medicine on producing certificates to the following effect:—1. Of having been engaged during four years in their professional studies. 2. Of having passed the First Examination. 3. Of having attended a course of lectures on each of two of the subjects comprehended in the former list. 4. Of having dissected during twelve months. 5. Of having attended to practical pharmacy during a sufficient length of time to enable the pupil to acquire a practical knowledge in the preparation of medicines. 6. Of having conducted at least six labours. 7. Of having attended the surgical practice of a recognised hospital or hospitals during twelve months. 8. Of having attended the medical practice of a recognised hospital or hospitals during other twelve months. 9. Of having completed the twenty-second year of their age. 10. Of moral character, from a teacher in the last school or institution at which they have studied, as far as the teacher's opportunity of knowledge has extended.

Candidates who have not taken a degree in Arts, or passed the Matriculation Examination in this university, will be required to translate a portion of CELSUS *de Re Medicâ*.

Regulations relating to the Practitioners in Medicine or Surgery desirous of obtaining Degrees in Medicine.

Degree of Bachelor of Medicine.—Candidates are admitted to the two examinations for the degree of Bachelor of Medicine on producing certificates to the following effect:—1. Of having been admitted, prior to the year 1840, members of one of the legally-constituted bodies in the United Kingdom for licensing practitioners in medicine or surgery, or of having served, previously to 1840, as surgeons, or assistant-surgeons, in her Majesty's Army, Ordnance, or Navy, or in the service of the Honourable the East India Company. 2. Of having received a part of their education at a recognised institution or school, as required by the charter of the university. 3. Of moral character, signed by two persons of respectability.

Candidates who have not taken a degree in Arts, or passed the Matriculation Examination in this university, will be required to translate a portion of CELSUS *de Re Medicâ*.

Degree of Doctor of Medicine.—Candidates who have been engaged during five years in the practice of their profession, may be admitted to the examination for this degree on producing certificates to the following effect:—1. Of having been engaged during five years in the practice of their profession. 2. Of having taken the degree of Bachelor of Medicine in this university.

Candidates who have not taken a degree in Arts, or passed the Matriculation Examination in this university, will be required to translate a portion of CELSUS *de Re Medicâ*.

The regulations respecting the transmission of the certificates to the registrar, the fees, the periods, and the mode of conducting the examinations, and the arrangement of the candidates after examination, are the same for all candidates for the same degrees.

A NEW COLLEGE AT ATHENS.—A Medical Academy has just been established at Athens. Dr. Damianos Georgios is perpetual secretary.

SCIENCE IN EGYPT.—The Egyptian Government wishes to give every possible guarantee to Europe for the quarantine service. It will double the number of Arabian and European doctors throughout Egypt. The number of pupils in the Medical School at Cairo is to be increased, also, in the same proportion.

LUNATIC ASYLUMS IN RUSSIA.—For a long time there has been but one district establishment in Russia for insane persons: it is situated at St. Petersburgh. The Government intends to establish others in the city of Moscow, Kasan, Charkow, Keiu, Odessa, Wilna, and Riga.

SUGGESTIONS

FOR A MORE SIMPLE ARRANGEMENT OF THE

MATERIA MEDICA,

BASED ON ITS PHARMACEUTICAL AND THERAPEUTICAL RELATIONS.

By GEORGE LEITH ROUPELL, M.D.

Cantab., F.R.S., Fellow of the Royal College of Physicians, Physician to St. Bartholomew's Hospital, Lecturer on Materia Medica at the College of St. Bartholomew's Hospital.

(Continued from p. 584.)

LECTURE X.

The next order of which I have to treat is the

VII. Drugs which owe their Efficacy to Gum and its Alliances.

Gum is well known as a mucilaginous juice exuding naturally from, or obtained by making artificial incisions in, certain trees, those chiefly of tropical climates. This juice concretes by exposure to the air, and by the heat of the sun, into hard, transparent, irregular masses. Its great characteristic is the formation of mucic acid when it is acted upon by dilute nitric acid, mucic acid appearing as a white crystalline powder, crackling in the teeth. Gum contains two principles, arabine and bassorine—the one souble in water, the other not. Gum arabic is to be taken as the type of the purest specimen of this order. This is soluble in its own weight of water, is insoluble in alcohol, and occasions a dense curdy precipitate with diacetate of lead; a precipitate by the neutral acetate of lead distinguishes the mucilages which are allied to the principle now under consideration. It deserves notice that, by heat and the action of acids, a substance resembling gum may be made from starch: to this the term dextrine has been given.

Gum forms a smooth, lubricating, mucilaginous solution which is beneficial in various cases of irritation of the mucous membranes of the chest, bowels, or kidneys. It is used to form pill masses, but is apt to render them hard. By its means powders, fixed and volatile oils, and resins may be suspended in water.

The following are the plants referred to in the Pharmacopœia as the chief sources of gum and its alliances:—

43. Gum or mucilage from—

Acacia vera.
Astragalus verus.
Cydonia vulgaris.
Althæa officinalis.
Malva communis.
Linum usitatissimum.

The next order is composed of

VIII. Drugs Chiefly Introduced on Account of the Starch which they Contain.

Of the importance of this principle all, I presume, are aware. Its chemical relations are highly interesting; its conversion, for example, into dextrine and sugar on the one hand, and into fixed oil and fat on the other, are striking instances of the metamorphoses of principles. It constitutes one great source of the nutrition both of plants and animals, abounding in the seeds of the cereals, the stems of the palms, and the roots of many of the vegetable orders.

Starch may readily be detected by its own peculiar features. It exists in the form of small rounded brilliant grains, varying in size from the $\frac{1}{100}$ to the $\frac{1}{1000}$ of an inch in diameter. These grains are described by M. Raspail as vesicles filled with a hardened mucilaginous or gummy matter, bursting in water at a temperature about 140° F., and remaining in suspension in the fluid while the enclosed matter dissolves in it. Others describe these grains as composed of layers, the outer one of which is the thickest, and may be dissolved by continued ebullition or broken by grinding it with any hard powder. These grains or vesicles vary in shape as well as size; those procured from wheat-flour are the smallest, those from the potato are the largest; some are globular, some ovoid, others again are angular, peculiarities by which they may easily be distinguished by a practised eye, aided by the microscope. The formula of starch, dried at an ordinary temperature, is $C^{12} H^9 O^9 HO + 2$ aq. When pressed in the fingers it gives a peculiar sound, and it is coloured blue on the addition of iodine; when boiled, however, with diluted acids, it is first coloured purple by iodine, this afterwards ceases to have any effect upon it, and then it will be found to have been converted into dextrine. The presence of starch in the pollen of plants; its deposition in the stem of perennial shrubs and trees; its conversion in the spring into gum and sugar by the action of "diastase," which is naturally generated during germination; and the probable conversion of starch by its deoxidation into the fixed oils and fats, are not only interesting as physiological facts, but are valuable as showing the simple means by which such different results may be obtained, and give connection to some of the various heads under which I have endeavoured to class what was anciently termed the "simples" of the materia medica. I shall not dwell further on the varieties of starch, but shall briefly mention its uses in medicine, and then enumerate the plants from which we chiefly procure it.

Starch is chiefly employed in medicine as an emollient, as a lubricating injection, and occasionally as a soothing drink. It is the vehicle for opium in the enema opii, and it is serviceable in the form of powder as a means of defending abraded surfaces from friction. Compresses steeped in a solution of starch become hard when dry, and afford an excellent support in certain cases of fractured limbs.

Dietetically, starch is largely used as a mild non-stimulating aliment; and, according to the most modern view, it is looked upon as one of the great sources of animal heat through the agency of the respiratory process. Suffice it to say that starch is essentially a vegetable product undergoing complete transformation by the agency of the digestive process. We chiefly procure—

44. Starch from—

Triticum hybernum.
Hordeum distichon.
Avena sativa.
Secale cereale.
Oryna sativa.
Zea mays.
Sagus farenifera.
Maranta arundinacea.
Solanum tuberosum.
Inula helenium.

IX. Drugs used on Account of their Saccharine Matter.

Sugar abounds in the nectaries of most flowers; in the roots of many plants, as in the potato, the carrot, the beet, &c.; in the juice of very many, though abounding particularly in some, as the cane, the palms, and maple. Sugar is found in milk, and is the product of mal-assimilation in one interesting disorder, diabetes.

The conversion of starch into sugar has already been alluded to—a change which takes place in the maturation of fruits, and in the germination of plants. Other substances, too, less tractable apparently in their nature, can be made to undergo this alteration—woody fibre, for example, and even the bitter neutral principle, salicine. Gelatine also, by the action of sulphuric acid, yields fermentable sugar.

There are two varieties which require notice, the cane, namely, and the grape-sugar. The formula of the cane-sugar is $C^{12} H^9 O^9 + 2$ aq. This is the variety found in flowers, in beetroot, and is the one commonly employed to impart a sweet taste.

Grape-sugar has for its formula $C^{12} H^{14} O^{14}$. This it is which gives the sweet taste to grapes: it is the product of the action of acids on woody fibre, on starch, and on sugar of milk. It is the form met with in diabetes. Honey contains it in a particular state, and cane sugar itself is converted into this form when treated with diluted acids.

Grape-sugar is less soluble, and dissolves more slowly in water than cane-sugar, and two and a half parts of grape-sugar are required to produce in a liquid the same degree of sweetness as one of cane.

Chemical analysis detects sugar very extensively, indeed, in vegetable juices even where it would be *a priori* little suspected, as, for example, in the bitter root of the gentian.

Some kinds are fermentable, others not; and we are familiar with sugar in the crystalline form, or in that of an amorphous transparent mass. Sugar is extensively used in pharmacy, medicine, and as an aliment. It is used, for example, in pharmacy to preserve many substances, both vegetable and mineral, from decomposition, when it appears under the title of a syrup, an electuary, a conserve, a confection, or a saccharate. It is largely employed in making lozenges. It is sometimes mixed with scammony, jalap, and other aperient powders, from a supposed power of mitigating their activity; and it enables us to suspend more largely camphor and the volatile oils in water. In medicine sugar, variously combined, is constantly employed in cases of irritation about the larynx and trachea. Applied to parts denuded of their cuticle, or to the surface of ulcers, it stimulates the vessels, and thus aids in the process of reparation. It would appear even to irritate the sound membrane of internal parts, as it was in solution the ordinary laxative enema in the time of Sydenham. It has been recommended in cases of poisoning by copper, bichloride of mercury, and the salts of lead, as an antidote; but the question of its efficacy is not determined, and we have in albumen and the soluble sulphates more certain remedies.

A few words must be said about sugar as an alimentary substance. Naturally intended as a provocative to the appetite, and as naturally combined an admirable adjunct to other nutritive principles, taken in excess in its pure form, it is highly injurious, and in some disorders is itself little short of a poison. In diabetes and in the oxalic acid diathesis it is most pernicious; and in all constitutions, if largely indulged in, it is liable to occasion dyspepsia, emaciation, softening of the gums, and excess of lithic acid.

I have now to refer to the chief sources of this principle, which, in various states of combination, is yielded by the following plants:—

45. The saccharine principle as obtained from—

Saccharum officinarum.
Ficus carica.
Prunus domestica.
Cassia fistula.
Rosa canina.
Vitis vinifera.
Mel.

Fraxinus ornus.
Glycyrrhiza glabra.

Under the head "Saccharine Principle" I propose to consider the conversion of it into alcohol and into acetic acid, selecting that especial source from which these products are usually obtained commercially, or were originally procured. Under the head, therefore, of the "Vino" I shall treat of alcohol and ether, as also of vinegar. The leading facts of these interesting transformations will be briefly detailed, and the pharmaceutical uses, with the good and ill effects of these products upon the system, will then be considered. Few subjects have of late years attracted more attention than the injury to the health occasioned by the habitual use of alcoholic drinks, and the philanthropist has shown incontestibly to the intemperate the rashness and folly of his course. Still, out of these very so-called evils has sprung one of the greatest blessings yet conferred by any one person on his race—the means, namely, suggested by Dr. Morton, of Boston, of obviating the pain of operations by the sedative effect of the vapour of ether.

I shall conclude in my next this arrangement of the organic principles by the consideration of the organic acids, the various colouring matters, and albumen.

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.

By Professor MATTEUCCI, of Pisa.

Part XV.

CIRCULATION OF THE BDOOD.

(Continued from p. 586.)

We have now to speak of the pressure which the blood supports in the vessels. The investigation of this point has occupied the attention of physiologists in all ages; but widely different roads have been followed by them in their respective researches. The same may be said of the investigations regarding the force with which the left ventricle of the heart contracts.

Borelli, Bernouilli, and Keil arrived at vastly different results in this respect. Thus, whilst Borelli estimates the force of the heart equivalent to a force capable of sustaining 180,000 pounds, Keil estimates it as low as five ounces.

Hales was the first to make accurate experiments for the purpose of measuring the pressure of the blood in the arteries; but it is to Poiseuille that we are indebted for the most complete researches into this important subject.

Poiseuille's hemo-dynamometer consists of a species of glass manometer, the short and horizontal branch of which is inserted into a brass tube, which latter is subsequently introduced into one of the arteries of a living animal. To prevent the coagulation of the blood, which, were it permitted to occur, would obstruct the portion of the tube situated between the artery and the column of mercury, Poiseuille recommends to fill this portion first with a solution of carbonate of soda. When the tube is inserted into the artery, the mercurial column is seen to rise to a certain height, at which it remains subsequently stationary during the whole of the time that the experiment is made to last. The difference of level between the two columns of mercury indicates likewise the degree of pressure exerted by the blood against the corresponding section of the wall of the vessel into which the tube of the apparatus has been introduced. Poiseuille made a great many experiments with this instrument upon the arteries of divers animals, and also upon different arteries of one and the same animal. The most important fact deduced from the results of these experiments is this—the pressure of the blood in the arteries is uniform, the same, whatever the point of the arterial system, the diameter of the vessel, its distance from the heart, and the position of the ramification experimented upon, relatively to the trunk from which it springs. Thus Poiseuille found that the instrument indicated the same pressure when applied upon the carotid of a dog at a distance of 180 millimetres from the heart as when applied upon the aorta at a distance of 370 millimètres from the heart: the diameter of the aorta experimented upon being nine millimètres, that of the carotid four millimètres. In both cases the pressure was measured by a column of mercury of 84 millimètres. The same result was obtained in experiments upon two different arteries of a horse: the diameter of one of those arteries was five times that of the other. The pressure exerted by the blood in both was equally measured by a column of mercury of 146 millimètres. It is curious that the pressure which the blood has to support respectively in the several animals bears no relation whatsoever to the respective weight of the animals.

The uniformity of the pressure exerted by the blood in the several vessels of the animal body, which has thus been demonstrated by Poiseuille, is the necessary consequence of the principle of equality of pressure: the shock given by the column of blood expelled from the left ventricle against that which is contained in the aorta is instantly propagated equally throughout the whole mass of the blood in the large and small arteries.

It is this shock, which is repeated each time the ventricle propels blood into an artery and its ramifications, that produces the well-known phenomenon of the pulse, which we know to be isochronous with the contraction of the ventricle.

The numbers supplied by Poiseuille's experiments indicate, accordingly, the amount of pressure supported by the walls of the heart and arteries: this pressure is constantly equivalent to the weight of a column of mercury having for base the area of the artery, or the superficies of the ventricle, and for height the elevation marked by the hemo-dynamometer. From these data Poiseuille was enabled to calculate that at the moment of the contraction of the heart of a young man aged twenty-nine, (a) the blood rushes into the aorta, exerting against the liquid column which fills the latter (assuming this column to be in a state of rest) a pressure measured by 1·971779 kilogramme. In the radial artery this pressure would be reduced to 15·35 grammes. Could we know accurately the extent of the internal surface of the left ventricle at the moment of contraction, we might readily estimate the amount of pressure exerted at that moment upon the walls of the ventricle.

The constancy of the variations observed in the elevation of the mercurial column in the hemo-dynamometer, during the respiratory movements, is one of the most important results of Poiseuille's experiments: this elevation is constantly more considerable during expiration than during inspiration; this difference is observed equally in the large and the small vessels; but it is more or less considerable, according to the several classes of animals.

The elevation of the mercurial column in the hemo-dynamometer varies also with the respective position in which the animal happens to be placed. The author observed invariably that, the instrument being introduced into the carotid, the mercurial column rose several millimètres whenever the animal was lifted up by its hind part, and fell, on the contrary, whenever the opposite manœuvre was practised upon it. The cause of this difference is evident; and we must accordingly assume that Poiseuille, in his comparative experiments upon the pressure respectively exerted by the blood in the different vessels, kept the animal experimented upon constantly in one and the same position.

The dilatation of the arterial tubes which occurs at the arrival of each successive wave of blood is a fact deserving a few brief remarks. It is, again, to Poiseuille that we are indebted for the experiment proving, beyond doubt, the existence of this phenomenon, which exercises so great an influence upon the circulation of the blood. The experiment alluded to is conducted as follows:—A certain space of the course of the carotid artery of a live horse is laid bare and enclosed in a metallic tube filled with water; this tube has an aperture which is then closed with a perforated cork, to which a glass tube of small diameter is fitted. At every contraction of the left ventricle, the liquid column rises in the tube, and recedes again when the contraction ceases; thus the dilatation of the artery occasioned by the impulsion of the column of blood is succeeded by the re-contraction of the arterial walls to their usual size by virtue of their elasticity. Poiseuille has endeavoured to measure this force of elasticity displayed by the arterial walls; we will not go quite so far as to admit the correctness of his results, viz., that the force with which the walls of the artery contract exceeds the force which dilated them; but this much is certain, that an additional propelling force is supplied by the contraction of the arterial walls succeeding the contraction of the ventricle.

Poiseuille has also studied the question of the movement of the blood in the capillaries. He saw the movement of the blood in the capillaries cease upon removing or tying the heart; the movement certainly persisted for a few moments, but this is ascribable simply to the diminution of volume and a species of contraction which the elastic walls of the vessel experience when the blood ceases to be propelled by the heart. With the aid of the microscope, a layer of serum, perfectly stationary and motionless, is seen adherent to the walls of the vessel, and the sanguineous liquid is thus seen moving in a tube formed by its own substance. Poiseuille has studied the flow of liquids, both in capillary tubes of glass and in capillary vessels, of live and of dead animals; he found the same laws presiding over it in the capillaries as in the glass tubes. This fact demonstrates clearly that in these different cases the liquid circulates actually in a tube formed invariably of one and the same material, viz., a stationary liquid stratum of its own substance adherent to the walls of the tube, no matter what the nature of the material of the latter. It is a curious fact that the capillary circulation is not influenced by variations of the atmospheric pressure; it continues the same *in vacuo* as under a pressure of from eight to ten atmospheres.

After this detailed exposition of the most precise and conclusive experiments on the divers questions relating to the circulation of the blood, we will now proceed to elucidate the mechanism of circulation from the data supplied by the results of these experiments.

It would be superfluous to adduce any further proof of the fact that the contraction of the heart, and the elasticity of the vascular and, more particularly, of the arterial walls, are the principal motive powers in the sanguineous circulation.

We will confine ourselves here to cite an experiment of Magendie's:—The crural artery and crural vein of a dog are laid bare, and a ligature is passed round the vein: upon making an incision in the vein below the ligature, a jet of blood escapes from the aperture; upon compressing the artery the jet of blood from the vein diminishes, and ceases finally altogether, except the compression be removed from the artery, when the jet will at once reappear: these alternations may be reproduced several times. The deduction to be drawn from this fact is evident: the blood traverses the capillaries and circulates through the veins by the sole action of the forces which propel it in the arteries, viz., the contraction of the left ventricle, and that of the arterial walls.

The atmospheric pressure can exercise only a very limited influence upon the circulatory function. We have already remarked that the mercurial column of a hemo-dynamometer, applied to an artery, rises at each expiration, and falls at each inspiration. Poiseuille observed the same phenomenon, under the same circumstances, in the large venous trunks in the thorax; but this phenomenon is not observed in the venous trunks situated at a distance from the thoracic cavity. We

(a) We assume the diameter of the aorta in man to be = 34 millimètres, and the column of mercury raised in the hemo-dynamometer = 160 millimètres.

can readily understand that, upon the dilatation of the thoracic cavity, the atmospheric pressure must compress the veins, and thereby, with the aid of the valves disposed in these vessels in a manner to prevent the reflux of the blood, assist the motion of the blood towards the heart. On the other hand, during expiration, the thoracic cavity contracts, and all the vessels contained in it are equally compressed. Indeed it has been experimentally demonstrated that the variations observed in the pressure of the blood, in the arteries and in the veins, correspond to the respiratory movements, and are no longer observed in the sanguineous trunks situated beyond the precincts of the thoracic cavity.

The muscular contraction of the heart and that of the arterial walls are accordingly the principal motor powers of the sanguineous circulation. The combination of these two forces, in the mechanism of the circulatory function, is so perfect that the movement by intermittent jets, caused by the alternate contractions and dilatations of the heart, is transformed into a continuous and regular motion by the force of elasticity with which the arterial walls are endowed.

Now, let us figure to ourselves a circular system, formed of tubes with elastic walls, and of different diameters; the two extremities or apertures of this tubular system open into two cavities separated from one another, and of which the walls possess the faculty of approaching one another and receding from one another, like the sides of a bellows; let us imagine this tubular apparatus filled with a liquid: upon rapidly closing one of the two cavities, by the depression of its movable wall, the liquid contained in that cavity will be propelled into the tube opening in it, and will on its own part propel the liquid column contained in that tube, and the movement of this column again will be rapidly communicated to the whole mass; at the same time the other part of the bellows opens, and the liquid in the opposite extremity of the tube precipitates itself readily into the dilated cavity. Were not the walls of the tubular apparatus elastic, these movements would be intermittent, and would stop the moment the bellows ceases to be open; but they become continuous from the elasticity of the walls of the tube, which exerts its action at the very moment the bellows closes, and continues to act during the whole of the time that the latter rests. Now, the heart performs the function which we have described here under the guise of the action of a bellows. The walls of the left ventricle approach one another and contract with great rapidity, which might even be accurately determined if we knew the precise direction of the contraction, and the exact amount of blood expelled. The capacity of the ventricle is thus diminished, and a certain amount of blood propelled into the aorta, the motion being thence imparted to the whole mass of the blood in the system. At this moment the arteries dilate, the right ventricle opens, and the blood rushes into it. Upon the cessation of the contraction of the left ventricle, the arteries contract to their original size, and this contraction supplies an additional propelling power.

The pulmonary circulation depends upon the same causes and follows the same laws as the general circulation.

DUMAS ON ORGANIC CHEMISTRY.
No. XXXI.

(Continued from page 587.)

THE MUSCLES.

The muscles constitute that which we ordinarily call the flesh of animals, and form the greater part of the mass of the body. They are detached organs, independent of each other; they are ordinarily covered by aponeuroses, and terminate in tendons which are attached to the bones. Their structure is somewhat complex, for, besides the muscular fibres which form their principal element, we also discover in them cellular tissue, adipose tissue, bloodvessels, lymphatic vessels, and nerves.

In a chemical point of view, fibrine constitutes the chief base of muscular tissue. But, from what we have just said of the anatomical composition of this tissue, we may readily understand that, independently of the fibrine, it must also contain the other materials of which the anatomical elements that we have above enumerated are composed. Now, it is impossible for the chemist to operate on the muscular fibre in a state of isolation, and, consequently, his analysis must embrace all the principles which enter into the composition of the entire mass of muscle, and which may be definitively classified as substances soluble in the different vehicles, or as insoluble bodies.

If the muscular tissue of the ox be desiccated, it leaves a dry residue, which may mount as high as 23 per cent.; but, should it be previously washed in water until this fluid becomes no longer coloured, the residue will scarcely be found equal to 17 or 18 per cent., and is then composed of fibrine and some insoluble tissues.

On washing finely-cut meat in pure water, until the latter ceases to be coloured, there remains a white, inodorous, and insipid mass, from which alcohol and ether remove a little fatty matter, and which, moreover, possesses properties almost identical with those of the fibrine obtained by beating the blood. It is, however, distinguished from it by some special characters. Thus, if, after having dried it, we again moisten it with water, it does not so easily regain its original softness as does fibrine. Further, if it be boiled with water, a portion becomes dissolved, whilst another part is rendered hard and remains insoluble; the filtered liquor assumes a jelly-like consistence. We have already seen that washed fibrine does not possess this property, and that the matter dissolved differs greatly from gelatine, both in its properties and in its composition.

Finely-cut meat, when treated by cold acetic acid, becomes partly dissolved, forming at first a jelly-like mass. The solution filters with difficulty, and leaves an insoluble deposit, composed in great part of the *debris* of the various vessels which the muscles contain.

Caustic potass, when aided by a gentle heat, dissolves washed muscular tissue. There remain, however, some *debris* which appear to belong to the cellular tissue, but which may be dissolved at a more elevated temperature. The acids partially precipitate this solution.

M. Chevreul has made some very important observations in relation to the extraction of the principles of the meat, and on the composition of broth: he made a decoction of 500 *grammes* of butcher's meat, deprived, as much as possible, of bone, tendons, and fat; the temperature was very gradually raised to the boiling point, and maintained there for five hours, taking care to replace the water according as it was evaporated. The decoction, when decanted and freed of fatty matter, contained:—

Water	988·570
Fixed organic matters, dried *in vacuo* at a temperature of 20° C.	12·700
Soda .. .. Potass .. .. Sulphuric acid, phosphoric acid, and Chlorine	2·900
Phosphate of magnesia	0·230
Phosphate of lime .. .. .. Oxide of iron	0·100
	1004·500

On introducing meat into a distilling apparatus, M. Chevreul found that several substances became volatilized, such as ammonia, a sulphureous product, a principle endowed with an animal odour, another principle possessing a scentlike amber, and traces of some acid very analogous to acetic acid.

M. Chevreul has extracted from the broth of meat a peculiar substance, to which he has given the name of *créatine*. This substance is obtained by treating with alcohol the aqueous extract of meat, after having desiccated it *in vacuo*; it crystallizes, by concentration of the solution, in straight, rectangular prisms; its density ranges from 1·35 to 1·34. If it be heated, it crackles, parts with its water, melts without decolorizing, and then decomposes, at the same time giving out some ammoniacal products. One hundred parts of water, at 16° C., dissolve 1204 of créatine; whilst 100 of alcohol, having a density of 0·81, dissolve scarcely 0·05 parts, at a temperature of 15°. Sulphuric, nitric, and hydrochloric acids readily dissolve it.

The aqueous solution of créatine is not precipitated by chloride of barium, oxalate of ammonia, nitrate of silver, sulphate of copper, protosulphate of iron, subacetate of lead, or chloride of platinum.

When finely-cut meat is subjected to a strong pressure, there escapes a reddish-coloured liquid, having an acid reaction on litmus-paper, but which does not coagulate spontaneously. If, however, we take the still warm flesh of a recently-killed animal, and effect the division and pressure with great rapidity, the liquid obtained coagulates in the same manner as blood, and we find a small quantity of fibrine in the coagulum. To procure the liquid portion of the meat, we must exhaust it by small quantities of water. We thus obtain a red liquid, slightly acid, which contains some salts, albumen, and extractive matters. Its acidity is due to the lactic acid which is found there partly in a free state.

According to Berzelius, this liquid becomes cloudy at 50° C., and between 52° and 53° throws down a coagulum, of which the formation continues during some time; the supernatant liquid possesses the colour of venous blood. At 56°.5, the greater part of the coagulum is formed, and it will be found precipitated in a colourless state, even although the liquid may have been maintained for the space of half an hour at this temperature. At 62°, the coagulum acquires a red tint, but the liquid itself seems to lose nothing in the intensity of its colour. Above this temperature, the colouring matter becomes itself coagulated; but it is necessary to carry the liquid to the boiling point, to obtain a coagulum which can with facility be separated by the filter. In such case, the filtered liquid is almost colourless. The albumen, which is thus coagulated in a colourless state, possesses an acid reaction which is not removed from it by reiterated washings. We must always take the precaution of evaporating the solutions in which the albumen has been precipitated, should we wish to collect it entirely.

Berzelius on one occasion saw the liquid portion, from which the coagulum had been separated, become covered over with a pellicle on evaporating it at a temperature of about 85° C.; this pellicle was dissolved by the aid of heat in acetic acid, and thus formed a milky solution which was not clear at the end of two months; it was coagulated by hydrochloric acid. The substance found in this case by Berzelius possessed some of the properties of caseum. I have myself occasionally met with caseum in the extractive matters of the blood. It is easy to show that the acidity of the muscular fibre is due to the presence of lactic, or of some other organic acid. We have merely to evaporate the liquid from which the coagulable matters have been separated, and to take up the residue by alcohol at 0·833. The alcoholic solution, on evaporation, leaves an extractiform matter, mixed with crystals of chloride of sodium, and which possesses a very manifest acid reaction. After incineration, this residue is found to be alkaline, which proves that the acid is in part combined with bases, and that it is of an organic nature. To isolate this acid, we pour into the alcoholic solution tartaric acid dissolved in alcohol, until all precipitation of the resulting tartrates ceases, when there will remain in solution in the alcohol hydrochloric acid, tartaric acid, and some other vegetable acid. This solution is then digested over pulverized carbonate of lead, filtered, and evaporated. The residue is dissolved in water, and the solution, freed from the excess of lead by sulphuretted hydrogen, is decolorized by animal charcoal; it furnishes, after renewed filtration and evaporation, a syrupy extract

which possesses all the properties of lactic acid. It is mixed solely with a little extractive animal matter.

The salts which exist in muscular tissue are very numerous; they are similar to those found in the blood and in the other products of the economy—that is to say, we here meet with salts having for their bases potass, soda, lime, magnesia, and even traces of ammoniacal salts. These bases are combined with chlorine, phosphoric and lactic acids. We sometimes, though very rarely, also meet with sulphates.

The extractive matters of the muscular tissue have not yet been very perfectly studied, by reason of the difficulties attending their examination; in fact, they so greatly resemble one another in their general characters that we cannot completely isolate them, whether by the solvent vehicles or by the aid of those reagents with which they form insoluble precipitates. It is not only in the meat that we find these matters; they are also met with in the milk, the blood, the saliva, and even in the urine. Whatever their origin in the economy, they are invariably found to be identical in their chemical properties.

The extractive matters of the meat may be divided into three groups, according to their solubility in the different vehicles. When we act on the aqueous extract of meat by absolute alcohol, this fluid dissolves but one portion; dilute alcohol effects a second separation; and the residue of these two treatments is dissolved by water only. The alcoholic extract made with ordinary alcohol contains several azotized matters, some creatine, and lactates; it is to this extract that M. Thénard, and various other chemists after him, have given the name of *osmazôme*. This name has even been extended to the azotized extractive matters which are met with, not only in animals, but also in plants.

Extractive Matters soluble in Absolute Alcohol.—On evaporating the solution of the extractive matters soluble in absolute alcohol, there remains a syrupy mass which retains its liquidity. It possesses a peculiar taste, at once sour and saline, and its odour resembles that of burnt bread; but, after keeping a very short time, it acquires a marked urinous smell. When heated in closed vessels, it decomposes, and disengages an odour of urine so characteristic, that one might be tempted to attribute to it an origin altogether different; eventually it becomes carbonized.

It is dissolved by water, which gives to it a yellow colour, the precipitate which this solution furnishes with bichloride of mercury and infusion of gallnuts, is but slight when compared to the quantity of matter dissolved. The same may be said with regard to nitrate of silver and acetate of lead. The subacetate of lead precipitates it abundantly. Oxalic acid throws down its lime. Nitric acid forms with it no precipitate of nitrate of urea, even after the lapse of several days; after an interval of a week, there appear some crystals of nitre. This alcoholic extract contains, besides the lactates, at least two azotized extractive matters, of which the one is precipitated by bichloride of mercury, and the other by subacetate of lead. We may separate them by treating the two precipitates by sulphuretted hydrogen, and taking them up again by water.

Extractive Matters soluble in Dilute Alcohol.—The alcoholic extract insoluble in absolute alcohol constitutes an opaque viscous mass, of a deep yellow colour. This residue is not wholly dissolved in alcohol at 0·833, which separates it into two portions,—taking up a yellow extractive matter, mixed with some salt, which is not destroyed by incineration. This extract, if heated till it commences to turn brown, disengages an odour similar to that of roast meat, and may thus be separated in great part from the salt which was mixed with it, by means of animal charcoal. The solution of this matter is, moreover, slightly clouded by infusion of gallnuts and by bichloride of mercury; but it is not precipitated by the neutral acetate of lead, nor by the protochloride of tin.

(To be continued.)

ORIGINAL CONTRIBUTIONS.

ON THE CAUSES OF DEATH AFTER SEVERE SURGICAL OPERATIONS.

By HENRY SMITH, Esq., Surgeon,
Late House-Surgeon to King's College Hospital.

(Continued from p. 573.)

From the cases I have mentioned, and the circumstances connected with them, I think we may conclude that irritation of the nerves, and subsequent irritation and inflammation of the parts supplied by them, are a frequent cause of death after operations on the arteries in the neck. It is impossible, however, to resist the conviction that their proximity to the heart renders an operation on them more doubtful and more hazardous: for this reason, probably, is it that, independent of other circumstances, operations on these arteries are so much more fatal than those performed on arteries of as great and greater magnitude, and surrounded by important textures.

The next case I have on the list is an operation on the external iliac for aneurism. This patient appeared to me to be a very bad subject for an operation: he bore the marks of severe and uncontrollable disease. During the operation the surgeon wounded the peritoneum. The patient died on the sixth day, apparently from irritative fever, lighted up by a low attack of erysipelas. Irritative fever is a frequent cause of death after operations on large arteries; but it is also a cause of death after operations of various kinds; so I shall not particularly consider this now, but defer it until I come to speak of other operations.

The fourth fatal case is the most interesting of the whole; it exemplifies well the two most formidable accidents which may happen after a ligature has been placed on a large artery, namely, secondary hemorrhage and gangrene. It was a case of ligature of the external iliac, by my friend Dr. Davies, of Hertford. The femoral artery had been first tied for popliteal aneurism. Eighteen days after this operation, secondary hemorrhage came on to such an amount that another ligature was placed just below Poupart's ligament; this restrained the hemorrhage. Five days subsequently, some appearances of gangrene showed themselves on the foot, and somewhat increased, but were eventually stopped by remedial measures. On the fifteenth day from the second operation, hemorrhage again recurred; the external iliac was then ligatured. On the fourteenth day, hemorrhage recurred, and subsequently returned. Gangrene of the limb and parts about the pelvis came on, but he lingered for two months after the operation on the iliac. The particulars of this very interesting case were published in the *Medical Gazette* at the early part of this year.

We have, then, here a case where death was brought about by two causes, either of which, separately, are most formidable accidents, and much dreaded by the surgeon; and I will now dwell shortly upon each of them.

Hemorrhage, that is to say, secondary hemorrhage, is a fertile source of danger after operations upon arteries. The surgeon feels the chief anxiety on that score. If we look through the records of surgery, we shall find that a large amount of patients who have died after these operations have perished from secondary hemorrhage.

If it take place to any great amount, it either quickly destroys the patient or renders it necessary that he should undergo another operation. The causes of hemorrhage are various, and not to be entered into in this place. It occurs in different degrees and at different times. The period at which it generally occurs is when the ligature is about to separate from the vessels; but this will differ according to the magnitude of the vessel which has been tied.

Operations upon arteries which would, in all other respects, have proved successful, have failed through this accident. Thus, in the two cases in which the severe operation for tying the innominata was resorted to, hemorrhage caused death, but not until a considerable time after. Dr. Mott, of New York, performed the operation first. In his case hemorrhage took place on the twenty-third day; and it recurred several times, and destroyed the patient on the twenty-sixth day. Graëfe, of Berlin, operated in the other case. His patient was carried off by hemorrhage so late as the sixty-seventh day. Mr. Copland Hutchinson tied the femoral artery for aneurism; hemorrhage took place on the twenty-first day, and reduced his patient so much that he was necessitated to perform amputation.

Thus we see that secondary hemorrhage may occur a long period after the operation; at a period, in fact, when one would be justified in supposing that almost every other accident liable to cause death had been passed by.

Hemorrhage is more likely to occur after a ligature has been placed on an artery for aneurism, because the arterial system generally is more or less affected in this disease, and those healthy processes which take place when a ligature is applied to a sound artery cannot so readily be brought about. But hemorrhage is a much more rare accident now-a-days than it was before the time of John Hunter, when surgeons were in the habit of placing a ligature close upon the aneurismal sac; in fact, at that time the mortality was so great that Sir Astley Cooper has remarked, in his lectures, that it was considered quite a wonder for a person to be seen going about after the old operation for aneurism had been performed upon him.

Mortification of the part which is supplied with blood from the vessels tied is a not unfrequent cause of death. The records of surgery give many instances of this kind; the last case I have mentioned well exemplifies this. Every one is aware what an amount of mischief will result sometimes, when a part has been suddenly deprived of its accustomed supply of blood; not only when this supply has been cut off by the aid of the surgeon, but when, from some injury to the chief vessels, the circulation has been impeded or arrested. Thus it is one of the greatest rules in surgery that, whenever the chief vessels of a limb have been much injured, amputation should be performed to prevent the supervention of gangrene.

This accident is more liable to take place in some situations than in others. Thus it is more frequent in the lower extremity, for obvious reasons; and there is more or less likelihood of its occurrence, according to the situation in which a vessel is tied, and according to the freedom of anastomosis in the collateral branches. Let us take, for instance, the femoral artery. Gangrene of the limb is much more likely to ensue after ligature of the common femoral than of the superficial femoral. The ligature on the former stops the circulation in the profunda, which chiefly supplies the thigh and nourishes it; whilst a ligature on the latter only commands the circulation in the superficial parts, and leaves the profunda free.

Mortification, then, is a result of operations on arteries which the surgeon has a well-founded dread of, for, if it occurs, the case is generally hopeless: death will either soon take place, or there will remain the only alternative of amputating the part at a point above the ligature, which, in such circumstances, is a proceeding fraught with extreme danger.

There is yet another cause of death after ligature of arteries, in the abdomen particularly, and that is common to all operations performed on that part, namely, peritonitis. This has occurred after ligature of the external iliac, but I believe not frequently. In the well-known instance of Captain Seaton, when Mr. Liston placed a ligature on this vessel, death ensued in a very few hours from peritonitis, although no damage was done to the lining membrane of the abdomen.

I now come to the second series of cases—those in which the operation for lithotomy was

performed. I have notices of sixteen cases, of which four proved fatal. We all know that the operation of lithotomy, even at this day, when it is carried to such simplicity and perfection by such surgeons as Liston, Fergusson, and Key, is attended with considerable danger. An operation of great magnitude, and performed upon delicate and important parts, liable to inflammation and all its bad consequences upon the slightest injury, it requires the strictest knowledge of anatomy, and the greatest coolness and perseverance on the part of him who performs it. Nothing has struck me so forcibly as being true, as an observation once expressed to me by the distinguished Professor of Surgery at King's College: that it is particularly in the operation of lithotomy that the surgeon cannot estimate beforehand the extreme difficulties with which he may be overtaken during its performance.

Of the four fatal cases, I witnessed three, and know the particulars of each; and they will be found highly interesting. The first was one where Mr. Fergusson performed the operation in a most admirable manner.

The subject of it was an old man past seventy; the operation was done in Mr. Fergusson's ordinary manner, with the knife, and a small incision in the neck of the bladder. This man did not die until several weeks had elapsed; but the cause of death was one which not unfrequently happens, although there were peculiarities in the case. He appeared to labour for some time under severe irritative fever, having for the first week or ten days gone on well. The wound had nearly healed up, but it opened again; fæces and urine passed through it, and he died with all the symptoms of severe irritative fever. On inspection of the parts after death, a large abscess was found between the rectum and bladder, and an ulcerated opening was found in the former, which fact accounted for the fæces passing by the wound. Mr. Fergusson, in some clinical remarks, observed that the ulceration and suppuration were caused by the urine setting up some unhealthy inflammation.

This case is a curious and remarkable instance of death caused by the chief danger after lithotomy, namely, urinary infiltration. The particulars of the case were published in the *Lancet* for 1846.

We can readily understand how infiltration of urine may cause a serious result, and how easily it may take place, when we remember the mischief it causes in the tissue of the perineum and scrotum from rupture of the urethra, and when we call to mind the parts that are cut in the operation, and the great likelihood of escape of urine into the tissues around. This accident—so much to be feared by the surgeon—may depend upon causes which may be obviated. Thus it may depend upon the nature of the incision into the neck of the bladder; and much has been written upon this subject. Some eminent surgeons have recommended a very free incision. Amongst these is Mr. Samuel Cooper, who has written an interesting paper on the subject. He says that there is no more danger of urinary infiltration after a free incision than after a small incision. On the other hand, many say that a very free incision is accompanied with this and other dangers. The celebrated Scarpa recommended a very limited incision. The incision made by Mr. Fergusson in the neck of the bladder is generally very small; and I believe Mr. Liston advocates the same plan of operating. I think we may reason with propriety that there is less danger attending a small incision.

Urinary infiltration may also be favoured if the external wound does not correspond to the internal; for instance, if the former has been made too high up, we may expect that the urine would not have a free passage, would collect at the bottom of the wound, and cause mischief. There can be no doubt that these matters have in some degree an influence over the result of an operation.

There are several other causes of death after lithotomy. I have already spoken of the formidable nature of the operation, and of the difficulties and dangers which surround the surgeon. In some cases none exist, or they are slight, and the patient, when under the hands of a practical operator, is not kept more than two or three minutes upon the table; but, on the other hand, some unforeseen difficulties may present themselves, which will either render the operation long, painful, and bloody, or will entirely overcome the efforts of the surgeon. It is not to be wondered at, then, that, under these circumstances, the patient should die purely of the shock caused by the proceeding.

The second case is an example of this.

Mr. Fergusson performed the operation upon an old man. There was unusual difficulty in all the steps of this operation. During its performance I could see the difficulties which the operator laboured under, but it was not until after death, when I saw the parts displayed, that I could so well sympathize with him in his difficulty. There was a great depth of substance, even for the longest finger, to get into the bladder. The outlet of the pelvis was unusually narrowed by the extreme size of the rami of the pubis and ischium; and, to crown the difficulty, the stone was large, flat, and oval—most awkward for easy removal. Under all the circumstances, the operation was much prolonged. Mr. Fergusson found it necessary to use the knife frequently, and the forceps were introduced and withdrawn many times by that skilful and persevering surgeon before the stone could be extracted; great bruising of the parts must necessarily have been the consequence; great pain and irritation must have been felt (and this was previous to the introduction of ether in surgical operations).

This poor man suffered severely; a great shock to the system had taken place, and, notwithstanding every care, he gradually sunk, and died on the third or fourth day after the operation, no inflammation nor other mischief having occurred in the pelvis or abdomen.

We see, then, that shock may cause death after lithotomy; this is common after all severe operations, and we cannot wonder at its occurrence after this severe proceeding, when we consider the difficulties and dangers it presents.

The third fatal case I have to particularize was still more interesting and instructive than either of those yet mentioned. In this case death was chiefly owing to a naturally irritable and nervous state of constitution, excited and perturbed by a severe operation.

As I have before mentioned, the result of an operation is greatly influenced by the constitutional endowment of both of body and mind. A naturally vigorous body and firm mind are much in a man's favour; on the other hand, an irritable and nervous state of both are bad for an operation. In such conditions, an injury to the body will always cause a corresponding amount of disturbance; and, when once set up, it requires the greatest skill on the part of the surgeon to obviate, and there is no knowing where it will end. Every one who has seen much of injuries and operations must have noticed how surely any shock to a naturally irritable system will produce symptoms the most serious, and the most difficult to overcome by remedial means. Extreme restlessness, sleeplessness, delirium, tremours, and tetanus are the most prominent of them; and these, as every one who has had the after-treatment of operations knows, are most difficult of control, and most likely to prevent a successful termination of an operation. We may, then, expect to find these unfavourable symptoms occur after such a severe operation as lithotomy. The case I am about to mention is an example.

The patient was a medical man, aged fifty-two, of a naturally nervous and irritable temperament, and belonging to a family possessing the same temperaments. I assisted at the operation, and partly had the care of the case afterwards until death took place. The operation was easily performed, but some deep veins were wounded, which caused a considerable, but not extensive, hemorrhage. In the course of two or three days great irritation came on about the neck of the bladder, rendering him restless and nervous. He had been subject to piles, and now this local irritation near them caused a great aggravation. They became large, swollen, and inflamed, and added greatly to the irritation. Restlessness, apprehension of danger, and want of sleep, were the consequences; the local irritation was somewhat relieved by anodynes in enemata, and by the mouth, but only for a time. He went on day after day, sometimes being calmer and quieter for an interval; but he again got worse. Sleep could not be procured, nor the restlessness be calmed. On the fifteenth day hiccough came on, and persisted with great violence; the pulse was high, and the tongue furred, but it was evident it was merely one of the links in the chain of nervous symptoms which was pulling him to pieces. Vomiting supervened. These symptoms remaining almost to the last wore him out, and he died on the eighteenth day from exhaustion. On the examination, after death, there was, as we expected, not the slightest trace of inflammation of the peritoneum, or mischief about the wound. This latter looked healthy up to the last, and it was found to have been healing favourably.

In this case the local irritation of the wound, and the additional irritation of piles, caused, on a naturally susceptible frame, such an amount of excitability of brain, diaphragm, and stomach, as produced the sleeplessness, hiccough, and vomiting, which could not be restrained, and which ultimately destroyed him.

Inflammation of the peritoneum may arise after lithotomy and destroy the patient. We know how apt this is to occur when the contents of the pelvis or abdomen are meddled with. The surgeon is naturally anxious on this score after he has performed the operation of lithotomy. Inflammation of the kidneys may also take place after lithotomy. The surgeon has a well-founded dread of suppression of urine occurring after it. Hemorrhage sometimes occurs, and proves fatal in this as in other operations, but fortunately it is rare.

Mr. Crosse, of Norwich, mentions a fatal case from this cause; the bleeding took place from the internal pudic artery. Sir Benjamin Brodie also relates a fatal case; the bleeding took place from the veins about the prostate. The artery of the bulb, if large, might throw out a sufficient quantity of blood to cause death. It is impossible, probably, to avoid these accidents in some cases; yet, by carrying the knife neither too near the rami of the pubis, nor too high up, the wounding the pudic or the artery of the bulb may be prevented; but, notwithstanding the knife may be used with the utmost skill and caution, hemorrhage may take place from an irregular branch or branches, which are found here as well as in other parts. It is right for the surgeon when he undertakes this operation to recollect the possibility of its occurrence, otherwise he may meet with difficulties which may annoy him.

(To be continued.)

ERRATUM in Mr. Henry Smith's paper in the *Medical Times* of Sept. 11:—Eleventh line from the bottom of the first column, for *correct*, read *carried*.

THE PHYSIOGNOMY OF DISEASES OR SEMEIOTICS IN THEIR ASSIMILATIVE CHARACTERS.

By GEORGE CORFE (Author of "A Popular Treatise on the Kidney," &c.), of the Middlesex Hospital.

[Illustrated by Portraits of Cases.] (a)

ARACHNITIS.

The great difficulty which the most eminent surgeons encounter in the formation of a just diagnosis in injuries of the head, and the obscurity attending those fatal symptoms which ordinarily follow such lesions, are chiefly witnessed in large hospitals. The above disease is rarely met with, as an idiopathic affection, in these institutions; and I shall, therefore, take the present opportunity of tracing a marked instance of traumatic arachnitis, which terminated fatally

two days ago, and the *post-mortem* examination of which took place yesterday.

The case was the following:—Jas. Meaders, aged fifty-one, admitted May 8, under Mr. Shaw, with a slight wound over the *left* eyebrow, with the frontal bone denuded, and fractured radius, near its humeral extremity, on the right arm. Two days after his admission, he had a sharp attack of erysipelas, extending over the head, face, and neck, which, however, passed away, and he was apparently convalescent from it in ten days. On the expiration of a fortnight from this period, Mr. Shaw observed that he was slightly deaf in the right ear; that there was, moreover, partial hemiplegia on the same side; and that the two halves of the face did not quite correspond in symmetry. As the erysipelas had chiefly occupied the right side of the head and face, it was supposed that this slight distortion did not arise wholly from cerebral disease. However, the house-surgeon, Mr. Dixon, hastily summoned me to see him on the 8th of June, in consequence of a severe fit in which he was then struggling. The face, owing to the former erysipelatous inflammation, was blackened with turgidity, and presented the aspect of a man who had been strangled or drowned. The countenance was a ghastly figure, both in appearance and its features; there were hemiplegic twitchings and convulsive throes of the right half of the body. There had been increased deafness and impeded deglutition for two or three days prior to this fit. The tongue was not protruded with ease, and he could not, or would not, answer to our questions so readily or so easily as he had done. These symptoms led me to suppose that either the cerebellum or pons varolii, or medulla oblongata was suffering from some injury which it had received in the *contrecoup* to the blow on the forehead. Mr. Shaw did not take this view of the case, but regarded the symptoms as the result of active inflammation, beneath the dura mater, of the wound, and that the impaired functions, as it seemed, of the seventh and ninth pair of nerves were the effect of the erysipelatous swelling. The immobility of these muscles, he conjectured, resulted from the œdematous stiffening which cellular inflammation had left in its train. The accuracy of this shrewd and, to my mind, doubtful diagnosis was fully borne out by the *post-mortem* examination. The jugular was now opened, but only a few ounces of dark blood flowed; the temporal artery, and, a vein in the left arm, were successively tried, but not more than seven ounces of blood could be obtained altogether. The pulse rose to 120, but diminished in power, the respirations became deeper and less oppressed, and the ghastly appearance of the countenance gradually subsided. A turpentine enema was administered, and, as he already had taken repeated doses of calomel every four hours, it was deemed unnecessary to alter this part of the treatment. On the following day he was much rallied, but the improvement was of short duration, for in the course of the same afternoon he had another and more severe fit, and sunk in a few hours afterwards.

Post-mortem Examination Eighteen Hours after Death.—Head.—The frontal bone was slightly blackened; purulent matter oozed out from beneath the scalp around the wound. The calvarium being removed, a gush of lymph and whey-like serum escaped from beneath the dura mater on the *right* side. The whole of this hemisphere was coated with a thick layer of coagulable lymph, and the portion of dura mater immediately opposite to the wound was studded with spots of purulent matter, and the lymph on the cerebral surface, at this point, was unusually thick and firm. The substance of the brain was softened, also, in the anterior lobe of this hemisphere. The arachnoid and the whole cerebral matter on the left side, were perfectly healthy. There was no effusion or disease in the pons varolii, or medulla oblongata, only that the lymph, on the right side, extended as far as the base of the brain.

The following fatal case of idiopathic arachnitis, which has recently occurred, also may tend to illustrate the difficulties which surround this class of cerebral diseases. The symptoms, it will be observed, were quite of an opposite nature to the last-cited case, and yet the diagnosis was found to be a correct one by the *post-mortem* examination. I attribute this circumstance, in a great measure, to the fact that, in all acute diseases springing up in an idiopathic form, especially where those diseases attack organs that are essential to life, the recognition of a malady, both in its rise and progress, may be made through the study of the physiognomy, although the patient may be quite insensible, or, at least, unable to furnish us with any information about his sufferings.

ACUTE MENINGITIS—HYDROCEPHALUS—SOFTENING OF THE SPINAL CORD OPPOSITE THE SECOND AND THIRD CERVICAL VERTEBRÆ.

Peter Groves, aged ten, errand-boy at a fishmonger's, was admitted, under Dr. Thompson, June 15.

Countenance extremely heavy, dull, and of a dusky colour; brows knitted; eyes half closed; eyeballs prominent, and rolled upwards; pupils dilated, especially the right; slight twist of the mouth, and a flatness of the left half of the face; left angle of the mouth drawn downwards; nostrils pinched up as in sniffing, and their angles depressed downwards and slightly outwards; feeble in the right arm and leg; skin covered with a dirty, greasy sweat; pulse full and slow; cannot protrude his tongue, or give any account of his sufferings, but he screams piercingly when moved, as though he was suddenly alarmed or frightened; and if he is roused for a moment he turns on his side, and doses off immediately; scalp hot and flushed; bowels confined.

The mother stated that ten days ago he came home from his situation, and was unusually drowsy, but in two or three days more, after the action of some aperient medicine, he rallied and went out a little, but relapsed, and he had been lying at home constantly dosing ever since. She also observed that he could not hold his cup to drink with his right hand, whilst at tea the preceding day.

The doctor treated this case actively, by ordering the head to be shaved, and c.c. ad ℥vj. pone aures. Hydr. chlor. gr. ij. 6tis horis, ol. ricini ℥ss. stat. Notwithstanding the utmost antiphlogistic measures, the child survived only six days after his admission.

Post-mortem Examination.—Head.—Acute inflammation of the arachnoid over the base of the brain only, with layers of lymph, chiefly around the posterior lobes; ventricles distended with clear, pale serum. The medulla oblongata and spinalis, as far as the fourth cervical vertebra, was not only acutely inflamed, but there was ramollissement of the whole portion of nervous matter in this situation. No disease in the other two cavities of the body.

The portrait of this case forms one of the series of the collection in my possession.

CLASS I.

Division II. *Cerebral Asphyxia in Stupor; Countenance livid.*

From Narcotic poisons.
Coma.
Hepatic disorders.
Renal degeneration.
Intoxication.
Syncope (hemorrhagic).
Facial paralysis.

NARCOTIC POISONS.

Of these cases, *opium* in substance, or *laudanum*, the most common of all the poisons taken for a suicidal purpose; essential oil of almonds, monkshood, foxglove, oxalic acid, veratria, and hellebore, have come under my notice during twenty years' hospital practice. With respect to the results of poison by the first of the above-mentioned narcotics, I may here remark that I have never been able to satisfy myself that the smell of laudanum could be distinctly traced in the matters brought off the stomach by the pump, in cases of narcotism by this drug; which negative evidence is contrary to what is asserted in some toxicological works. In the first of these poisons only is the pupil contracted, whilst in all the others the iris is dilated.

It is quite unnecessary to enter into any scientific details upon the subject of poisoning by the narcotic drugs above mentioned, as these matters are treated of in the works on medical jurisprudence and toxicology; besides, I have only enumerated those poisons which have been taken intentionally or otherwise, and which have actually come under my own observation, and am now only desirous to allude to the subject practically, and that for the benefit of the younger branches of the profession.

Now, it is commonly stated by toxicological authors, when treating upon the subject of poison by laudanum, that, after the stomach has been washed out by the pump, coffee or green tea should be administered. This practice is really quite useless—nay, I believe is very often prejudicial. The stomach is only irritated by it, and neither beverage has the effect of keeping the nervous system in a state of insomnia. There is, however, benefit to be derived from constant, persevering, but moderate exercise in the open air; though the patient, at the outset, may be scarcely able to drag one leg after the other, yet have I seen such an individual led out into the hospital garden, supported by two strong men, and what with an occasional bastinado over the buttocks, in the form of a long, flat, and thin splint, pulling the hair, dashing the face with cold water, and then smartly rubbing it dry with a rough towel, and again goading the patient on to walk—I say I have witnessed recovery from the very worst forms of narcotism by laudanum under such rough and apparently unfeeling treatment, whilst tea, coffee, and such like fluids, have been rejected as fast as they were swallowed. If a third person does not follow in the rear whilst the patient is walking, and lay on pretty smartly over his glutei from time to time as he flags and drags along, he will not be kept sufficiently roused to walk at all, and, when once he gets off his legs, you have an extraordinary difficulty to get him up fairly in walking order again.

But it cannot be too strongly urged on the attention of the profession, that all this unsatisfactory, rough, and wearying treatment can be wholly dispensed with by the employment of the electro-galvanic battery. The singular effect of this extraordinary agent is well described in a case recently published by my excellent colleague, Mr. James, the assistant-apothecary, who perseveringly employed it in a most aggravated form of narcotism, with perfect success. The patient, a female, was roused up to complete consciousness in one hour from the time that this remedial agent was in operation.

Two days ago, also, a case of poisoning, by muriate of morphia, was submitted to the influence of the battery. She had taken five grains of the salt six hours before the police brought her to the hospital. There was no probability of recovery; however, the effect of this agent was most striking. On admission the countenance was of a ghastly, livid, and death-like expression; lips tumid and blackish; pupils greatly contracted; extremities mottled, blue, and cold. The respirations were two in a minute before we commenced, and the pulse 100. When the pump had emptied the stomach the pulse rose, under the influence of the battery, to 120, but in another quarter of an hour it sank to 80, and soon ran down to 60. All hopes of her surviving began now to diminish; however, the respirations were equal and deep, so long as the battery was at work upon the patient, but the moment it was suspended the breathing altered in its character. At the expiration of one hour we were induced to remove her from the chair in which she sat to the couch, in order that greater facility might be afforded to the operators; however, in so doing, the wire of the battery became displaced, and its action was necessarily suspended for three or five minutes; the alteration in the breathing, pulse, and countenance was sudden and marked. In

less than eight minutes more she ceased to breathe, and the pulse was gone from the wrist.

On examination of the body, the brain was simply gorged with dark blood; this fluid had no where coagulated: it was black and thick in the left side of the heart, and there was a colourless mass of fibrine in the right ventricle. The stomach was merely ecchymosed in one spot, but all the other organs were healthy.

A very striking and successful case of narcotic poisoning, treated by means of electricity alone, has been published by an intelligent house-surgeon, Mr. Hensley, who, with myself, kept up the administration of electric sparks, unremittingly, during five hours, when consciousness suddenly returned, and the patient rapidly recovered.

There is another point that I must here advert to in this part of my subject, and it is one of the greatest practical utility. In the after treatment of all cases of poison, but especially in those of the mineral poisons and oxalic acid, toxicological writers do not lay sufficient stress upon the importance of keeping the patient in a state of complete starvation during the first two days after the poison has been taken. If a medical practitioner has an acute case of iritis under his treatment, he excludes every ray of light from the inflamed organs, so also the surgeon who has a sprained ankle or fractured limb to treat, orders the injured part to be kept in the most perfect state of quietude; as, therefore, the light, which is the natural stimulus to the iris whilst in health, becomes an injurious agent under disease, so, in like manner, the inner surface of the stomach is stimulated by the presence of food; but when this organ is acutely inflamed, the judicious practitioner is not only desirous of lowering this gastric inflammation, but he is careful not to allow any substance to pass into an organ, the direct tendency of which would be to increase that inflammation by the stimulating process of digestion.

A large number of cases of poisoning by oxalic acid have entered this hospital, in which no untoward symptoms have arisen, and, consequently, no fatal results have followed. I attribute this circumstance to the measures that have been invariably adopted in such instances. It is somewhat distressing to a patient to suffer from urgent and intense thirst, and yet not be allowed the gratification of swallowing a pint of liquid, as tea or toast and water, every ten minutes or so, but to have some bland fluid, as barley-water, served out to him in teaspoonfuls, every half hour; yet such is the treatment that I strictly enjoin during the first two or three days after the stomach has been emptied of its deadly poison.

In all these cases the most perfect abstinence is rigidly adhered to, by strict injunctions to the nurse, and even, as is necessarily the case here, to the patients of the ward also, lest the earnest importunities of the suicide to obtain some food should induce the neighbouring persons to give it. I am certain that this point is most important; and, therefore, I would caution my junior readers not to allow such a patient more than one pint of barley-water, and this to be sipped at, and so consumed in the course of a day and night, for the first two days, in such cases of poisoning.

Many years ago I casually heard, from one of our more observant nurses, that all the leeches applied to persons who had taken oxalic acid died soon after they fell off Knowing the solubility of this acid in the stomach, I did not doubt the fact; however, I was not satisfied until I had watched the animals myself; and I have seen them drop off the surface, curl, and wind about, shrivel, and die in a short time.

But since the above period I find that Professor Christison, in his admirable work on "Poisons," notices the same fact, which was communicated to him by a medical gentleman. But I am inclined to think that the professor will ascertain for himself, from intelligent nurses, that these animals die very soon after they fall off from the patient. I am not aware that this singular effect results from any other poison which may be taken into the system.

(To be continued.)

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of Sept. 14; M. Brongniart in the Chair.

Typhoid Fever.—M. Lafont-Gouzi, of Toulouse, forwarded to the academy a paper relative to the recent communications of Professor Serres, on the subject of typhoid fever. The treatment from which M. Lafont-Gouzi had derived the greatest benefit consisted in the exhibition of calomel in doses of six grains daily.

Treatment of Purulent Absorption.—In order to prevent, or to arrest the progress of, purulent absorption from wounds, M. Gouyon recommends the cauterization of such wounds with a solution of nitrate of silver (ʒj. to ℥j.). The statement being, however, merely an assertion unsupported by cases, it is impossible, for the present, to form a positive opinion of its value.

ACADEMY OF MEDICINE.

Meeting of Sept. 15; M. Broin in the Chair.

LITHOTRITY AND LITHOTOMY.

M. Velpeau remarked that it was impossible to admit M. Civiale's assertion, that relapses were more frequent after lithotomy than after lithotrity. The researches in the bladder were easy and complete after cutting, whereas it was very difficult after crushing to be certain of having removed all the fragments: besides, M. Civiale's own statistics were in contradiction with his opinion. Thus M. Civiale mentioned 51 cases of relapse out of 600 cases of lithotrity, and 42 only out of 4000 cases of lithotomy. M. Civiale attributed the fatal termination of cases of crushing to the clumsiness of the operators, and seemed to assert that he alone could perform the operation with satisfactory dexterity. This might be a convenient argument, but it was a strong one against the method advocated by M. Civiale, for when that learned academician had paid, as some day he must, his debt to nature, what would become of a method which was safe in his hands only? This was however, in M. Velpeau's opinion, a calumny against lithotrity: many names were in the thoughts of all members who were fully competent to operate. On the other hand, the operation was not in itself so difficult as M. Civiale represented it to be: its perils did not arise so much from its complication as from the organic condition of the patients who submitted to it. Finally, M. Velpeau would say, that the cases to which lithotrity was applicable were not as yet properly specified; that it was not yet decided when that operative method should be preferred to lithotomy; that its success had been much exaggerated; and that it presented as much danger as cutting in those cases in which cutting was perilous.

M. Amussat, after some general remarks, endeavoured to solve the following questions:—What are the cases to which lithotomy or lithotrity are applicable? Is there any general method applicable to all calculous patients? Is lithotrity susceptible of much improvement? The two operations could not be indiscriminately performed: this was an assertion suggested by common sense, and proved by numerous facts; but, although this opinion was very generally subscribed to, still, in practice, it seemed that many patients were cut who might have been operated by lithotrity; surgeons too fond of the knife feigned to consider this mode of treatment as tedious, and fit only to be employed by specialists; on the other hand, lithontriptic surgeons were also exclusive in their opinion, and applied their method to cases which should be treated by the knife; hence on both sides an equally unjust exaggeration. M. Amussat was, however, of opinion that lithotrity should always be first thought of, and that lithotomy should be resorted to only in those cases which it was not possible to submit to the crushing instruments. As to the progress of lithotrity, M. Amussat considered that a very great benefit had been derived from the inhalation of ether, which permitted to prolong each operation without pain, and to rid the patients in a much shorter time than heretofore of their concretions.

M. Sigolas then requested permission to read a paper on "the Choice of an Operation in cases of Vesical Calculus."

The choice of an operation in cases of this description was the real question at issue in the present debate. It was the only practical one, and the only one which the author intended to examine. The only general answer which could be made was of so very comprehensive a nature as to be entirely without value, and what M. Sigolas merely proposed to himself was, to lay before the academy the opinions which had resulted from twenty years' observation. The conditions which rendered lithotrity absolutely impossible might be referred to the concretions, to the bladder, the urethra, or the prostate gland. With regard to the calculi, their size or their extreme hardness only might interfere with the operation: their number could not be considered as an objection, because each stone might be isolately crushed and removed in succession. As to size, M. Sigolas had crushed concretions of twenty-five and even twenty-seven lines in diameter; but this appeared to the author to be the extreme limit of magnitude of calculi to be destroyed by the act of the lithontriptist. The hardness of the stone had seldom proved an insurmountable obstacle to crushing, except when coupled with excessive volume. In such cases M. Sigolas had remarked that the stones were composed almost exclusively of lithic acid, and had formed fifteen or twenty years previously to operation. Phosphatic concretions were readily destroyed by simple pressure; and calculi of oxalate of lime yielded generally, without much difficulty, to percussion. The *bladder* interfered with lithotrity only by violent and too frequent contraction, by a shrinking of the walls of its cavity which left no room around the calculus for the action of the instruments; however, this could be looked upon as an obstacle only when the calculi were of a large size and of considerable hardness. Besides, in such cases much advantage might be derived by placing the patient in a warm bath, and endeavouring afterwards to prevent him from voiding urine, in order to distend the vesica as much as possible. Paralysis of the bladder in no instance became an obstacle to the operation; on the contrary, the division of the stone was more readily effected; and, although it was afterwards necessary to use mechanical means for the removal of the fragments, this was now rendered a very easy matter by the use of the improved instruments in the hands of all surgeons, and particularly with the assistance of injections. But the existence of lacunæ in the bladder was an anatomical circumstance most unfavourable to the safe performance of lithotrity; it might even altogether preclude the possibility of employing that method. The concretions being in some cases almost altogether incarcerated in these lacunæ, or the fragments becoming after the operation lodged in these cavities, lithotrity became always uncertain in its results, and sometimes impossible. Two years since, M. Sigolas had presented to the academy the history of an old man who was affected with a calculus lodged in one of those pouches; the case had terminated favourably; but, in another instance of the same sort, M. Sigolas had been obliged to have recourse to hypogastric cystotomy—an operation which was performed with the assistance of the ethereal inhalation, and which had a most happy issue. Tumours within the bladder rendered lithotrity difficult, but never absolutely impossible. Cystitis became an obstacle only by causing violent contraction of the bladder, and by rendering the use of instruments exquisitely painful. *Hypertrophy of the prostate*, now-a-days, constituted no insurmountable obstacle to crushing; and this was due to the introduction of curved instruments into that branch of practical surgery; *strictures of the urethra* constituted only a temporary obstacle, which might in a few weeks be readily vanquished. A professor of the school of Montpellier had proposed in cases of severe

stricture to make an opening into the urethra behind the constriction, and to operate for lithotrity by introducing the crushing instruments through the incision. The commission of the academy had not sanctioned this practice; and M. Sigolas adopted entirely the opinion entertained by the commission, because a few weeks' perseverance might always permit the surgeon to overcome the difficulties presented by a stricture, however severe. The diseased state of the ureters, of the infundibula, or of the calyces might certainly diminish the chances of success of the operation of crushing a calculus, but did did not in any way interfere with the surgical process. Lithotrity was easier in women than in men; and with regard to age, M. Sigolas had operated with success even in the most tender infancy, for instance, in a child aged twenty-three months, who had been presented to the academy. Thus the excessive size or hardness of the stone, its deep and tight incarceration in the vesical lacunæ, and the obstinate retraction of the bladder were the only absolute and insurmountable objections to the performance of lithotrity, and the only circumstances which rendered cystotomy necessary. But it did not follow, from the mere practicability of lithotrity, that it was proper to adopt that method of removing the stone. The mechanical possibility of an operation was separated by a wide chasm from the expediency of its performance. In this respect, lithotrity was submitted to the general rules of surgery, and the discrimination of the cases to which it might with propriety be applied demanded from the surgeon as much knowledge, tact, and prudence as any other surgical problem. M. Sigolas would now endeavour to separate the cases which required one method from those in which the other was indicated.

Taking into consideration the size of calculi, M. Sigolas recognised four sorts: the *small* concretions, the diameter being under six lines; he called *middle-sized* those of from ten to fifteen lines in diameter; *large*, those concretions of fifteen or twenty lines; and *very large*, those calculi of more than twenty lines in transversal diameter. All the small concretions should be, in M. Sigolas' opinion, crushed; the same might be said of middle-sized stones, were it not for certain conditions of mobility and of general health which might render immediate extraction a matter of imperative necessity, as, for instance, an apoplectic predisposition, together with cystitis and frequent efforts of excretion. For large stones, again, lithotrity was preferable to cystotomy, provided the calculi were fragile as recent concretions, particularly phosphatic, generally were, and if the state of the kidneys or ureters offered no counter-indication. As to the very large stones, a distinction should be established. If they were formed of phosphatic salts they might readily be crushed; but calculi of uric acid above 20 lines in diameter were usually of extreme density: their destruction required considerable time, and their angular fragments often occasioned in the bladder great irritation, and too frequently sympathetic excitement of the kidneys and digestive tube. In such cases M. Sigolas thought that cystotomy was safer, but it was not always in the power of the surgeon to persuade the patients to have it performed in place of the apparently singular operation of crushing. Calculi of oxalate of lime seldom acquired so considerable a size, and were destroyed without much difficulty; besides, they were always observed in very young subjects, and were very rarely attended with complications. The number of the concretions, if their size be small, should not prevent lithotrity; and it was of very uncommon occurrence to meet with several very large stones in the same bladder; but if such a case was observed, lithotrity would certainly not be applicable.

Obstinate inflammation of the mucous membrane of the bladder, attended with contraction of the viscus, constituted a counter-indication to crushing. The counter-indication was still more evident if the urine contained habitually pus or blood, or if an ulceration or an organic disease was recognised in the vesica. The frequent introduction of instruments would increase the local damage, and might even endanger the life of the patient. A tumour of an indolent nature within the bladder, not containing much blood, was not an absolute obstacle to crushing; but if the calculi were numerous or hard, cystotomy would be preferable. When lacunæ were present in the walls of the viscus, cutting would be almost always a safer plan of treatment than lithotrity; but disease of the prostate or strictures of the urethra should not cause this mode of destruction of calculi to be abandoned.

The various disorders of the kidney, ureters, calyces, &c., were most unfavourable circumstances for the success of one or the other method; but if one of the two should absolutely be chosen, M. Sigolas would recommend cystotomy.

Sex or age constituted no obstacle. M. Sigolas had operated by crushing in twenty-six children, who all were cured with the exception of one, who was affected with caries of the humerus, and entered into Hospital St. Louis for the treatment of this malady. Cystotomy was afterwards performed by M. Guersant, and the child ultimately recovered. In several of these children, however, lithotrity was attended with much difficulty, and required great care and patience, chiefly on account of the narrowness of the anterior part of the urethra, and the comparatively great dilatability of the deeper portions of the duct, into which large fragments often became impacted.

In conclusion, M. Sigolas stated that to a first class of calculous patients crushing might be advantageously applied; in a second class cystotomy presented less peril, or was alone applicable; and to a third series all operations should be set aside. The progress of lithotrity, and its growing popularity, enlarged daily the numbers who composed the first series at the expense of both others; and a day would most probably come when crushing would be used in almost all cases, and cystotomy applied only to a small number of exceptions.

Meeting adjourned at five.

D. M'Carthy, D.M.P.

TO CORRESPONDENTS.

The Medical Times may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.

A Constant Reader, Devonport.—*The article may be obtained at Mr. Button's, chemist, High Holborn.*

T. B.—*The subject will be again discussed at an early opportunity.*

Mr. Samuel Seaton.—*The case of injury to the spine is under review, and will probably be inserted in an early number.*

Mr. Norris, South Petherton.—*We are sorry for the mistake in the name. The communication will probably be inserted next week, when due attention will be paid to the intimation.*

M. D., Brixton.—*The communication has been received, and a full answer will be given to it next week.*

A Union Surgeon.—*The facts would be more clearly understood if thrown into a tabular form.*

A Country Surgeon.—*The National Institute has published its annual list, which may be obtained on application to the secretary, Mr. Ross, Hanover-square Rooms, Hanover-square.*

Philo, Dublin.—*The information sought will be found in the Students' Number, published last week.*

S. J.—*We do not wish to interfere in professional misunderstandings. A little forbearance would oftentimes be the means of avoiding many unpleasantnesses.*

Senex.—*The case does not present sufficient interest for publication.*

L. F. B. *can learn his profession very well at the place he names. It is not the place, but the student—not the price, but the studies.*

True O. *writes us very just remarks in a very slovenly way. Our correspondent, if he wish to address his brethren, should do us the service of writing legibly, and* them *the compliment of writing elegantly, or at all events carefully.*

Custos.—*There is no medical orphan school; the greater is the pity. The Provincial Association alone has the funds for such an institution.*

A Poor-law Guardian *makes a very sorry defence for his parsimony. The "confiscation of property" is a selfish appeal of small force, where the first necessities and rights of the citizen are in question. The "Guardian" also omits his "name;" another instance of overstrained economy and caution.*

The letter of "C." has been received.

Dr. M'Cormack's *pamphlet shall have early consideration.*

The article on "Quackery," through the "Journal," or the advantage of an hospital appointment, hardly requires insertion.

M. R. C. S. *should address his complaint at the "dismal falling off in the 'Quarterlies'" to their publishers. The retirement of Dr. Forbes on one side, and the lamented death of Dr. James Johnson on the other, accounts for that "dreary waste of literature," without one "bright spot" to rest the eye or memory on, our correspondent complains of.*

Letters and communications have been received from Dr. Aldis; Mr. M'Lean, Ballabea; Mr. Spencer, Hindon; Mr. Rossiter, Williton; Mr. Deverell, Dromore; Mr. Dale, Hanley; Mr. Charlton, Birmingham; Mr. Jeffares, Ballymena; Dr. Goate, Ledbury; Mr. Wills, Crewkerne; Mr. Walker, Wakefield; Mr. Davies, Chester; Mr. Webb, Whitchurch; Mr. Morris, Banbury; Mr. Spurrell, Bexley; Mr. Lewis, Mountrath; A Poor-law Guardian; M. R. C. S.; Dr. M'Cormack; Custos; True O.; L. F. B.; Senex; S. J.; Philo, Dublin; A Country Surgeon; A Union Surgeon; M. D., Brixton; Mr. Norris, South Petherton; Mr. S. Seaton; T. B.; A Constant Reader.

Poor-law.—*The numerous correspondents who have addressed us on this subject will pardon us if, from a regard to other interests, we have found space for comparatively so few. We have sought in our insertions to give samples of the different classes of writers.*

THE MEDICAL TIMES.

SATURDAY, OCTOBER 2, 1847.

CONVENTION OF POOR-LAW DOCTORS.

We are rejoiced to witness the public spirit shown on this subject. The union surgeons are truly up and doing. In the benevolent work before them there is but one mind and one *heart* among them. This is hopeful—cheering—excellent. But to *business* !– Thought—writing—earnestness—zeal—all is nought without that matter-of-fact quality—*business!*

All agreeing that there must be a *Convention*, the first want is an honorary secretary. Our voluminous correspondence on this subject has proved that there are few union surgeons who are so situated as to unite those advantages of leisure, residence, and peculiar qualities which would enable them to do efficient justice to this very troublesome and onerous office. In this difficulty we are happy to announce that T. Piers Healey, Esq., barrister-at-law, 43, Connaught-square, has liberally undertaken to perform for

the profession, so long as it shall be felt desirable, this responsible and arduous duty. His legal knowledge and business habits fit him to render useful services to the *Convention*.

We propose that the Convention be held on Tuesday, October 12. The place of meeting to be at Charing-cross—a central point—near all the Government offices.

Mr. Healey has undertaken to make known the time and place, by circular, to every union surgeon.

He will be happy to receive in the mean time the names of gentlemen who propose to attend. He will also receive and acknowledge any subscriptions towards the expenses of the Convention.

THE FIRST OF OCTOBER.

"Hæc olim meminisse juvabit."

There are certain seasons of the year that are invested with particular importance in the estimation of particular classes of people. Married people, for instance, have a very natural regard for their wedding-day; and those to whom matrimony has proved a benefit and a blessing make a point of periodically illustrating the fact, by enlivening the said day with a hilarious plum-pudding, and certain tender sentimentalities having an embodiment in certain bumpers of wine. A similar good old custom prevails as an enunciation of the advent of every fresh birthday, amongst those respectable souls who are philanthropical enough to think their own lives, or those of other people, worth caring for, and the beginning thereof worth commemorating. Particularities like these have given rise to festivities and celebrations, in annual remembrance of things having a personal or a national importance. In fact, so many of the occurrences in this mundane sphere stand out in their own individual consequence, that there is not a day in the whole three hundred and sixty-five of our planet's gyration that is not marked as being a memento of something in which one person or another, or sundry such, are interested.

The 1st of October, now, is a day in which three very large, but very different, classes of persons, are affected by appertaining circumstances.

The *gentleman*, conventionally so called, easy in his income, and indifferent about the employment of his time, which, like a cumbrous thing, he tries to get rid of with as much pleasantry and as little exertion as possible—this said gentleman, the prototype of Solomon's lilies in all but their innocence and loveliness, hails the advent of the month of October as the season of wily slaughter, when with his dog and his gun he can chase a poor pheasant over hill and dale, and effect its sacrifice in his enthusiastic devotion to the duties of a sportsman. The more he kills, the merrier man he, when, with his companions in bloodshed, he carouses at nightfall over the bottle, and calculates how much of the harmless happy life of inferior creation has been lessened by his prowess of this day. Well! there may nothing really wrong in it, and we suppose there is not, or in a civilized, semi-sanctified country like this, the practice would find fewer patrons amongst those whose professional obligations speak of mercy and compassion, even towards the smallest of God's creatures.

For ourselves, however, we prefer to discourse with the man who can boast of the number of lives he has saved, instead of those he has sacrificed. This man, and we proudly say there are many of his class, is the second of those whom we have alluded to as particularly interested in the 1st of October. His interest in it is only of reminiscence, but it is not the less sincere and hearty and affectionate because it refers to days that are gone by. Rather, like the friendship that twines itself round the memory of the dead, it clings the closer and the more tenderly as the lapse of time threatens to tear it from an embrace in which the best and warmest emotions of the soul are enwrapped!

The individual now before our mind's eye is the general practitioner of the day. There are many varieties and subdivisions of him, but we will take three of his phases in which to view him according to the purport of this article.

There's the patriarch of the profession, then, with his grey hairs and tottering gait, betokening lengthened years and lengthened servitude in a calling to whose members the honour of a prolonged life is a privilege rarely granted. The commencement of October revives in his good old heart feelings that lack little of the freshness of that memorable time when they first visited him in the ardour and enthusiasm of his boyhood. He remembers how the spirit of solitude sat upon him as he grasped the last hand extended over his father's threshold to bid him a voiceless good-by, when he turned towards London—a student! He recals the feelings that entranced him when he listened for the first time to the prelections of Hunter or Brookes, or the earlier discourses of Abernethy or Cooper. He thinks of the eagerness with which he drank knowledge from those fountains so celebrated for imparting it; and how gladly he availed himself of the various opportunities of becoming practically eminent in the quiet country place he had fixed upon for a residence. And then he speaks of the good that has come of these things in upwards of half a century's experience. He recounts, triumphantly, his difficulties and dangers and gains, and, in measuring these last, wonders how they will extend themselves, with advantage, over the long line of children and children's children that grace his home and make it happy! Nor is he forgetful, in gratitude, of the many occasions in which Providence has kindly placed in his way the opportunity of doing good. He has a store of little pleasantries in this wise with which to greet those who gather round him in company. The scenes of sorrow for the dying or the dead, in which his solitary voice has breathed a balm into the heart of the helpless mourner — the occasions of anger and inquietude, when his mild intervention has stayed the strife, and stood, angel-like, an interpositor of threatened bloodshed—those he has relieved in their hunger, and those he has rescued from ruin, are happy items of lifetime, upon which it is at once his pleasure and his honour to dwell. These are the things that make grey hairs really venerable, and that extend to the authors of them a hope beyond the grave! May it be the privilege of future, as it has been of previous, generations of our profession to have these goodly truths told of them as leading traits of their history!

Then there is the practitioner in the height of his popularity—every hour of his time employed in the acquisition of fame or of fortune. Busy though he is, and bright as are his possessions and prospects, he can yet spare a leisure thought reflectively upon the time when he was only at the foot of the great eminence whose summit himself constitutes. To him the commencement of October brings the remembrance of the time when, not out of his boyhood, he wondered whether he should ever be actually a man—when, starting as a student, he tried curiously to peer into future years, and see whether he should pass his examination, and become a practitioner, and have patients who would trust their lives in his hands—when, instead of being dependent upon the bounty of his father, he would be able to earn his livelihood, and have spare money of his own. These old thoughts, painful and anxious as their first visit was, are now called up as good jokes, the hobgoblins of youth, and the rich practitioner drains a glass to the memory of those cloudy days, when he little thought how bright a sun of prosperity was in store for him. Let these men, who have enough and to spare, remember in kindness those who are in the outset of a life whose beginning they themselves found difficult. The man who has toiled up the steepest parts of the hill of existence must have a poor heart if he cannot, when out of danger, lend a hand to those who are struggling in the midst of it.

We say thus much, to introduce our third friend in the list of practitioners. He is last on the said list, but the time may come when he will prove "the star of the goodly company." He has had his name on a shabby door, in a secluded street, just twelve months; and the 1st of October recals to his mind the time when he went to London with a gay heart and good prospects, eager to carry off the honours of studentship, and make them tributary to his triumph as a practitioner. He was the best man of his day—took the highest prizes and honours, and stood alone in the achievements of his examination. But he had barely passed this, when his father's death left him penniless, and he began the world with its frown and ill favour in his face. A year has gone away, and he has made little head against these ungracious things. Patients are few; payments fewer; and debts numerous. Never mind, my fine fellow, your time has to come!

> "Endure and shrink not; you of nobler clay
> May temper it to bear—it is but for a day!"

The 1st of October reminds him of when he commenced his London studies, and of the cheerful prospects connected therewith: he thinks of these things, and contrasts them with his present difficulties, and wonders whether brighter days will follow. Yes, many that are much brighter! The booby that rolls in yonder carriage, who got into practice when good men were wanting, will one day tremble in his wealthy shoes when you meet him in consultation. There was only one chance open to *him*; there are many open to *you*, generous-hearted, accomplished boy: take your time, and you will take your treasure also!

So much for the past Octobers, and those concerned in them. We must now say a few words about the present, in which the last of the three great parties we mentioned are interested—THE STUDENTS. Those of them who have studied in bygone sessions, and those who are now commencing studentship, are alike subjects of interest and anxiety to us. Upon each forthcoming session we have willingly devoted special columns to their service, and we cheerfully continue the practice. Retrospects and prospects are often equally profitable; in the medical profession they are especially so, inasmuch as the experience of those who have toiled through the difficulties and have attained the honours of practice can be made to bear with frequent advantage upon the minds of such as are beginning

the hazardous career of physic. It is hazardous, however, only to the idle and the dissolute; the genuine sudent will ever find its most pleasant and profitable paths open to him. Let him, both early and late, betake himself to the duties which his choice of a profession imposes; let him pursue its difficulties with ardour and diligence; and successful studentship and a bright career of practice will assuredly await him. In a season like this, a word spoken admonitively is seldom without its advantages. There are many suggestions to offer, and many warnings to give, concerning the student's life, which we shall submit in due form in another article. In the meantime, we congratulate those who have commenced the session of 1817-8.

THE NECESSITY OF ORGANIZATION.

There are three epochs in the history of all those voluntary associations which survive to develop them. The first is that of enthusiasm, when popular feeling, rallying all its gigantic energies, rushes into the struggle against usurpation, violence, and wrong, with an undisciplined but dauntless devotion. The next is that of dismay and indifference; when cowed by defeat, passion subsides into apathy, and courage dwindles to despair. The third is a renewal of spirit, of hope, and of strength; the heart recovers confidence, the energies react, and the resolution to obtain redress and to establish the cause of truth revives with a subdued but a more enduring and irresistible vigour; the character of permanence is impressed on the organization, its opinions are authoritative, its progress steady and sure. We trust that the National Institute has arrived at the last epoch.

Very few associated bodies survive the second stage to which we have referred. The apathy of the public is communicated to the official authorities; doubt paralyzes action; new objects entice, and the old love is abandoned to make way for the new. Unless, also, the leaders of such associations are deserving of confidence and respect, it is quite impossible, after the first defeat, that they can ever regain their influence. At the onset of every great movement, little men may attain high positions; the public do not stop to investigate characters or claims: their cause fills their minds, and they care nothing who may be the instruments, provided that the end be achieved. Defeat, however, instils circumspection, individual claims are scrutinized, and in proportion as these are affected by the examination is the chance of maintaining the integrity of the associated body. It is scarcely necessary to apply these remarks to the history of medico-political associations. How many of them have we not witnessed careering valiantly before the gusts of popular enthusiasm, and, when the atmosphere has calmed—

> "Go down at sea,
> When heaven was all tranquillity?"

A leaky hull, a bad pilot, a sunken reef—one or all—have stranded the fated vessel.

The National Institute has escaped these insidious dangers, and the wreckers who were anxiously watching her from the coast, gloating over her anticipated destruction, and counting their spoil, are now retiring with visible chagrir and uttering impotent sarcasms at her speed an trim.

Our friend the Coroner cannot retire from th beach without stopping to cast many a wistfu lingering look at the prize that has escaped his violence and his rapacity. What a booty would e not have had if the ship had struck! What ood characters would he not have plundered—hat a number of excellent motives would he not ave chained to ignominy—and what honourable eelings and high hopes would he not have ncerated and belied! Disappointed man! one cannot help sympathizing with his misfortunes, despite his malevolence and his vicious practices! The poor fellow is almost rabid with vexation:—he foams at the mouth, stammers, shrieks;—ever and anon, in his moments of ecstasy the words, "National Institute," Apothecaries' Society," escape incoherently from his lips; he clinches his hands, fights with shadows, and, like Molière's Miser, strikes his *own arm*, and cries out that he has at last caught the thief!

Thomas Wakley has declared at various times that the National Institute and the Apothecaries' Society have been duly joined together in holy matrimony, and he seems to think that what *he* has joined together no man shall dare to put asunder;—nay, he even denies this right to the interested parties; and, notwithstanding the recently published resolutions of the National Institute, protests that they are still inviolably united, and that his fiat is necessary to a dissolution of the bond. The National Institute remonstrates with the Society of Apothecaries—Mr. Wakley deprecates its resentment—he is ridiculed for his pains Blessed are the peacemakers!

It would be mere waste of words to dilate further upon the amiable benevolence and gracious solicitude which the Coroner displays upon all available occasions for the success of the labours of the National Institute. We are much obliged to him, on the part of the general practitioners, for his disinterested kindness, and for those gentle sympathies which so enviably distinguish him, and which he is always so prompt to exhibit in the cause of independence and truth. The tender spontaneities of his heart are exceedingly affecting.

It is clear, however, that, without his assistance, and in despite of it, the cause is advancing, and will triumph. There is an awakening to their great interests throughout the profession They are beginning to feel the strength and the ardour of combination. The union surgeons are rising to a sense of their wrongs; they have long been trampled upon by ignorant and arbitrary poor-law guardians; their injuries have found a voice, and they are resolved no longer to be the helots of a mercenary plebeian despotism which recognises neither the rights of suffering humanity nor the proprieties of gentlemanlike demeanour.

The National Institute declares itself prepared to aid the labours of those gentlemen who have stepped out to defend the cause of their injured brethren, and we hope that this assistance will be as useful as we know it to be zealous. The union surgeons may now begin their crusade under flattering auspices; and if they should now neglect to combine, and to insist upon redress, they can blame themselves alone. Mere talk never yet carried a cause; *action—action* is the great political engine to break down abuses or to impress new principles upon the institutions of the age.

The profession are usually too ignorant of the discipline and tactics of a popular agitation; and they are also too reserved, too obstinately dignified, to employ the proper means, when they happen to know them, to compass a large success. Their duties are antagonistic to public commotion; these lead them rather to the quiet chamber of death than to the noisy and tumultuous arena of political strife. Their habits are detrimental to public warfare; personal timidity, a vague dread of public opinion, unacquaintance with the arts and practice of the hustings, all conspire to render their efforts in the cause of justice inefficient and abortive. Let them know, however, that there is no mystery in public business: very indifferent people make very good public men; all that is required to enable a man to do his duty in that capacity is the *resolution* to do it. We hope that hundreds of union surgeons will come to this resolution.

NORWICH HOSPITAL DOMESTIC ECONOMY—WATER AND WASHERWOMEN WANTED.

Charitable institutions are places which, we are taught to believe, are not only founded and supported by persons of high moral character, but who also take so much interest in their prosperity as to use the most efficient vigilance to prevent the existence of abuses amongst them. Founded, as these places are, ostensibly for the promotion of the best objects, and managed by the best men, to call in question the efficiency of the one or the integrity of the other requires no small amount of moral courage. The reformers of charitable abuses have not only difficulties to encounter in bringing before the broad light of day the imperfections which they discover, but in making that impression on the public mind which is absolutely necessary to accomplish beneficial results. No class of persons know better how to shield abuses than the benevolent managers of eleemosynary institutions; and, when compelled to stand upon their defence, none use more dangerous weapons against an adversary. He must, in the first instance, look well to himself, for, though at the onset he may have made the attack, he will speedily find that for a season, at least, he must act on the defensive. His character will be assailed—his motives impugned—his conduct denounced—while the divine armour of the governors, as impregnable as the far-famed shield of Achilles, bids defiance to the keenest shafts. We should be led to suppose, if permitted to draw conclusions from what has already occurred, that all things attached to religious or charitable institutions—be they good, bad, or indifferent—are "tabooed," and to lay hands upon any one of them is a sacrilege punishable without benefit of clergy. Yet, in spite of danger, there have been individuals with enough courage and philanthropy to attempt the removal of that which disfigures charity and curtails its usefulness.

Such champions have been found on behalf of the Norwich Hospital in the persons of Messrs. Dalrymple, who, having discovered certain abuses in that establishment, considered it their duty to make them known to the public. This was just what it was their duty to do, though there has been an attempt by some parties to call in question the propriety of such a proceeding. It would have been an act of supreme folly, after having ascertained how much the hospital needed reformation, to have left the work to those under whose eyes gross mismanagement had occurred. Doubtless there would have been got up some select meetings, many commonplace speeches, and more good promises; while the persons for whose benefit the hospital was especially erected would have derived as much benefit from them as the world does at the present time

from the efforts of philosophers to find out perpetual motion.

The facts, however, are out, and they are certainly of a very astounding nature. "The comparison," it is said, "of other provincial hospitals with Norwich, first opened our eyes to the enormous disparity between their cost. We found that Norwich was more costly, that it admitted fewer patients, and cured fewer per cent. than any of its size; that, in fact, compared with others, its utility was in an inverse ratio to its cost." In order to establish the truth of these assertions, there is a comparison made with the hospitals at Bedford, having 727 patients admitted yearly; Cambridge, 742 Derby, 741; Hull, 745; Leicester, 776; Northampton, 882; Nottingham, 1128; Oxford, 922; and Worcester, 971, with those of Norwich, having only 607 patients. We have not here space to give the summary, but from it we learn that at Norwich the cost of maintenance per head is 120 per cent. dearer than at Hull, and 4½d. per day more than at Derby; the cost of drugs is 4s. 8½d. more than at Nottingham, and the patients remain 24½ days longer. There are 302 patients fewer cured than at Leicester; the cost of washing is 220 per cent. more than at Derby; the cost of nursing is 322 per cent. more than at Hull; while the quantity of meat allowed per week to each patient is 2lb. less, and that of bread 1lb. 6oz. less, than at Leicester; and the quantity of beer 5½ pints less than at Oxford.

It appears also that the charges for night-nurses in the matron's account amounts to £93 in each of the years 1845 and 1846, for 1917 nights in the one year, and 1869 in the other; the total number of accidents and operations having been 160 and 178 in each year respectively. The whole number is equal to 36 and 37 nights' nursing per week. "We do not pretend," it is remarked, "to say how it is; but other hospitals, whose proportion of cures far exceed Norwich, manage to attend to a much larger number of patients in a week with 21 night-nurses, than Norwich does with 37; and, next to professional skill, on nothing does cure more depend than nursing." After referring to the diet of the house, in which they say that there is a difference of above 400 stone of meat and 200 stone of bread, between the estimated and actual consumption of 1845, and of 80 stone of bread and 300 stone of meat in 1846, they mention the following defects in the establishment:—1. No efficient system of checks, so that it is not known the nurse does not say a patient is to have full diet, when middle or low is ordered. 2. No means of ascertaining that the quantities of food sent in by the tradesmen correspond with what the patients and the establishment do and ought to consume. 3. No check on wine, spirits, porter, or beer; so that these articles may be drawn by the nurse out of stock long after the patient has ceased to have any of them. 4. No taking stock. The cook and all the night-nurses sleep out of the house, so that there is an easy mode of conveying anything out of the house. The perquisites at the hospital must, under these circumstances, be very good; and for the parties just mentioned there must be good fat livings, and we doubt not but the "inner man" or, rather, woman is abundantly nourished thereby. Doubtless these parties think the management of the hospital bordering on perfection, and, if called upon to give evidence, would exhibit it in such fair colours as to win the approbation of all other establishments of a similar kind. We cannot wonder that so many nurses are wanted for pregnant as they must be with beef, mutton, and beer, they must be soon wearied and require help. John Hunter used to say that bad surgeons were like bad carpenters—they made work for one another; the sentiment, we suppose, would hold good if we apply it to nurses — the Norwich Hospital itself being witness.

But, while the female functionaries are taking care of themselves, they do not manifest much regard for the external comforts or cleanliness of their patients. Messrs. Dalrymple tell us—"It has been complained, and it can be proved, that one towel only is allowed per ward per week, so that persons otherwise afflicted, but whose skins are wholesome and clean, have to wipe on the same cloth with those whose skins are diseased and loathsome. That soap is not to be had in some of the wards, though allowed as a matter of course from the stores of the hospital, while articles are sold and made a source of perquisite by the nurses in the wards." It appears that at one time there was a man in the hospital covered from head to foot with some cutaneous eruption—"as bad a case as ever was admitted;" and yet the other patients with clean skins, viz., free from disease, were obliged to use the same rags to wipe their flesh as their leprous companion. Such an occurrence would be disgraceful to any institution, much more so in one established for the express purpose of restoring health to those who, in addition to poverty, are afflicted with disease. Notwithstanding all the efforts of the house-visitors, who made a report, this part of the statement of Messrs. Dalrymple could not be got rid of, and a lady, whose servant had been in the hospital, had complained to the Rev. D. Mathias, that the patient had been compelled to use the same towel as those whose skins were diseased; and on inquiring of the matron he found the statement was correct.

These statements having been made public, as a natural consequence the managers of the hospital met together in order to investigate them; and it has been resolved that for the future there should be more towels, soap, and water furnished to each ward; and that, for the hot baths especially, the number of articles for the drying of the body should be increased. We congratulate the patients with healthy skins upon this important move, and we hope that the good work on their behalf which has thus been so well begun will be rendered complete by the addition to the establishment of a fresh number of washerwomen and a good supply of soap and water.

It is a matter of regret when charitable institutions are found to be inefficiently managed; and, while it is an ungracious task to expose the faults of those who hold offices of public trust, it is, nevertheless, oftentimes an imperative duty. We sincerely hope that the governors and other official persons connected with the Norwich Hospital will henceforth look more to their servants, that they efficiently perform their duties, and that the sick poor under their management may have all that attention which such an establishment professes to afford.

MR. MAYBURY AND CORONER PAYNE.

The droll gentleman—who was supposed by competent authority to have perished under the influence of temporary insanity about the period of the City election—has been lately showing that the *effect*, at least, was not so *total* as was fancied, by a long letter to a sympathizing contemporary Mr. Payne, being very systematic in his logic, can only respond to the accusations made against him in our columns by letters to contemporaries! The same ideas of the fitness of things which offered this infinitesimal dose of public humanity as the opponent of the Prime Minister and Baron Rothschild—and to the first constituency in the empire!—pervade his exculpatory correspondence. Charged with some folly at the assizes, he is just the man to go to a judge-and-jury club to deliver his defence!

Now, how did Mr. Maybury, who stood on excellent terms with Mr. Payne till—as a City voter—he was unable to recognise the coroner's singular merits as a parliamentary candidate, first find out how much he had lost in coronatorial estimation and influence, by his unfortunate lack of *political* discrimination? In this way: Summoned by the coroner's authority, Mr. Maybury bore all the inconveniences of personal attendance at the time and place fixed. Mr. Maybury had visited the deceased on the first discovery of the suicide. He had been summoned by the coroner's warrant and attended. Coroner Payne, however, contrived to do without his testimony, and Mr. Maybury, *therefore*, must contrive to do without the fee! This is Mr. Payne's logic! or, as Shakspere has it, "crowner's quest law" in the city of London.

Mr. Maybury has sent us his remarks on the defence of Mr. Payne, whom he accuses, with some evidence, of mis-statement, calumny, and misrepresentation. It is wholly needless to publish the statement. There can be little doubt that Mr. Maybury was *not* told before the inquest that his attendance was unnecessary; and there is none that he behaved there as a professional man should; or that, being summoned by the coroner, he is entitled, in reason as well as in law, to the statutory fee. Mr. Maybury assures us that he will in a day or two test the point; and, when he does, Mr. Payne—there can be no doubt of it—will receive a very useful lesson, both in law and equity.

CONVENTION OF POOR-LAW SURGEONS

[To the Editor of the Medical Times.]

SIR,—Will you allow me a portion of your valuable space for a few observations on the above subject, and in particular with reference to the letter of "C.," given in your leader of Saturday last? The remarks contained in that letter are pointed and forcible, and I fear calculated to deprive the poor-law medical officers, to some extent, of the support of the other portion of the profession; and I am sure you will excuse me, if I think that your space did not allow of your dealing so much destruction to the fallacies of our friend "C." as those fallacies deserve. "C." sets out by throwing all the blame on the profession for the present preposterously unremunerative salaries of those officers. In this I believe that "C." is partly, but not entirely, correct. There cannot be the slightest doubt that the *Times* correspondent, "S. G. O.," has truly represented that the *ultimatum* of a large number of poor-law guardians is, regardless of consequences to the poor, to "keep down the rates"; but, before we condemn the local boards unsparingly, we should remember that there is to be found among them a section of gentlemen who, feeling to the fullest extent the evils complained of, and striving to emancipate their medical officers, are yet met by the argument that, if even every medical officer were to resign, plenty others would be glad to fill their places. I could mention a parish, Sir, where such high-minded guardians are to be found—(and the pre-

fession must one day have an opportunity of doing them honour)—gentlemen who have for years been in advance of even the medical officers themselves on this subject. I must, however, express my regret—and it is a painful fact—that there should be found in the ranks of the opposing parties gentlemen who, though poor-law guardians, yet belong to our own profession. Thus those to whom their medical officers might with reason look for support to the rational claims of those officers prove to be the greatest obstacles. Now, I take it that your correspondent "C." (and I would chide him with tenderness) would *join* them in their untoward dispositions and feelings towards their professional brethren. It *is* to the profession, to a great extent, that the blame is due, but it is to the whole mass of the profession—it is not to individuals. Let "C." ask himself what is the position of those to whom he attributes all the odium? It is not even the whole body of poor-law medical officers, for they have done nothing which the profession in general have declared to be dishonourable; and they have never *yet* been able to act in concert. Is it the individual who has singly taken office, when that office was essential (as I think by no means improbable in some cases) to his daily bread, or to assist in relieving his family from privations? Is it the newly-made medical man, who is naturally impatient for something whereon to exercise his newly-acquired powers, even were it but to banish the *ennui* which must frequently arise from the sudden cessation of those anxieties and arduous efforts which, before passing his examinations, left him no leisure to think of anything besides? Or he to whom thirty guineas a year may be the only thirty guineas he may be able, at an early period of his strictly professional life, to get? The answer must be, that it is not to these that the odium belongs: for, as individuals, they are rendered by circumstances perfectly powerless. It follows, then, that it is the business of the whole profession. The interest of the subject does not belong to the *present* officers only, nor the present *time* only. It is also prospective; and I think there are few who will not agree with me, that the whole profession have an important stake in it. For we may rest assured, that without confining ourselves to individuals and the present, the degradation of such a large body of duly-qualified and, in very many instances, able and scientific gentlemen cannot but depreciate our profession in the eyes of the public.

Let the poor-law medical officers, then, at once take steps and unite; it is *their* interest *directly;* let the whole profession be earnestly requested to second and assist, for it is their interest at least indirectly. In the suggestions of Mr. Levitt, of Somerset, I perfectly coincide. *Let a memorial be agreed upon;* and a deputation wait on the *Home Secretary*, and also on the *Poor-law Commissioners*. Let local boards be simultaneously memorialized. Let the thing be begun by some few zealous members of stability in London, and let all the poor-law medical officers in England and Wales be invited to attend; and let each one *enclose a half-guinea* to pay for the expenses of preparation; and I think there will be found many of us at our posts.

Apologizing, Sir, for taking up your valuable space, I must still beg to tender you my personal and best thanks for your able advocacy of the interests of the profession generally, and for your exertions in this matter in particular; and I beg to remain, Sir, yours, &c.,

William Hinds, M.D.,
Poor-law Medical Officer.

[To the Editor of the Medical Times.]

Sir,—From your *Times* of the 25th inst., which I received this morning, I perceive that there is in contemplation a "Meeting of Poor-law Union Surgeons." Permit me, Sir, being one of the unfortunate, to say that I will be glad to join it and render it any assistance in my power in this locality. The remuneration of medical officers is a subject upon which I have of late written several letters. And coinciding with your correspondent (Mr. H. W. Livett), that statements inserted on this topic in medical journals only are seldom perused unless by our equally unfortunate brethren (the public generally, whom it is of importance to enlighten on this subject, remaining in ignorance), I was fortunate enough to procure—through the kindness of the editor—their insertion in *Douglas Jerrold's Newspaper*.

I presume that if your correspondent "C." would peruse my letter therein, dated 18th inst., signed "Medical Officer," it might tend to enlighten him on the subject which he derides. I think that the medical profession owe a debt of gratitude to Douglas Jerrold for the powerful manner in which of late he has advocated their just claims upon the public.

I am, Sir, your obedient servant,
Hugh Hastings, a Poor-law Officer.
Stokenchurch, Sept. 29.

*** We are happy to bear testimony to the good feeling which—equally to the high talent of the editor—can we say more for it?—has been weekly displayed in favour of the medical profession through the pages of *Douglas Jerrold's Newspaper*. We are all indebted for such efficient advocacy of the interests of science.—Ed.

[To the Editor of the Medical Times.]

Sir,—I perfectly agree with your correspondent, Mr. Livett, in everything he says, except the following:—"I think the remuneration regulated by the number of cases and their distance, and paying us per case, would be equitable and satisfactory." Now, I think nothing could be more unsatisfactory and unjust, alike to the poor and doctor. By such an arrangement, the pauper and doctor would be at the mercy of the relieving officer; and if the medical order involved a certain expense of but a few shillings, it would be obtained with great difficulty, and then only in extreme cases, and after disease had taken such fast hold of the patient that many lives would be sacrificed. As an illustration: I attended a parish for many years at £6 per annum, and had plenty of work for the money. However, the vestry agreed to discontinue the yearly salary, saying they would give orders when necessary. The consequence was, that, for four years, they never gave an order or paid one shilling for attendance on their paupers, and this with a poor population of 500. It is true this was under the old law; but such has been, and will be, the result under the new. For instance: I made an application to the guardians of a union that I attend for increase of salary, and named the number of cases I had attended during a year (viz., 150 cases; salary, £25; population, 5000). They refused my application. I then threatened to apply to the commissioners, since which (one year) I have only had forty cases. And again, every union surgeon knows the difficulty in getting an order for what are called extra cases; indeed, so very cautious are some relieving officers, that I have heard of some who, when they give a medical order to a woman with child, add a note—"Not to attend in labour." For these reasons I fully agree with your correspondents, Mr. Livett and Mr. Cantrell, that a fixed salary, based on the population's extent and poverty of a district, and to include all cases, will be the most just and best, both for the paupers, doctors, and rate-payers.

But this subject will, no doubt, be fully discussed at the meeting of poor-law doctors, which, I trust, will be well attended; for, if we do not now bestir ourselves, we deserve to suffer all the insults and injustice we have hitherto undergone.

I am, &c.,
One who has been a Parish and Union Surgeon for Twenty-five Years.
Sept. 25.

[To the Editor of the Medical Times.]

Sir,—It is with feelings of no common character that I see the dormant energies of an injured race of men aroused into action to throw off the incubus which has so long lain like an Atlas upon the individual welfare of the poor-law surgeon. The weight of intelligence which is about to bear on those who have the remedy in their hands, and the undeniable existence of the legal iniquity, are of themselves sufficient to guarantee a shortness and want of severity to the struggle which might not otherwise have been the case in those days of inaptitude to medical legislation. That a modification of medical remuneration is in contemplation at present cannot be doubted, and that it will be a niggardly one may be reckoned on with as much certainty; the various enactments emanating from Somerset-house, and others which have been disengaged in a more liberal atmosphere, and taking effect in the sister island, sufficiently prove that this will be the case. This, however, with the proper interference of the interested portion of the medical profession, supported by the rest who may not apparently be so, but who are, can not and will not take place. It is known to legislators that medical men are the most enlightened, liberal, and have the most correct notions of social improvement of any class of men of the present time. They likewise know that the influence for good which they possess is exerted and extends over every part of the British dominions. How can it be thought, then, that any government can be indifferent to the demands of such men? They cannot, and they are not. The blame lies with the profession itself: it will not allow them. That great destruction of strength, disunion, has ever prevailed amongst us, and shorn the hair of our energies for any improvement in our social and political status.

The present position of the medical connection with Somerset-house is lamentably debasing. Independence of thought and freedom of action, the natural qualities of enlightened understandings, cannot exist, much less be exercised, when allowed to be controlled by the hands of those who have never had their intellects impressed with the noble claims of our science. They have ever shown that their only object is to have the greatest good done at the least price. Instances might be brought forward where this maxim has been objected to by the medical man interested, but not in a way to have any effect on the iniquity which exists in every place, extensive as the law itself. They number by scores and hundreds who have had their indignation raised to its highest pitch, by the ungenerous imputations of ignorant guardians to their acts of self-denial and consecration for the poor under their charge: yes, and such we are content to pocket—a proof that we have some claim to the honourable designation of medical paupers as well as medical gentlemen.

"Organize, organize, organize," was the exciting cry of the late Dr. Chalmers, when concerned in the accomplishing of a great purpose; organization took place accordingly, and the accomplishment of the purpose was the result. The same should be the war-cry of medical men holding situations under the Poor-law Act now; and as sure as our organization is complete will our intentions be carried into effect. The shoulders of every one must be put to the wheel, and as certain as it is done the wheel will move.

I see you have occupied the pages of the *Medical Times* of late with the personal grievances of union doctors: this I think unnecessary: following out the tale of one is the tale of the whole. I may be allowed just to mention, that I have the exceedingly large allowance of two shillings per case, and have to perform the operation of vaccination for the very liberal fee of ninepence. We must surely, Sir, be as "valiant as the wrathful dove, or most magnanimous mouse," to sit quietly under such disgraceful metings.

To conclude: I hope you will continue your strenuous and able advocacy of the rights of union surgeons. Your paper is now the acknowledged organ of the profession—raised to this eminence by your talent, liberality, and zealous endeavours in the promulgation of scientific knowledge amongst its members. The country

surgeons are ripe for the contest. It is only for those in and about the metropolis to be stirring themselves, and making arrangements for the proposed meeting. "The time is most favourable, and not a minute should be lost."

I am yours obediently,

Haworth, Sept. 23. A Poor-law Surgeon.

[To the Editor of the Medical Times.]

Sir,—In the last number of your valuable periodical there are two letters from Union Surgeons on the subject of their grievances, and the wrongs which they endure, in common with other members of the profession who have been unfortunate enough to enter into a contract with board of guardians of poor-law unions to attend the poor and supply them with medicines on terms most ruinous to those who undertake such a task.

The question which naturally presents itself is, How can any man in his senses be guilty of such folly as to undertake these ruinous sacrifices? Can any one be so ignorant of human nature as not to know that the public invariably despises whatever they do not pay well for; and that boards of guardians, being no exception to the general observation, will almost certainly depreciate the services of individuals who seem to rate them at so mean a value? What opinion must the public have of men who seem so lost to a sense of what is due to their profession and to their own character, as to degrade themselves by accepting contracts made in the spirit of dishonesty by guardians, and meanly entered into by members of the profession? And yet we hear of great complaints made by these very men of ungentlemanly manner in which they have been treated, probably by the College of Surgeons; that they are not eligible for the council, &c. &c.! These men, indeed, eligible for the council! numbers of whom are rushing eagerly every year in the spirit of competition to try for situations like these, which must irretrievably damage both the aspirant and the profession. The terms generally offered are such that the meanest tradesman would spurn at them.

But it is asked, why do not the Colleges of Physicians and Surgeons, along with the Society of Apothecaries, unite to make a strong representation to the Government of the injustice and ill treatment with which members of their body are treated in their laborious exertions in attending the sick poor? There are two answers to this question: the first is, that the spirit of jealousy between these respectable corporate bodies is so great that they will not act together; the next is, that, if possible, a greater feeling of rivalry and competition exists among individual members of the profession, who are too glad generally to do one another harm, by offering their services for nothing. The sure consequence of this is the degradation of the profession. Can any man be insane enough to imagine, that as long as boards of guardians positively have the choice of candidates who in some cases offer to supply advice and medicine to the poor gratis, even if the colleges were to stir in the business, their representations would be heeded? As long as men can be got who are willing to ruin themselves, it would be contrary to the doctrine of free trade to interfere.

Before concluding, the profession generally seems to require a little advice, and that is to be guided a good deal by the example of the lawyers, who never quarrel among themselves, but unite in protecting one another.

The medical profession might, if they chose, dictate terms to the public, who profit by their dissensions. If the profession were properly organized, and so united that no member would dare to do a degrading action, or act unprofessionally, which is punished in the law by being sent to Coventry by every one, so that defaulters are invariably ruined by none holding any intercourse with them, self-interest would then combine to uphold the suggestions of principle and the honour of medical men,

I remain, &c. &c.,

London, Sept. 22. A Constant Reader.

[To the Editor of the Medical Times.]

Sir,—There never was a time when medical men were so imperatively called upon to come forth from their privacy as the present. It is not fair that the battle should be left to the few; it is the business of all, both those who are connected with unions and those who are not. Never before was there such a general movement in the right direction. The Provincial Association, numbering its thousands, has taken up the cause of the oppressed union surgeons, and appointed a deputation to wait on Sir George Grey, to represent their case. It may be said that a congress of poor-law doctors is not called for till the result of the above deputation is known. On the contrary, I say it is more needful that the opinions of all may be collected, discussed, and some fixed principle agreed upon, and communicated to that deputation for their guidance at the interview. The National Institute, also numbering its thousands, has taken up the subject of medical remuneration, as well as that of quackery; and every general practitioner ought at once to enrol himself a member, and then we shall get a charter which will give us (what we have not at present) a standing and a home; for the College of Surgeons has degraded us, and the Apothecaries' Company will not defend us. Let us, therefore, have an *alma mater* of our own. I am ready with my subscription and services to promote so good a movement.

I am, Sir, your obedient servant,

Sept. 27. A Union Surgeon.

HEMORRHAGE FROM THE UMBILICAL CORD.

[To the Editor of the Medical Times.]

Sir,—In the number of the *Medical Times* for September 11 there is an account of a case of hemorrhage from the umbilicus of an infant, arrested by ligature of the "tubercle;" and there is also a reference to another case published at p. 116 of vol. 16, which was fatal, and afforded an opportunity of ascertaining the source of the hemorrhage, which proved to be from the right umbilical artery. In No. 409 of the *Medical Times* there is also a fatal case of hemorrhage from the navel, and a notice of a paper or communication of Dr. Simpson, of Edinburgh, respecting the treatment, but not the pathology of the excrescences that occasionally spring up after the separation of the umbilical cord. Now, it appears to me that there is, probably, a connection between these two morbid states (that of a patent and unobliterated umbilical artery, and that of an umbilical excrescence), as both may originate from the same cause, viz., an excess of vitality in the vessels of the cord, that prevents its complete desiccation and the formation of a level cicatrix after its separation, by keeping up the circulation in the arteries, and consequently that of the capillaries of the cord, to some distance beyond the ordinary level of the umbilical cicatrix. So that, when the dried portion separates, it either leaves a raw, conical, vascular prominence, instead of a puckered surface covered by a moist new integument, or it exposes the open ends of the vessels, and thus gives rise to violent and dangerous hemorrhage.

M. Billard ("Maladies des Enfans nouveaux nés") has most accurately described the process of the separation of the cord, pointing out that it begins from the edges and extends to the centre, much in the same way that the stalks of gourds separate from the fruit, and that the desiccation of the cord is the chief cause of the obliteration of the vessels, as this latter does not occur until the completion of the former; also, he mentions that the projecting closed extremities of the vessels often form a fungous excrescence requiring the application of caustic for its removal; but he omits entirely the consideration of hemorrhage at the time of the separation of the cord.

If, therefore, we admit, with M. Billard, that the drying up of the cord is the cause of the arrest of the circulation in the arteries, it will happen that in very thick cords the vessels will be still permeable after the cicatrix has begun to form round the base of the cord, and there will be a permanence of vitality in the vasa vasorum to a little distance around and beyond the closed extremities of the vessels; and hence the cicatrization of this portion will not be completed as soon as that of the surrounding surface of the navel, but it will form a conical projection or "tubercle," covering the cul-de-sac of the vessels, which, if separated by accident or ulceration too soon from the dried portion, may become a source of hemorrhage; or, after the separation of the cord, if it be irritated by its friction against the walls of the cuplike hollow of the navel, by this time retracted, or against the clothes, it will be kept in a raw state, and will throw out vascular, warty excrescences very difficult to remove.

Such, in the cases I have witnessed, has appeared to me to be the origin of these tumours; and, though I have not had an opportunity of confirming this idea by a dissection of the state of the umbilical arteries after death, yet, if we grant that the arteries remain permeable as long as M. Billard asserts they do, the danger of hemorrhage and the existence of the excrescence would seem to be closely connected. In both the instances of hemorrhage cited, the separation of the cord occurred after the sixth day, which indicates a thick cord—the condition most favourable, according to M. Billard, for the occurrence of such accidents—which also was the case in the instances of excrescences that I have observed.

With regard to the treatment, I cannot say that I have been as successful as M. Billard and Dr. Simpson in the use of astringents, and argenti nitras, having, as frequently as not, been compelled to apply a ligature after the other remedies have failed, as was also the case in the instance mentioned by Dr. Simpson. The instances, therefore, in your journal of the successful application of the ligature appear to me highly useful, as showing that this mode of treatment is admissible for the removal of excrescences and the arrest of hemorrhage at a very early period after birth, instead of our being obliged to wait the effect of other means, often pursued for many days in vain, before we venture to apply a ligature (and only a very fine one would be suitable), lest it should accidentally cut through the tender tissues, and thus produce a hemorrhage from the unobliterated vessels.

Should you deem these observations worthy a place in the columns of the *Medical Times*, you will oblige, Sir, your obedient servant,

T. Ogier Ward, M.D., Oxon.

9, Leonard-place, Kensington, Sept. 24.

MEDUSÆ AS IRRITANTS TO THE SKIN.

[To the Editor of the Medical Times.]

Sir,—Your very learned correspondent (Sept. 1) Dr. Wisely has discovered a mare's nest, viz., that medusæ possess the property of stinging when irritated; "a fact which seems new to the naturalists and medical practitioners" in the vicinity of Rosehearty. He then goes on to state that "the poisonous property seems not to be confined to any particular part of the animal," &c. &c.

Had this sapient man studied, or even read, a little natural history, he would have known better, unless, poor man, he prefers his own opinions to those advanced by Cuvier, Spallanzani, Dicquemare, &c. &c.

From the time of Aristotle down, they have been known to possess the singular property of being luminous to a great degree in darkness, and of producing a painful sensation similar to the sting of nettles, when any of them are touched; hence their name *Acalephæ*—sea-nettles.

Dicquemare, who experimented on himself with the *Cyanea cærulea*, relates the effects of them in these terms:—"The pain is pretty nearly similar to that which is felt on touching a bunch

of nettles; but it is stronger, and endures for about half an hour. In the last moments reiterated stings are felt, but proportionally more faint. There appears a considerable redness on all the parts which have been touched, and swellings of the same colour, which have a white point in the centre. After the end of some days, when the pain is gone by, the heat of the bed will cause the blisters of the skin to reappear."

Spallanzani, who tasted the liquor that issued from a wound in a medusæ, felt a burning on his tongue which lasted for more than a day; and a drop having by chance fallen upon his eye, the pain was still more intense. The species which possess the property of urtication in the living state, have it also when dead.

This effect is owing to a peculiar gelatinous humour which issues from the great tentacula, the muscular zone of the umbrella, and the stomachal cavity. Expressed into different liquids, as salt water, but particularly fresh warm water or milk, it communicates to them a phosphoric light.

Let your self-dubbed naturalist, for further information, consult "The British Cyclopædia of Natural History," edited by C. F. Partington, 3 vols., article ACALEPHÆ; or "Cuvier's Animal Kingdom," by Edward Griffith, vol. 12, ACALEPHÆ: and there he will see recorded the opinions of moderns. But, should his zeal for natural history lead him further, he can have the description given by Pliny IX., ch. 18; or that by Dioscorides II., ch. 36; or by Matthiolus, in his "Commentaries," published at Venice 1568, p. 365." "Tocchi con le manifanno subito un prurito grandissimo, alquale segue subito rossore infiammato."

Every seaman and boy in her Majesty's navy knows by experience what "seems new to the naturalists and medical practitioners" of Rosehearty. Yours ever and *wisely*,

AN OBSERVER, R.N.

CROWNER'S QUESTS IN CARLISLE, ANNO DOMINI 1847.

[To the Editor of the Medical Times.]

SIR,—Your readiness in giving publicity to abuses of all sorts bearing upon the well-being of our profession has encouraged me to send you this communication.

I have hurriedly sketched an account of two cases, both of them were infirmary patients—both came under jurisdiction of the coroner; and for conducting the *post-mortem* examinations of them without his sanction I have met his sore displeasure, and, in the bargain, been threatened with imprisonment, besides an appeal through the Carlisle and local newspapers for the interference of the governor of the infirmary.

I refrain at present from further comment; waiting the decision of the governor.

I am, Sir, your very obedient servant,

EVAN THOMAS, House-Surgeon to the Infirmary.

Sept. 17.

FRACTURE OF THE BASE OF THE SKULL. COMPRESSION OF THE BRAIN.

POST-MORTEM APPEARANCES.

In November last, a man, aged fifty, was admitted into the infirmary, under the care of Mr. Page, in the following condition:—Nearly insensible; bleeding from the right ear; considerable rigidity of the flexors of the upper extremity; the left pupil fully dilated, and insensible to the stimulus of light; breathing stertorously; perspiring profusely; the pulse scarcely perceptible; and the breathing short and frequent, performed mostly by the pectoral and *nuchal* muscles; and, in addition, a contused wound; skin deep over the right parietal eminence.

The case being hopeless, no remedial measures were adopted except feeding him with beef-tea, conveyed in a tube over the back of the tongue. A great difficulty was experienced in passing a catheter into the bladder on account of some obstruction about the triangular ligament, supposed, at the time, to be a tight stricture. He died thirty-six hours after his admission.

Upon examination, the following appearances were observed:—Fracture of the parietal, temporal, and spheroid bones; a thick layer of coagulated blood flooring the base of the skull; and extensive extravasation into and upon the left anterior and middle lobes of the brain; a stricture, hardly admitting a probe, was found in the membranous portion of the urethra; the mucous membrane of the bladder was sacculated, and the walls of the organ about half an inch in thickness.

LACERATED WOUNDS OF THE NECK, &c., PRODUCED BY A BEAR.

POST-MORTEM APPEARANCES.

About ten days ago, a man, aged thirty-two, was admitted into the infirmary, under the care of Mr. Page, in the following condition:—Insensible, cold, and pulseless, from the loss of blood; the back of the head was scalped, and the bone laid bare. Three deep wounds were observed on the left side of the neck: the upper, about 1½ inch in circumference, going into the substance of the parotid gland, between the mastoid process and the neck of the lower jaw; the middle, a little below the angle of the jaw, in a line with the sterno-mastoid muscle; and below this, the largest of all, but on a place somewhat posteriorly. A probe passed into the last-named wounds, grated upon detached portions of bone, supposed to be the transverse processes of the cervical vertebræ; blood welled out of the wounds for some time. Besides these, there were numerous smaller wounds of the same character on the opposite side of the neck, trunk, and upper extremities. He rallied from the immediate effects of the shock, and died thirty-six hours after the accident; the symptoms preceding dissolution being sickness, vomiting, restlessness, and great difficulty in breathing and swallowing.

The following lesions were observed after death:—Extensive effusion of blood under the platysma; the sterno-mastoid so much lacerated as scarcely to be distinguished from the surrounding mass of blood; all the superficial cervical nerves more or less injured; the third, fourth, and fifth cervical, the phrenic and spinal accessory, nerves were divided; the posterior branches of the external carotid, and the ascending of the subclavian, were lacerated; the transverse processes of the fourth and fifth cervical vertebræ were torn asunder, wounding the vertebral artery; the sheath of the carotid and sympathetic nerve were free from injury.

*** We have read the reports of the inquests Mr. Thomas attended; and cannot but think that the coroner in receiving that surgeon's able evidence exhibited a personal unamiability that by no means beseemed his office.

DYSENTERY.

[To the Editor of the Medical Times.]

SIR,—I felt much pleasure in reading Dr. Ayres' letter on dysentery, in your last number, inasmuch as it brought to my mind the method of treatment recommended by M. Pringle, Chevalier, who, in his work, "Observations sur les Maladies des Armées dans les Camps et dans les Garrisons," tome second, 1771, gives a full account of the causes, symptoms, treatment, and *post-mortem* appearances of dysentery. After dividing dysentery into three stages he proceeds to show that in some cases, where the patient is plethoric, he bleeds once, but he omits doing so if the patient is of a feeble temperament. He then gives an emetic of ant. p. s., and ipecacuanha, observing, that if the emetic operated also by stool the patient became better. The author then administers ipecacuanha, in doses of five grains at a time, repeating it two or three times in the hour, until the patient is well purged. In the course of his treatment he gives sulph. sodæ, rheum, opiate clysters; enjoining strict regard as to diet, &c.

In page 47 he states:—

"Les autres médecins de l'armée ont suivi à-peu-près cette méthode dans la derniere guerre, et le docteur Huck en particulier, qui, ayant toujours été employé dans l'Amérique septentrionale, ou aux Indes occidentales, a eu les occasions les plus favorables de voir la dysenterie sous toutes ses formes. Il m'a appris que malgré la différence des climats, lorsque la maladie était épidémique dans l'armée, elle paraissait par tout avec les mêmes symptômes (avec cette différence seulement, qu'elle était plus violente à proportion que la chaleur du pays était plus forte), et que lorsqu'elle pouvait guérir, la cure se faisoit par les mêmes remèdes." Here there is a quotation too long for your pages. In page 40 he quotes from "Gul. Pison Hist. Nat. et Med. Indiæ Occident.," lib. ii., cap. ix. Speaking of ipecacuanha he writes:—

"Cette racine est peut-être plus cathartique lorsqu'elle est fraîche, que lorsqu'on l'a conservée pendant long-tems et en decoction, ou en infusion qu'en substance. Nous pouvons pareillement observer que Pison recommande la seconde et la troisième décoction pour les malades faibles, comme étant moins cathartiques et plus astringentes. J'ajouterai seulement ici un des principaux passages de cet auteur, qui a rapport à l'usage de ce spécifique:—'Dehinc ad radicem ipecacuanhæ tanquam ad sacram anchoram confugiendum, qua nullum præstantius aut tutius, cum in hoc, tum in plerisque aliis, cum, vel sine sanguine, fluxibus compescendio, natura excogitavit remedium. Quippe præterquam quòd tutò, et efficaciter tenacissimos quosque humores per ipsum alvum, sæpissime autem per vomitum ejiciat, et a parte affecta derivet, vim quoque astrictivam post se relinquit...... Illud verò hoc modo perficitur drachmæ duæ radicis ipecacuanhæ in ℥iv. liquoris appropriati coctæ, vel per noctem maceratæ, cujus infusum cum, vel sine, oxymellis ʒj. exhibetur. Postridie semel atque iterum pro re nata, secunda imo tertia ejus decoctio repetenda; tam quod ægri debiliores eam facilius ferant, quàm quòd astrictiva ejus vis tunc magis efficacæ appareat.'"

Connected and associated as ipecacuanha and dysentery are in my mind, I could not omit the above quotation. I must conclude, as I fear trespassing on the valuable columns of your journal; recommending your numerous readers to peruse the work, which will well repay their trouble, as it contains the views of several eminent physicians respecting the treatment of the disease. I am, Sir, your obedient servant,

WM. EMERSON, M.R.C.S. and L.A.C., &c.

Turnham-green, Sept. 18.

JACK KETCH A MEDICAL MAN.

[To the Editor of the Medical Times.]

SIR,—In your last number but one, it is stated that the executioner at Nantes, and the same functionary at Bourges, claim to be considered as practitioners in surgery by virtue of their office. Now, this is as it should be, and the fact furnishes a valuable hint to our medical reformers.

How comes it that this relationship has been so long unrecognised? Perhaps it is one of those things which are so very obvious that they are overlooked.

If a culprit is sentenced by court martial to be tattoed, a duly-qualified surgeon is very properly ordered to apply the acupuncture; if he is to be whipped, the surgeon must superintend the operation, and inspect the changes of colour in the epidermis; and yet, by a strange and unaccountable inconsistency, the important operation of *sus. per coll.* is intrusted to the hands of uneducated empirics, who often perform it in a most bungling manner. This cannot be wondered at, for how should a man be able to apply the ligature in a scientific manner who knows nothing of the relative anatomy of the internal jugular? or how can he calculate the amount of *descensus* (*anglicé*, length of rope) necessary to rupture the odontoid ligaments, if he has never studied the laws of animal mechanics, or calculated the cohesive force of organic structures?

Do, pray Mr. Editor, agitate this question. Urge it strongly and repeatedly upon the Government, upon the profession, upon the public. If you use your powerful influence as you ought, considering the importance of the subject, who knows but that the next JACK KETCH that is appointed may be a medical man! This would indeed be a triumph—the first step to an alliance of medicine with the state, and a crowning climax to the dignified progress, our profession has been making of late towards a "legal and social *status*."

There will be no difficulty, I conceive, about the question of salary, for judging by what is going on daily among us (witness your own columns *passim*), there are plenty of surgeons quite ready to enter into competition for the appointment, for the mere honour of the thing, and to find the rope into the bargain.

One suggestion occurs to me in conclusion, and that is, that as the operation of *sus. per coll.* is undeniably a capital one, and happily not among the "ordinary exigencies of surgical ministrations," none should be eligible to the office of Jack Ketch but Fellows of the College of Surgeons. This limitation is but due to the "dignity of the said college."

I am, Sir, with all respect,
your old correspondent,

Sept. 21. ECHO VERITATIS.

THE PROFESSION AND THE LIFE INSURANCE COMPANIES.

[To the Editor of the Medical Times.]

SIR,—The frequent applications made by various insurance societies to our profession for gratuitous information demands its serious consideration. I have recently been requested by four different offices to furnish replies to a long string of queries in reference to the past and present state of my patients who have been desirous of effecting assurances on their lives.

The medical certificate is so important a safeguard to the assurers as to be considered a *sine quâ non*. It is of importance only to the insurance society, and therefore ought to be purchased by the party requiring it. I have invariably declined giving any information in such cases without first receiving my fee. The plan I adopt is as follows, viz.: on receiving a request from any society for my report in reference to the health of the party wishing to assure his life, I respectfully acknowledge the receipt of such request, at the same time stating my readiness to comply with their request on being furnished with the sum of one guinea; but I make it a rule never to give such information gratuitously. If the office decline remitting my fee, I furnish my patient with the name of some society who remunerate medical men for any information required.

In furtherance of this view, can you favour your numerous readers with a list of the offices who pay for medical reports, so that we may be enabled to accomplish the end we desire by enabling our patients to effect their object without submitting to the exaction of paying for medical evidence, which is of no service to them, but is intended as a security to the opposite party?

I am, Sir, your obedient servant,

Sept. 18. AMICUS.

ASSISTANT-SURGEONS OF THE NAVY.

[To the Editor of the Medical Times.]

SIR,—Insertion in your widely-circulated and influential journal, for the following exposure of the present very anomalous and truly degrading position of the class to which I belong, will much oblige,

AN ASSISTANT-SURGEON, R.N.

Every assistant-surgeon, previous to entering the navy, must have obtained the diploma of surgeon, and many, in addition, are doctors of medicine. Another very strict examination must also be passed before Sir William Burnett, the talented Medical Director-General. When we join the respective ships to which we may have been appointed, instead of being treated as professional men, we are compelled to mess and associate with a set of noisy, half-educated schoolboys—midshipmen, naval cadets, clerks, assistants, &c.

We are excluded from the wardroom mess, not being deemed suitable company for the naval lieutenants, the paymaster, marine lieutenants, the naval schoolmaster, &c., until we have had our manners refined by a residence of some eight or ten years in the pure moral atmosphere of the midshipmen's berth!!

The junior marine lieutenants nominally rank below us, and the naval schoolmaster is a non-commissioned officer; yet both are admitted to the wardroom mess, and are allowed cabins, servants, and all the other privileges that are so unjustly withheld from us. The engineers in all our steamers, until lately, were only warrant officers; now they are very deservedly made commissioned officers, and admitted to the wardroom mess. May I ask, are we inferior to them? Nay, more: the gunners, carpenters, and boatswains, in every ship afloat, are allowed cabins, servants, and all the other comforts that are denied us; whilst we, who by birth, education, and profession, are gentlemen, are forced to sleep in hammocks, in an open steerage, among common sailors and marines, and to dress on the lid of our chest, the only article of furniture we are allowed to keep on board, and which must serve for toilet, wardrobe, library, &c. We are refused the smallest corner where we can retire to for study.

The natural consequence of this tyrannical treatment is, that we must close our books for ever, and give up all idea of deriving any further information from that source. We must, of course, retrograde in our profession, and of necessity forget much of that valuable knowledge acquired by years of patient study. Many of us fall into habits of professional indolence; whilst others, but the number I am happy to say is few, try to forget their wrongs in pursuits equally injurious to health and reputation.

Thus situated, we have no other resource than the sympathy of our professional brethren on shore. We call on them to petition the Legislature on our behalf, to remove our degrading grievances, and to place us in that position we are entitled to, viz., a perfect equality with assistant-surgeons in the army, who all mess with the field-officers and captains of their respective regiments.

Portsmouth, Sept., 1847.

DEATH OF DR. CURRAN, OF DUBLIN.

We have heard with unaffected sorrow of this event. There were few physicians of higher promise. Already he has done much not unwelcomed by us and our readers; and he was engaged in undertakings of greater importance when death by fever closed his useful career. The following well-written notice we extract from *Saunders' News Letter* of Monday last:—

"Among the many instances of death which in the present state of our unhappy and afflicted country we are daily called on to record, we have not yet met one so untimely or so harrowing in its circumstances as that which it is now our painful duty to announce. Dr. John Oliver Curran, whose illness we mentioned with extreme regret some days ago, sunk rapidly during the latter part of Saturday, and through the night of that day; and, notwithstanding all that the skill and brotherly aid of the ablest men in the profession could effect, the fatal typhus claimed him for its victim, and he expired at nine o'clock yesterday morning—another bright name added to the list of martyrs of the medical profession in Ireland.

"Who this young man was we need not tell our readers. His private character—amiable, generous and humane—the best of sons, the most affectionate of brothers, the stanchest of friends—we have not the heart to descant upon. Our grief is yet too fresh and gushing to permit us to detail in words the many virtues, the unselfish kindliness of heart, the noble disregard of danger, and the thousand graces of social life which endeared him to his friends and to all that came within the benign and gentle influence which he invariably shed around him.

"His transcendent talents, his great professional acquirements, the rapid strides he was making in his noble career, the bright promise for the future, and the achievments of the past, are well known to his brethren—the best judges of his pursuits and labours. All these shall no doubt be embalmed in their fit and proper place by those capable of appreciating their merits; but to the memory of Dr. Curran we have, in common with all the well-wishers of our native land, that tribute to pay which does not require us to be either private friends or professional brethren.

"Let it be remembered by the Irish medical profession that he was the man who first raised his voice against the insult and indignity offered to that body, by refusing to accept the miserable stipend proposed as remuneration for risking their lives in defending the Irish peasant and artisan from the ravages of the pestilence which now stalks amongst us. And yet, while he thus spurned the degrading offer, for the benefit of his brethren, he daily toiled without fee or reward, in the haunts of misery and distress, to relieve suffering, to succour the fever-stricken poor; and in his generous endeavour to rescue others he himself fell a sacrifice to the Moloch of pestilence and misrule.

"Let it never be forgotten by the Irish people that to the courageous disregard of official threat—to the honest and indignant appeal made in their behalf to the sympathies and benevolence of Europe by Dr. Curran—were the gates of fever-sheds, the barred portals of hospitals, and the stern hearts of rulers opened to afford them shelter and a cup of water when they blackened, exposed to the sun and sky, in the lanes and ditches around our metropolis.

genius,

country, to science, and his friends. In John Oliver Curran his mourning family have lost the most feeling and affectionate of relatives; an aged father his only son; his friends, a soul of sterling and enduring worth, unalloyed by selfishness, unpurchasable from its allegiance; the Irish School of Medicine, the University, and the Royal Academy, one of their most promising sons. Science may mourn the most devoted of her votaries; Ireland a man whom she could never spare, now least of all; and humanity a friend. For our rising literature his able pen was wielded. For our dawning nationality his manly voice was raised. To elevate us in the scale of nations he not only toiled, but by his conduct and deportment (the real tests of patriotism) mainly contributed. No foreigner of distinction ever visited the Irish metropolis within the last few years without feeling indebted to Dr. Curran.

"Gentle and unobtrusive in his manner, a tone of serious thought and an extraordinary fund of information, with a remarkable facility and clearness of expression, graced his conversation, and rendered him one of the most delightful and instructive of companions. If being utterly devoid of envy towards others, and a holy, never-failing desire to do good, could ensure a man the world's friendship, then had Dr. Curran no enemies.

"His writings are eminently remarkable for their unbounded research, their power of argument, and perspicuity of style; no man understood better the force and value of the English language. Dr. Curran had but entered his twenty-seventh year. We understand his funeral will take place on to-morrow morning at seven o'clock. He was professor of the practice of medicine to the Apothecaries' Hall, a licentiate of the College of Physicians, a graduate of Trinity College, a member of the Royal Irish Academy, and attached to all the literary and scientific institutions of this city."

GOSSIP OF THE WEEK.

WAR-OFFICE, Sept. 24.—72nd Foot: Assist. Surg. Edward William Gray, M.D., from 81st Foot, to be Surgeon, vice Dumbreck, promoted on the Staff.—Hospital Staff: Surg. David Dumbreck, M.D., from the 72nd Foot, to be Staff-Surgeon of the First Class, vice Denis Murray, who retires upon half-pay; John Henry Smith, M.D., to be Assistant-Surgeon to the Forces.—Sept. 28.—2nd Dragoon Guards: Assistant Surg. Alexander Smith, M.D., from the 93rd Foot, to be Assistant-Surgeon, vice Wheeler, appointed to the Staff.—33rd Foot: Staff-Surg. of the Second Class James Townsend Oswald Johnston, M.D., to be Surgeon, vice James Murray Drysdale, who retires upon half-pay.—73rd Foot: Assist.-Surg. Benjamin Swift, M.D., from the 63rd Foot, to be Assistant-Surgeon, vice Foster, who resigns.—93rd Foot: James Webster, M.D., to be Assistant-Surgeon, vice Smith, appointed to the 2nd Dragoon Guards.—Hospital Staff: Assist.-Surg. Thomas Honer Wheeler, from the 2nd Dragoon Guards, to be Staff-Surgeon of the 2nd Class, vice Johnston, appointed to the 33rd Foot.

NAVAL APPOINTMENTS.—Surgeons: Daniel Ritchie, to the Hecate; Dr. John Smith, to be Surgeon Superintendent of the Ann freight-ship. —Assistant-Surgeons: Frederick Stupart, to the Spider; R. P. R. Sparrow, to the Vindictive; James Mitchell, M.D., to the Dolphin.

APOTHECARIES' HALL.—Gentlemen admitted members on Sept. 23: Henry Lambden, John Thomas Campion, and John Coghlan Haverty.

HONOURS TO MEDICAL MEN.—His Majesty the King of the Belgians has conferred the title of baron on the celebrated Dr. Seutin.

JUBILEE TO M. JACOBI.—At Sigburg, on the Rhine, on the 21st of last March, was celebrated the fiftieth anniversary of the doctorate of Max. Jacobi, physician to the insane. A great number of eminent physicians assisted at the celebration of this ceremony, on whom it reflected great honour, and also on the Government, who appreciated and encouraged these warm manifestations.

THE NEW SANITARY COMMISSION.—The appointment of the special commission, gazetted this week, for inquiring into the means of improving the health of the metropolis, must be regarded as a recommencement of sanitary reform in a more workmanlike manner. In attempting to legislate, Lord Morpeth was balked by easily foreseen obstacles. In appointing a commission to grapple with the principal of those obstacles, Government stands pledged to a real performance of work. The commissioners cannot mistake their duty or their interest. Three of them are men already versed in their labour. The chairman is a steady, attentive, and judicious man. Mr. Lambert Jones, the commissioner taken from the City, has been called "the representative of filth;" it having been presumed that he would represent the conservative objection entertained in the City against innovation on the vested rights of filth and pestilence to undisturbed away. But the presumption is too gross. We do not remember what precise course Mr. Jones has taken on the subject of sanitary reform; but everybody knows that he is an active, intelligent man, with feelings and tastes above mere local objects. His selection for so important a post cannot but stimulate him to acquit himself with credit; there can be no doubt that he will be a useful aid to the other commissioners, and, possibly, he may be the means of at once disarming the civic fears of cleanliness, and of conciliating assent. The more boldly and effectually the commissioners do their work, the more thorough will be their support from the public, the more complete their hold on the official concurrence in ulterior measures. It will not be very long before another opportunity will occur for testing the sincerity of the official support. The functions which ought to be performed by a Board of Health are performed, or rather neglected, by certain Commissioners of Sewers, appointed for each district of the metropolis. Except for the City, the commissions are issued by the Lord Chancellor; and the Chancellor annually appoints them according to a list handed in by each expiring board, which he adopts without question. The commissions will expire in December next. Of course, if the new special commission is to have any practical or reasonably prompt result, it will be needless to reappoint the old machinery for another year. An additional reason against continuing this standing practice is the probability that the commissions about to expire would nominate candidates the most disposed and most able to obstruct the measure intended to supersede them in their functions. The appointment of the commissions, therefore, ought to be suspended at least till the special commissioners have made their report. From the course taken by Lord Cottenham in this behalf, the public will be able to form a tolerable guess as to the official sincerity.—*Spectator.*

TREATMENT OF FEVER PATIENTS.—A person named Patrick Doyle, was brought up at the Police Court, at Newcastle-upon-Tyne, a few days ago, at the instance of Mr. Tullock, charged with bringing one Daniel O'Connell, an Irish labourer, ill of fever, from West Chevington to the parish of St. Nicholas, in Newcastle. Mr. Tullock, who is the keeper of the vagrant-ward, informed the bench that he had been instructed to bring the defendant before them in order to put an end to a system which was attended with great danger to the inhabitants and unnecessary expense to the parish. Some months ago a great number of Irish peasantry had arrived in the district, often in a state of distress, and afflicted with the famine fever, many of whom had been scattered through the county; but it appeared to be the regular practice of the authorities in the district, that as soon as these poor creatures were found to be labouring under fever, it made no matter how far they were off, they were immediately sent to Newcastle, and thus a contagious disease was brought into the very midst of a dense population. The man O'Connell had actually been conveyed in a cart upwards of twenty-two miles, and had thus been cast upon the parish of St. Nicholas. The bench said the case was one of importance, but they were unable to interfere with it. The only remedy was by indictment.

INSANITY AT PERU, MEXICO, TEXAS, AND CHINA.—If we credit the tales of travellers, lunatics are not well treated in South America. At the Hospital of St. Andrew there is always a considerable number. It is open to the public every year, Nov. 30 (St. Andrew's day); and one of the favourite amusements of the inhabitants of Lima is to go and sport with these unfortunate creatures. At Mexico, there used to be a lunatic asylum, but since the last political events it has been used for some other purpose. It appears as if insanity did not prevail much in Texas, as travellers speak very little of it. In China there are very few lunatics, though suicide is frequently committed.

NEW ALKALINE VEGETABLE.—At a meeting of the Chemical Society, a short time since, M. Porrett read an account of the existence of a new alkaline vegetable in gun-cotton, which was called lignine. It was obtained by dissolving gun-cotton in nitric acid at a temperature of from 37° to 71°. In throwing this solution into water, it produces a white precipitate which has all the properties of gun-cotton, but is not fibrous. When this solution is neutralized by bicarbonate of potash, it gives nitrate of potash in abundance; a precipitate also of a whitish-grey colour, very probably a new carbonate of the alkali. When hyponitrous acid acts upon this liquid alkaline solution, it reproduces immediately hyponitrite of oxide of lignine (gun-cotton). M. Porrett has an idea that the lignine is formed at the expense of the woody fibres, and becomes acid in the sap of the vegetable, its chemical composition is one equivalent of lignine and two of oxygen.

SMALLPOX IN SHEEP.—A very fatal disease, and, it is believed, new to this country, has lately made its appearance amongst sheep. It is the smallpox of that animal, and in its first stages more particularly many fall victims to it. It is desirable that the public should be apprized of it, in order that the necessary precautionary measures may be adopted to prevent its further propagation. It was introduced by some Spanish sheep imported from Hamburg, and has already found its way into many flocks. Several sheep affected with it have also been exposed for sale in Smithfield Market. At the Royal Veterinary College experiments have been instituted, by which its infectious and contagious nature have been completely proved, and others are being carried on with a view to check its progress and to lessen its fatality.

DISCOVERY OF PLATINUM IN FRANCE.—M. Gueynard has just informed the General Council of the Isère that he has discovered a vein of platinum in the metamorphic district of the valley of the Drac, which he hopes to work with advantage. Hitherto this precious metal, which combines with incomparable hardness the lustre of gold and silver, has only been met with in the Ural Mountains, and its scarcity has always rendered the price very exorbitant.—*Paris Paper.*

OBITUARY.—Sept. 8th, J. B. M'Donagh, Esq., surgeon, at Carrara, of typhus fever, caught whilst in the discharge of his duties.—Aug. 1, at Montreal, of typhus fever, caught whilst attending at the emigrant shed, J. Hutchinson, Esq., M.D., aged 50.—On the 9th inst., after a short illness, aged 49, Thomas Weatherill, M.D., Hunter-street, Liverpool.—Sept. 1st, aged 32, of fever, George Vickers Dunne, Esq., M.D., physician to the Dispensary and Fever Hospital at Clondonagh, Queen's County.—Sept. 4th, of fever, Dr. Lauder, one of the district medical officers in the city of Glasgow.—Aug. 30, at Westport, aged 29, of fever, Peter Lavell, Esq., M.R.C.S. of Engl., surgeon to the Shruel Dispensary.—Lately, at Skibbereen, of fever, Thomas Goodison, Esq., M.D., of Dublin.—At Bolton, aged 28, of fever, Henry Hatton, Esq., medical officer of the western district of Great Bolton.—At Honiton, Sept. 18, Jas. Campbell, Esq., M.D., of a rapid consumption.—At Prince's-street, Perth, Sept. 20, John Monteath, M.D.

MORTALITY TABLE.

For the Week ending Saturday, Oct. 2, 1847,

Causes of Death.	Total.	Average of 5 Summers.
ALL CAUSES	1052	940
SPECIFIED CAUSES	1047	935
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	339	226
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	111	103
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	148	157
Diseases of the Lungs, and of the other Organs of Respiration	208	226
Diseases of the Heart and Blood-vessels	30	25
Diseases of the Stomach, Liver, and other organs of Digestion	94	94
Diseases of the Kidneys, &c.	10	8
Childbirth, Diseases of the Uterus, &c.	19	10
Rheumatism, Diseases of the Bones, Joints, &c.	6	7
Diseases of the Skin, Cellular Tissue, &c.	1	2
Old Age	44	50
Violence, Privation, Cold, and Intemperance	37	28

No. 419. **SUMMARY.** Oct. 9.

AN ADDRESS

DELIVERED AT THE OPENING OF ST. THOMAS'S HOSPITAL SCHOOL, ON FRIDAY EVENING, OCTOBER 1.

By J. H. GREEN, Esq., F.R.C.S.,
And Senior Surgeon to St. Thomas's Hospital.

Gentlemen,—Under the inspiration of hope the spirit within us is quickened to new life and kindled to increased energy: such may be described as the influence which animates us at the commencement of a new session, and, I will add, of a new era of St. Thomas's Hospital School. Nor will it be difficult in reviewing the prospects of our school to justify to its friends, many of whom I have now the honour to address, the anticipation of a future not unworthy of all the great names which have invested the past with radiance and renown. I cannot forget that we owe this brightness to a Cheselden, an Ellis, a Fordyce, a Wells, a Cline, and an Astley Cooper; and, although it is with great humility that we appeal to this great constellation of genius, we trust the appeal will be accepted as a pledge that we propose them as our patterns and guides. But, though I am more than willing to challenge a scrutiny of the qualifications of the gentlemen with whom I have the honour to be associated, any discussion of their merits on the present occasion would be unbecoming, and I am well content to leave the question to the sound judgment of the profession and the public. There are other elements in the eminence of St. Thomas's Hospital on which I may more suitably enlarge, and I fear no contradiction when I say that they consist mainly of the means which it possesses of combining all the requisites of a sound medical education, practical and scientific.

It is true there are other institutions in this metropolis possessing similar advantages, and we have no wish to decry their character and reputation: we wish that they may be greatly successful; but we do assert our claim to a place in the foremost rank, and we do it with a consciousness of large resources for our task, and with the confidence of men zealously united for the great work of professional education. The royal hospital to which we have the honour of belonging—entitled royal in virtue of its foundation by Edward VI.—is proudly distinguished by its noble revenues and the magnificent scale of its charities. Placed in the midst of one of the most densely populated districts of this city of opulence, the palace of Charity, in the hall of which we are now assembled, throws open its gates at the appeal of sickness and distress. Hither the afflicted are borne from the crowded garrets, the dark cellars, and the unwholesome alleys; from the factories, the warehouses, the neighbouring quays and docks, and from the vessels of all nations which float on the adjacent river. It is here that the gaunt and powerless victim of wasting pestilence, of burning fever, of slow, concealed hectic, of pining atrophy, of ghastly spasm, of suffocating asthma, of ever gnawing ulcer, and of the racking torture of stone—all over whom triumphant Death his dart still shakes, but yet delays to strike, though oft invoked as the chief good and final hope—it is here that the afflicted of all names and descriptions seek and find relief.

It would be, however, but a narrow policy which would confine the benefit to be derived from a hospital to those received within its walls. It is notorious, indeed, that the principal of the charitable institutions in this metropolis of luxury, this home of affluence, are wholly inadequate to supply the wants of its overgrown and ever-growing population. It must never be forgotten that one of the chiefest blessings of the hospitals of this metropolis is the establishment of medical schools in connection with the opportunities which they present for the study of disease. It is only from such schools that the poor of our country, that our army, our navy, belligerent and commercial—nay, that those who have at their disposal the amplest means of remunerating their professional attendants, can be supplied with competent practitioners, since without these means the medical education of the medical aspirant must be gained at the cost of the unhappy victims of unavoidable ignorance and imperfect skill. For very limited, comparatively, would have been the beneficial influence of many of the most illustrious surgeons of the metropolitan hospitals, had their rare abilities been confined to the immediate objects of their skill, instead of being exerted, as they have been, in training successive generations, who have thereby been rendered capable of multiplying the benefits intended by the original founders of those hospitals, by carrying away with them all the happy results of medical study for the relief of suffering, and by applying all the resources of the healing art to the wants of the remotest colony and the humblest village of the wide-spread British empire. I hesitate not, then, to say, that it is the most unalienable duty of those who have the funds of hospitals at their disposal to found, foster, support, and encourage schools for the education, practical and scientific, of medical practitioners. Nay, this duty is little less than urgent and immediate: since it is only by such means that the authorities of hospitals can command a supply of intelligent and skilful officers for those hospitals, the management of which is intrusted to them. But no painful task devolves on me to remind the governors of this hospital of the duties which have been imposed on them; actuated by the humane and generous principles which I have just suggested, they have ever been found foremost in promoting the efficiency and character of medical science in connection with the School of St. Thomas's Hospital. Witness the commodious and substantial building which they have erected for its service; witness, too, the valuable museum; and assuredly the success and character of the school will suffer no diminution under the auspices of our present respected treasurer, who has well recognised that link which connects the interest of the school with enlightened humanity and the welfare of the unfortunate temporary inmates of the institution; for he will permit me to say, that we owe it mainly to his care, foresight, tact, and management, that the present session opens with brighter prospects and with improved means of success; and he is nobly seconded in his disinterested efforts by the enlarged views and munificent spirit of the almoner, the grand committee, and the body of the governors. If proof were needed of what I have advanced, the evidence might be found in the prospectus of this year. It is not necessary to do more on the present occasion, with reference to that prospectus, than to remind you that prizes are offered in every department of instruction; the substantial fare of education is thus served up with every accompaniment, and in all the tempting varieties that may stimulate the dullest appetite and excite the slowest digestion. Nor must I omit to express the thanks we owe to my esteemed colleague Dr. Roots for the prize offered by him for encouraging the study of clinical medicine. Nor should I forget the offer of the treasurer of a gold medal as a reward for general proficiency and good conduct; and only since I have been within the walls of the hospital this evening have I been informed by the treasurer of another instance of the generosity of our president, who has offered one reward for the best reports of surgical cases, and another for the best medical reports, to be competed for by second year's men. But these are not the only aids and inducements to study; there are other splendid encouragements to professional excellence; the scholarships cannot but tend to sustain zeal and diligence which might otherwise flag under the pressure of long-continued application. The dresserships too, no longer to be obtained by purchase, but reserved strictly as the honours of merit, offer invaluable, I might almost say indispensable, opportunities for forming the character and habits of a thoroughly-accomplished practical surgeon. But, beside and, I may say, beyond all this, the house-surgeon will be annually selected from the dressers, and those will be appointed whose qualifications best entitle them to hold an office, the due performance of which will be a lasting guarantee of trustworthiness. Permit me, however, to add, that while offering prizes and honours as inducements to diligence, we should deem them little more than very dear stimulants to pride and conceit, were they offered as substitutes for those better incentives which arise from a lively sense of duty, and which are, therefore, the only reliable, lasting motives to exertion. If moral training, in its indispensable and unavoidable association with religion, be essential to a sound education, it cannot be less dispensed with in a profession which eminently implies moral fitness and the cultivation of that in man which constitutes his permanent worth. The high character of the profession of which each individual is to be the representative; the education and habits of those with whom it should be your ambition to associate, namely, the true gentry of our country, by virtue of liberal education, and elevating pursuits, and moral ex-

cellence; and no less the demands of society at large, dictated by the high degree of civilization to which it has attained in this country; all challenge excellences distinguished by their humanity, and which are, therefore, required of every man, but which no calling is more fitted to elicit, which no calling more imperatively requires, than the medical profession. The authorities of this hospital, entertaining a due regard for the moral welfare of the students committed to their charge, will be actuated by no narrow considerations in carrying out the promise of their prospectus of the advantages of a collegiate establishment. Circumstances over which they have had no control have hitherto delayed the fulfilment of the wishes of those connected with the school, and even now prevent them from fully carrying out the design of rendering the establishment in every respect worthy the name of a college. It would be difficult to appreciate in their full extent the advantages of a system which combines comfort, economy, and discipline, with all the requisite facilities for study; which assembles under the roof of some august edifice, a household united in the ennobling pursuit of science, where the *alumni* during the perilous period of transition from youth to independent manhood are mildly coerced by the same paternal laws, moulded by the same habits of association, influenced by the example of seniors and teachers, and by the estimation of equals, and who ever regard themselves as members of one body forming among themselves a correspondent law of honour, a sentiment of self-respect, and of respect for each other as gentlemen and fellow-collegians. I will fain hope, however, that in whatever degree the collegiate establishment in connection with this hospital shall be perfected, it will not remain a training school for medical students only. I trust I may not be deemed visionary when I assert a conviction that we are founding an institution in which, as in other colleges which already exist in connection with the University of London, the truth will be recognised and adopted of the inseparable fraternity of all the professions—deriving as they do their best honour from the same parentage, and bound by every motive of public duty and honourable interest to the respect, protection, and furtherance of each other's welfare. And if the older universities should still take the lead in the cultivation of the pure and austere sciences, and in the sedulous research of ancient learning, and yet remain the principal outlets of the ecclesiastical profession, it will be the function of the University of London to provide for the cultivation of the sciences which have the forms and productions of organic and inorganic nature as the material, and the application of their laws to the health and well-being of the community in the professions which have arisen or may arise out of them; and among which the medical profession must ever fill the largest space and occupy the most prominent position. It will be the high aim and urgent duty of the University of London to provide for that intellectual expansion which is most in alliance with the wants of the age, and to provide for it in connection with whatever is venerable in our native land; unceasingly occupied in observation and inquiry, and in extending knowledge already possessed; and constantly sending out into the community a succession of labourers competent to apply to the three chief interests—the health, property, and moral well-being of their fellow-citizens alike, capable of becoming, whether in the name of law, medicine, or divinity, in district, town, and village, the germs of civilization the *nuclei* around which whatever is of better tendency may crystallize and cluster. Such an institution would exist for the sake of the liberal arts, which acquire and merit that name because they contain as their element a knowledge the attainment of which is its own reward, and which needs no other benefit as a motive for its cultivation. These would be the departments of knowledge by which the professions that have arisen or may arise out of them would be retained in vital connection with the common trunk of universal science, of which they are ever-growing branches, and of which the circulating sap and the indwelling spirit is the one living truth—the eternal and divine.

But, gentlemen, to return to our institution. The prizes and the collegiate establishment are not the only points to which I will ask your attention. There is another and a noble feature in the arrangements which, as a proof of the wise liberality of the governors, ought not to be overlooked, and, is too important in its bearing to be passed by without notice—it is the institution and endowment by the hospital—I say the *endowment* by the hospital—of a chair of Pathology with clinical duties; and the election, in the first instance, has fallen on my friend and former apprentice, Mr. Simon, whose prize essay on the thymus gland has extended his reputation throughout Europe, and is the first-fruits of the rich harvest that may be expected from his perseverance and originality of mind. It would be, perhaps, most judicious in me to leave the explanation of his office to the professor himself; but I cannot forbear saying even now that the duty of every man aiming at the advancement of medicine to its true place as a science is eminently the improvement of pathology, by obtaining in each instance a clear and precise knowledge, not merely of the coarse and effete products of disease, such as is afforded by a *post-mortem* examination, but a clear insight of the morbid action in which the disease essentially consists. It would be no difficult task to cite a host of cases in which the primal derangement—the proximate cause, as it is called—has hitherto escaped our cognizance, and in which we fail even in distinguishing in those phenomena which we call morbid how much is disorder and how much belongs to the curative efforts of nature—cases in which, therefore, our treatment is blind, blundering, and empirical. This is not, however, the time for the sloth of despair. The advancement of animal chemistry and the increased facilities afforded by the microscope have furnished pathologists with the means of reaping abundant harvests in this hitherto scarcely less than unproductive field of medical study. Ah! we are on the eve of great discoveries for the relief of suffering humanity, and the praise of having forwarded this work will be awarded to the governors of St. Thomas's Hospital, who have wisely established within these walls a pathological laboratory, under the immediate direction of the professor, to initiate researches, not only into the processes by which disease was first established, but also into those curative processes by which it is removed. Let the results be carefully registered, and, should the authorities and medical officers of the hospital recognise the advantage—nay, the public duty—as they cannot fail to do, of securing annually authentic records of the experience obtained in this institution; should they cause to be preserved a correct history of the patients treated in the wards, a scientific and accurate statement of every indisputable fact indicative of disease, productive of its termination, and eliciting its cure; should they have completed their task by a periodical generalization of the facts comprehended in these precious documents embodied in abstracts, summaries, and tables; and, should other institutions be induced to follow this wholesome example, we shall be possessed of a *liber veritatis* of the healing art by which we may hope to see it rescued from empiricism, and to be ourselves led on to the discovery of laws and causes the knowledge of which will finally invest medical inquiry with all the insight and certitude of science: for, let it never be forgotten that, however distant its actual advancement may be, this is the ultimate aim of every liberal profession, that every duly instructed and accredited member should in his knowledge, and in its application, be an adequate representative of the whole body; that each severally should be capable of applying all the resources of art which the whole can supply; and that the possibility of this must be ever proportioned to the advancement which the art makes towards the exactitude of a science. And, if the hope of scientific insight must be still delayed in consequence of the limits of our faculties and the varying nature of the subject, where, I pray, can the progress of the student be so well secured as in a great practical school, such as this institution and the few that rival it?—where, alone, the zealous and enlightened teacher is at his command; where a living, ever-shifting cyclopædia of medical knowledge is continually open; and where the student is led almost without effort to notice, compare, and generalize the facts which constitute medical experience, in order to that knowledge which, to be real, must be self-acquired; and where he may be disciplined to that judgment, skill, foresight, and self-reliance which must ever distinguish the self-dependent master of his art from the mere practitioner or the life-long tyro.

Finally, gentlemen, addressing myself to those who are, or are to be, students of the hospital, let me, gentlemen, earnestly—yes, affectionately—exhort you to take advantage of the ample opportunities here presented, and to pursue your studies with zeal and unremitting attention. You owe this no less to yourselves than to those who afforded you the means of a liberal professional education, and who look forward with anxiety to your success as an ample compensation for their cheerful but, perhaps, not inconsiderable sacrifices for your advancement. Unless you devote your whole heart and mind to this subject, you will never study it with success, nor practise it with satisfaction. Believe me, a knowledge of it cannot be gained by sitting in listless vacancy in the lecture-room, or by sauntering in idle chat through the wards of the hospital, and, after escaping from the restraints of study, passing away the time in idle amusements, or, still worse, by frequenting the haunts of profligacy and dissipation. Pleasures, would you call them?—Yes,

> "Like snow that falls upon a river,
> A moment white—then gone for ever."

But, could we suppose that the prescribed forms of study had been passed through—that the appointed examination had been got over by some lucky chance—what would be your situation, when all the responsibilities of practice had come upon you, in your condition of neglected education? Cases would infallibly occur in which, to cover your ignorance and avoid detection, you would descend to the lowest arts; and if by cunning and deceit you could impose on others, you could not stifle the monitor within your own bosom, from which there is no escape nor subterfuge. But the consequences of professional ignorance are generally too obvious to admit of concealment, and you might find it necessary to quit the neighbourhood in which you practised with ruined fortune and blasted character, or you would, perhaps, be held up to scorn and contempt in one of our courts of justice.

But, gentlemen, if you love and prize the profession which you now embrace as you ought, I do not fear that the cases I have supposed will be verified in the experience of any whom I now address. For the attainment of the requisite knowledge, rare genius and talents are not necessary: diligence, attention, and method will fit you for the arduous duties of your profession, and open out your road to fortune and honourable distinction. But, gentlemen, professional knowledge does not include all that we desire from a medical practitioner: need I say that I refer to the moral attainments which are required of you as men, which concern you in an especial degree as medical men, and the possession of which cannot fail to have an important influence in your professional career. I cannot, I believe, give a more correct and comprehensive description of your minor, yet essentially moral duties than is comprised in the maxim:—Think, act, feel, and demean yourselves as gentlemen. The profession to which you are, or are to be, admitted is one capable of conferring honour upon you, and from which you will derive an increase of your own estimation; but, independently of this, I address few who will be so unfortunately

placed in after-life that the character and habits of gentlemen will not be of vital importance to success. The word "gentleman," to every one capable of becoming such, conveys its own meaning so fully that it is almost superfluous to say that he is a gentleman who, in his whole demeanour, shows respect and a due proportion of respect to every one with whom he is brought into relation. This is a feeling of so much importance that I am persuaded that you cannot rightly undertake the duties intrusted to you unless you are influenced by its sentiment, which will manifest itself as you recognise, on the one hand, the respect due to man as a human being, and on the other, the particular rank to which each individual is entitled by the established laws of society. The suffering incident to human nature, which it will be your office to soften and remove, will, at times, constrain the highest to treat you as their equals; and you will be undeserving of the name of men, much more of gentlemen, if the sight of the same suffering—the forerunner, perhaps, of death in levelling the artificial distinctions of society—do not induce you to treat the lowest as brethren.

ABSTRACT OF AN OPENING ADDRESS DELIVERED AT THE HUNTERIAN SCHOOL OF MEDICINE, OCT. 1, 1847.

By C. J. B. ALDIS, M.D. Cantab.,
Fellow of the Royal College of Physicians, and Physician to the Metropolitan Free Hospital.

GENTLEMEN—It is under very painful circumstances that I act as a substitute for one who for the last twenty-five years had been in the habit of delivering an opening address to the pupils of this school. He had already commenced the business of the present session, vainly believing that he would recover, and was anxiously looking forward to perform that duty which I am unexpectedly called upon to undertake, when death snatched him away, depriving you of one of the most eminent anatomists of the present day. Mr. Dermott was the favourite pupil of the late celebrated Joshua Brookes, who entertained so high an opinion of his qualifications that Mr. Brookes placed a son, as house pupil, for two years under Mr. Dermott, who superintended his surgical education until he passed the college. The shock occasioned by Mr. Dermott's death greatly affected his widow and friends, and the last act of his life was to place the superintendence of the school upon me. There were vacancies to be filled up, and numerous arrangements to be made, very little time remaining before the commencement of the session to accomplish this object, so that death had not only deprived the principal of this school of his life, but had nearly destroyed, if I may so speak, the vitality of the school itself; but, through activity and perseverance, our little bark is again afloat, and will continue so, I hope, for many years. As a lecturer on anatomy Mr. Dermott was most popular: his demonstrations, also, will long be remembered by those who had the benefit of his instruction. I have said that he was most popular, and deservedly so, for his regularity in lecturing, the facility with which he made himself understood by the meanest capacity, and for the zeal with which he endeavoured to infuse knowledge into the minds of his pupils. So anxious was he to fulfil his duties as a lecturer, that, even when suffering from illness, he would perform them; and I have seen him frequently carried in and out of the lecture-room by the pupils, being unable to walk in consequence of some bodily ailment. What vigour and animation appeared while he was lecturing—what amusement and what roars of laughter he excited at the examinations, without losing sight of their importance! At the same time he was a strict disciplinarian in the school; but, if any of you should have thought him occasionally too severe, reflect for a moment that he intended well for you—reflect, also, upon the vicissitudes of his fortune; and, above all, the organic disease with which he was for years tormented.

A biographical sketch of Mr. Dermott having already appeared in the *Medical Times*, I would merely allude to one anecdote, not mentioned there, which struck me so forcibly that I entered it into my note-book, from which I make the following extract, dated August 21 last:—"I called upon Dermott again after he had left his bed, at the time he thought he would recover, when, to my surprise, he touched upon the subject of religion with an intensity of feeling for which I was quite unprepared. He thanked God for his mercies, in having been so kind as to spare one who had so long neglected religion; he dwelt upon the danger of a mere death-bed repentance, and, with tears in his eyes, spoke fervently, eloquently, and thankfully, for their having been opened, through Jesus, to the consolations of religion. He then dwelt upon the justification of a sinner through faith, and upon the iniquity of unrestrained conversation. At length he rose from the sofa, and pressed his hands upon his head, becoming almost frantic with despair. Mrs. Dermott and myself endeavoured to assuage this excess of grief. He alluded to the impossibility of his being forgiven; at the same time he felt most grateful for the light that had shone upon him. I endeavoured to point out the forgiving spirit of the Deity, even under extreme circumstances, and related the story of the Pharisee and the Publican. He became more resigned; and, in conclusion, hoped that some of his friends would be brought to a sense of religion—that their thoughts might be diverted from the vanities with which they are surrounded, and be brought to the contemplation of a future state. He prayed fervently with the Hon. and Rev. Montague Villiers, Dr. Beaumont, and Mr. Stanley, who have assured Mrs. Dermott with the hope that your late unhappy master is now in a state of happiness. The above gentlemen, as well as his medical attendants, Dr. Prout and Mr. Stafford, did everything in their power, spiritually and medically, to assuage his sufferings, which were at last terminated on Sept. 12—the fatal complaint being thickened bladder and diseased kidneys, of a chronic character, supervening upon an old standing stricture.

Mr. Dermott had intended to insure his life, but, like many scientific men, neglected to do so, and has in consequence left his widow totally unprovided for. She has nothing certain at present, except the annuity of £30 from that admirable society, the Society for the Relief of the Widows and Orphans of Medical Men. The lecturers of this school intend to allow her a portion of the proceeds, so that she will have an interest in the success of the establishment. In this sad and short picture there are many circumstances to be dwelt upon with advantage:—1. The being carried off in the prime of life at a time when Mr. Dermott was looking anxiously forward to be most occupied. 2. The postponement of religion to a late period of life. 3. The leaving a widow totally unprovided for. 4. The termination of the complaint. But I do not intend to dwell upon them, hoping that you will ponder over them again and again, for we know not how soon we shall be called away by death; but this we know, "to the same complexion we must come at last." I have not mentioned these subjects because I wish to find fault—it is painful to do so—but I feel deeply the responsibility of my position as superintendent of this school, and I must look to your welfare in every point of view. Too often any allusion to religious matters is voted a nuisance, or it may be called cant, or something worse, but it is "the one thing needful," and I would implore the pupils of this school to elevate their minds from the carcass they dissect to the Deity who made it. Be most expert anatomists if you please, but be not puffed up with mere attainments in any science; there is something beyond science which our philosophy will not easily explain.

I would say a word or two about the termination of Mr. Dermott's disease. We were looking forward to coma or convulsions as a probable ending to his complaint, neither of which happened. Might not this be an interposition of Providence, warding off the frequent termination of this disease, allowing his senses to remain perfect to the last moment, and, consequently, more time to be devoted to prayer?

The lecturer then alluded to the grandeur obtained by those nations in which the arts and sciences flourish, and how much the fate of youth depended upon the cultivation of the mind. The great truths which medical men were bound to investigate nourished and strengthened the mind and enlarged the ideas. Study excited the mind to emulation, by which it was encouraged to hope for success. It rendered us useful to mankind, attracted the mind from idleness and dissipation, and urged it on to contemplate facts and give correctness to the reasonings upon them. He hoped that students would not be discouraged by the difficulties which met them at their entrance into the profession of medicine; and, in alluding to different plans of education, quoted the words of Dr. Latham respecting "the necessity under which the majority find themselves of exercising their profession early requires that they should be made practitioners in the easiest and nearest way. Their knowledge should be of things obviously necessary, and this knowledge ought to be rigidly exacted, and nothing more." It is scarcely necessary for me to dwell on the importance of the medical profession, the origin of which had been ascribed by Cicero to the invention of the immortal gods. When we consider the various branches of study that are either useful or actually requisite in order to understand our profession properly, it must be obvious than an unremitted attention should be exerted by us to obtain this object. A knowledge of polite literature, the classics, and the modern languages, were justly among the prerequisites of a medical education. The mathematics, also, will strengthen the mind and prepare it for the investigation of truth. How many absurd theories are frequently found in medical writings! How many vague hypotheses have been started in regard to the proximate cause of fever! Again, the essential cause of inflammation has been a bone of contention for ages. Although medicine and surgery are intimately connected and are to be considered as branches of the same root, still, as division of labour tends to improvement, no doubt advantage is derived in an art so difficult and extensive from the distinction of the physician and surgeon; but it is necessary to understand the principles of both before eminence can be obtained in either.

The lecturer then devoted a great portion of his discourse to the consideration of the different sciences which must be studied during a course of medical education, of which anatomy and physiology were the bases; chemistry and botany were auxillary sciences; then pathology and practice of physic, surgery, *materia medica*, widwifery, and forensic medicine. Be not alarmed at the large volumes written on *materia medica*, for it is not necessary to get them by heart "totus blaterantes pharmacopœias," but it will occupy much time at the bedside of the sick to learn those remedies which are useful for the cure or alleviation of disease. Be not, however, vast experimenters, especially with new remedies; recollect there are various fallacies with regard to cause and effect. Few can have observed the fate of a number of useless and dangerous remedies which have been introduced without regretting that a certain degree of scepticism did not exist with regard to their alleged efficacy. Remember that you are guardians of the public health, and that you cannot be too cautious in adopting new and potent medicines. Observe their effects carefully and with a true philosophic induction—that is, *pro* and *con*, and deduce inferences with the greatest regard to truth. It is greatly to the honour of the medical profession that it has always been ready and active to adopt sanitary measures for the public safety. When the plague

or cholera, or any other pestilence, prevailed, medical men, at the hazard of their lives, have visited the sick while others fled in alarm. The plague of London, in 1665, is computed to have carried off 100,000 individuals. Is it not, therefore, necessary that a medical man should be among the foremost in adopting sanitary measures for the health of the public; in encouraging free ventilation, drainage, and cleanliness wherever they should be neglected; by doing which he may render himself a benefactor to his species? Mr. Chadwick has stated, in his Sanitary Report, published in 1842, that "A conception may be formed of the aggregate effects of the several causes of mortality from the fact, that the deaths caused during one year, in England and Wales, by epidemic, endemic, and contagious diseases, including fever, typhus, and scarlatina, amounting to 56,461, the great proportion of which are proved to be preventible: it may be said that the effect is as if the whole county of Westmoreland, now containing 56,469 souls, or the whole county of Huntingdonshire, or any other equivalent district, were entirely depopulated annually, and were only occupied again by the growth of a new and feeble population, living under the fears of a similar visitation. The annual slaughter in England and Wales from preventible causes of typhus, which attacks persons in the vigour of life, appears to be double the amount of what was suffered by the allied armies in the battle of Waterloo." It was presumed that the Government would have been able to effect something during the last Parliament for the sanitary condition of the people. It made strenuous efforts to accomplish something. Lord Lincoln's bill contained remedies for the removal of enormous evils destructive of the comfort, the morals, and life of numbers of the people. Valuable reports have been presented to the Legislature and public on this subject in 1838, which were followed up, and in 1843 by her Majesty's commissioners, appointed "to make further inquiries into the actual state of large towns and populous districts, and to devise the best means of promoting and securing the public health." The result of these inquiries has been a body of evidence of the highest order. Do the opponents to sanitary reform know what they are about? Did they ever suffer from fever themselves? Look at these plates in which you see delineated the ulcerations of the intestines—a common result of fever. I have seen the intestines perforated like a cullender from this cause. Again, the brain may become inflamed and disorganized, producing palsy or mania, or the respiration may be impeded by inflammation of the lungs during fever; so that a person may be tormented for the rest of his life by organic disease through fever; and yet there are to be found persons who oppose legislative remedies for the removal of such an intense evil.

I attended a case of fever a short time ago in Jumper-court, near Barclay's brewhouse; during my visit, I learned that fever had existed in nearly every house. The place was most offensive from an untrapped gully-hole in the centre, accumulations of filth, and the stables, in addition to which the supply of water had been taken off during the day, and was only put on at uncertain times of an evening. Is it surprising, then, that we are called upon to attend erysipelas, gastric irritation, asthenia, and fever, occurring in the same family one after the other, when they are compelled to reside in such dens? A visit to Redcross-court and Maypole-alley, in the Borough, would surprise some of you. I have dwelt upon this subject, for I feel greatly the importance of medical students paying attention to the subject of hygiene.

The lecturer then called their attention to some diagrams of differently-formed sewers, traps for gully-holes, contrivances to prevent smoke, and other matters relating to sanitary measures.

You may, however, be excellent anatomists; you may, also, be skilled in all the sciences previously mentioned, and yet not be good medical practitioners. There is still something wanted to crown all this, to constitute a skilful person—something which will enable you to distinguish diseases and apply judicious remedies. It is clinical practice, which can only be acquired in the wards of a hospital. If you neglect this important branch of your profession, you will feel greatly at a loss whenever you are called to the bedside of a patient. It is true that a few simple cases may require very little treatment, and the patients recover; but diseases are liable to become complicated—look, for instance, at this greatly enlarged heart, which occurred in connection with acute rheumatism; it would be very dangerous to overlook such a complication as this, arising from rheumatism.

Many other illustrations were then introduced to illustrate complicated diseases, and the necessity of great attention to clinical studies.

You should, therefore, see disease in hospitals and dispensaries; in the miserable and comfortless hovels of the poor, as well as visit the sick-bed of those in higher stations. Some students are disposed to think that their studies are terminated when they have attended clinical medicine; but medical men should never cease to study, for new facts often occur in medicine which puzzle even the most learned practitioners; and this should teach us to be charitable towards each other, and not to imagine that we could always have devised better means where another has failed to relieve a particular case. Be careful to keep your minds unprejudiced by theories; diligently examine facts for yourselves, note cases at the bedsides of the patients, make remarks upon them, and draw your own inferences; at the same time be careful of becoming either dogmatical or too sceptical while performing this duty. Follow the principles of inquiry which have been established by Bacon, so that your minds may be fitted for the diligent investigation of facts, unprejudiced by preconceived opinions. You will frequently have occasion to act on the spur of the moment in a dangerous case; there will be no time for delays; delay might be death. How valuable your clinical knowledge will be then, if you have availed yourself of every opportunity to obtain it! Besides, you may, when early established in practice, be called to a dangerous case; you may have to decide before an anxious family respecting its nature and treatment; you may be succeeded by older and more experienced practitioners, who will be able to detect any glaring mistake which might have happened. In other professions there is an opportunity for referring to authority; in most cases you will be unable to do so, hence your minds should be habitually directed to the study of your profession in order that you may acquire sagacity in distinguishing, and expertness in treating, disease. It would be better to observe the cases in the wards for a short period before recording them; make inquiry into the symptoms; examine, by means of the stethoscope, the condition of the heart and the lungs in a state of health, in order that you may be able to detect any derangement of their functions during disease. If you were to inquire into the history of the most eminent medical practitioners of the present day, you would find that they adopted this method—that in their younger days they were constantly in the wards of the hospital, watching and noting down for themselves the symptoms, progress, and results of diseases; in a word, they were diligent clinical observers. By pursuing this plan you will have in your possession a clinical system of practical medicine that will be useful to you for the remainder of your lives. But personal experience will not alone suffice: it will be necessary for you to read much. It was well said by Dr. Crell, when an objection was made by the bench to witnesses for referring to medical authors, "My lord, it must be reading, as well as a man's own experience, that will make any one a physician, for without the reading of books in that art, the art itself cannot be attained to." It is well to add, observes Beck, that he was allowed to proceed. Again, it is mentioned in the Lectures of Mr. Amos, that a medical man flippantly replied to a question, by slighting the information which was to be obtained from medical writers, saying that the writers of books would advance anything. Chief Justice Dallas reprimanded the witness, and remarked that he would not sit in a court of justice and hear science reviled, and the recorded researches of the medical world represented by ignorant tongues as leading only to uncertainty.

However learned an education the kindness of your parents or friends may have bestowed upon you, should you have already made great progress in your preliminary education, it will be of little value unless you diligently observe for yourselves at the bedside of the sick. Honour will not cure a fever or set a leg, "therefore hath honour no skill in surgery" or medicine. I by no means wish you to undervalue preliminary studies, but I cannot conceal the truth, that your former knowledge, or even the acquisition of those sciences above alluded to, will not *alone* qualify you for the cure or alleviation of disease. On entering the medical profession frequent complaint is made that there is very little chance of success, because so many persons are embarked in it. Might not the same objection apply to every profession—to the church and to the bar, or any other occupation? Try any employment and you will find that there are plenty of candidates for it. Recollect that by steadiness, attention, and perseverance, by great regard to moral character in a profession in which confidence must necessarily be reposed in you, the difficulties which at present appear insurmountable will be overcome. Consider also the advantage of one settled occupation; the sons even of kings are educated to one of the professions. Would you envy the street loungers, the careless, the dissipated, the do-nothings? There are two paths for you to choose—the one straightforward and honourable; the other dangerous, leading to ruin, disease—leaving, perhaps, not a cranny in your bodies free from it and probably a premature death. It has been truly said by Goldsmith, that the most usual way among young men who [illegible] olution of their own, is first to ask one friend's advice, and follow it for some time; then to ask advice of another, and turn to that; so of a third: still unsteady, always changing. However, every change of this nature is for the worse. People may tell you of your being unfit for some peculiar occupations in life, but heed them not; whatever employment you follow with perseverance and assiduity will be found fit for you. Life has been compared to a race; but the allusion still improves, by observing that the most swift are even the most apt to stray from the course.

To know one profession only is enough for one man to know. Be contented, therefore, with one good employment, for if you understand two at a time, people will give you business in neither. In illustration of the above statement, Goldsmith relates the following story. A conjurer and a tailor once happened to converse together. "Alas! cries the tailor, what an unhappy poor creature am I! If people ever take it into their heads to live without clothes I am undone; I have no other trade to have recourse to." "Indeed, friend, I pity you sincerely," replies the conjurer; "but, thank Heaven, things are not quite so bad with me, for if one trick should fail, I have a hundred tricks more for them yet. However, if at any time you are reduced to beggary apply to me, and I will relieve you." A famine overspread the land; the tailor made a shift to live, because his customers could not do without clothes; but the poor conjurer, with all his hundred tricks, could find none that had money to throw away; it was in vain that he promised to eat fire, or to vomit pins; no single creature would relieve him, till he was at last obliged to beg from the very tailor whose calling he had formerly despised. Sink not, therefore, into sottish indifference, producing a mental atrophy. You may not possess the wealth of the rich man, but you may avoid his diseases from repletion, by activity of mind and body, and

render yourselves, as far as men can be, independent!

Dr. Aldis then alluded to the medical staff of the school, and stated that he had received promises of their cordial co-operation for the future management of the establishment. The museum had been greatly increased by an addition of preparations; and he concluded by saying that every endeavour would be made to render the courses of instruction as complete as possible, with due regard to the convenience of the classes, and that his colleagues and himself would be anxious for their increase in professional knowledge, and growth in valuable acquirements.

The lecture-room was completely filled.

DUMAS ON ORGANIC CHEMISTRY.
No. XXXI.

(Continued from page 626.)

Extractive Matters soluble in Water only.—That portion, which alcohol at 0·833 is incapable of dissolving, constitutes an opaque brown mass, having an agreeable taste of broth or meat. This substance possesses an alkaline reaction, and contains lactic acid in a peculiar state, in which it is but slightly, if at all, soluble in alcohol. It, moreover, contains some extractive matters, which M. Berzelius has endeavoured to separate one from another, and among which we remark a peculiar substance which has received the name of *zomidine*.

To procure this matter, we dissolve in water the residue of the treatment by alcohol, and turn into the liquor some ammonia and acetate of baryta. A precipitate of phosphate of baryta takes place, accompanied with some animal matter. This solution is to be filtered and perfectly neutralized by means of acetic acid, after which it is to be precipitated by the neutral acetate of lead, taking the precaution to neutralize by ammonia the acetic acid which becomes free. The precipitate is to be washed, diluted with water, and decomposed by sulphuretted hydrogen. It is then to be left at rest for some time, so as to allow the sulphuret of lead to deposit, and finally to be filtered. This solution is of a brown colour, and is not decolorized by animal charcoal. It still contains a little lactic, and some hydrochloric, acid, which should be removed by evaporating the solution and treating it by alcohol, which does not take up the extractive matter.

It possesses the external properties of a brown extract, which hardens by desiccation, but does not otherwise change in the air. It has a strong and agreeable taste of meat, which perfectly resembles that of the matter yielded by fibrine to boiling water. ated over the naked fire, it swells up and its an animal odour. It is dissolved water in al proportions, but is precipitated from it by alcohol. Alcohol at 0·833 dissolves, however, sufficient to acquire a yellow colour.

The acetate of lead, the nitrate of silver, and the chloride of zinc, precipitate it from its aqueous solution. The precipitate formed by the acetate of lead is slightly soluble in water; that which we obtain by the subacetate is altogether insoluble in that vehicle. Corrosive sublimate and the infusion of gallnuts do not precipitate it when pure.

The filtered liquid, which we obtain in the preparation of *zomidine* by means of the acetate of lead, yields a white precipitate on the addition of the subacetate of the same base; this precipitate, when washed, and decomposed by sulphuretted hydrogen, gives to water a colourless matter, which possesses the aspect and taste of gum, and which does not exhale any animal odour when burned.

Lastly, the liquor, on being separated from this latter precipitate, and decomposed by sulphuretted hydrogen, holds in solution a colourless substance mixed with some acetates, and which turns yellow during evaporation.

We thus see that the extractive matters of the meat, which M. Berzelius has taken so much pains to isolate and to place in their true light, are of considerable variety; but still we must acknowledge that none of them possess any clearly defined characters. It is, indeed, exceedingly probable that some of the principles which he regards as pure, are mere mixtures of several other matters.

We shall terminate this subject by giving a few analyses of muscular tissue:—

	Berzelius. Ox.	Braconnot. Bullock's heart.	Schlossberger. Ox.	Schutz. Ox.
Water	77·17	77·03	77·50	77·50
Fibrine, cellular tissue, nerves, and	·70	18·18	17·50	15·00
Albumen and colouring matter of the blood	2·20	2·70	2·20	1·30
Alcoholic extract and salts	1·80	1·91	1·50	1·32
Aqueous extract and salts	1·05	1·15	1 30	1·80
Albuminous phosphate of lime	0·08	—	trace	
Fatty matter and loss	—	—	—	0·08

M. Schlossberger has examined the muscular tissue of the fish, and has found it to be less rich in solid materials. The following are the results he obtained:—

	Carp.	Trout.
Water . .	80·0	80 5
Fibrine, &c. . .	12·0	11·1
Albumen, &c.		4.1
Alcoholic extract and salts	1·0	1·6
Aqueous extract and salts	1·7	0·2
Albuminous phosphate of lime..	---	2·2

PUS.

Pus is a more or less viscous, yellowish liquid, havin peculiar faint odour and a sweet taste, and which is secreted by the surface of a wound, or by an inflamed organ. That which is formed on the surface of certain ulcers, or wounds complicated with necrosis or hospital gangrene, is more fluid, and exhales a repulsive, fœtid odour. this is unhealthy pus.

Healthy or laudable pus is moderately viscous. According to M. Gueterbock, its density is about 1·03. When preserved from contact with the air, it is ordinarily neutral to litmus-paper. That which is secreted by th surface of a healthy-looking wound may a present th neutral reaction still, it is not an uncommon thing to find it cid. The pu of leucorrhœa reddens litmus paper. Frequently, pus alkaline; when is of a bad nature it usual presents this ch acter, which is owing, uch case, to the pre nce of a little ammo M. Donné has proved that the pu in gonorrhœa is, in the male, ordinarily alkaline M. Gueterbock made a similar observation on pus taken from the surfa of several wounds and ulcers, and he discovered that this alkalinity frequently disappears to e place to an acid reaction. He attributes this hange to the formation of a little acetic or lactic acid.

Pus mixes with water without being dissolved, but forms with it a true emulsion, very different in this respect from mucus, which never admixes itself with that fluid. It filter great difficulty, for the matter which is arried in suspension in it, speedily blocks up the p of the paper. The filtered liquid coagulates heat an evident proof that it contains albumen. The proportion of this principle is not, however, very great, for the coagulum is never very compact. It appears, moreover, that the albumen of pus, as well as that of the serum of blood, possesses the power of resistin oagulation by ther.

Filtered pus is precipitated by acetic acid. According to M. Gueterbock, it owes this property to a principle analogous to caséine, and to which this physiologist has given the name of *pyine*.

To isolate this substance, and make a perfect analysis of pus, M. Gueterbock operated in the following manner:—He heated some pus with rectified alcohol, and filtered the liquor while hot. On cooling, there was formed a deposit of fluid matter, fusible at about 60°, which communicated a stain to paper, and burned with a yellow flame, at the same time disengaging ammonia. From these characters, M. Gueterbock does not hesitate to regard this substance as a fatty body, although he has never succeeded in saponifying it; and, furthermore, the presence of nitrogen in this matter would seem to indicate that it was a body of a different nature, or at least that it contained, in a state of admixture, some azotized principle. However this may be, M. Gueterbock affirms that it contains no cholesterine.

The alcoholic solution, on being separated from this matter, was evaporated and treated by water. This liquid became charged with an extractive matter (osmazôme?), the ashes of which were found to possess an alkaline reaction, and which probably contained some lactate of soda. The residue was formed of a matter having a fatty appearance, similar to the foregoing, and, like it, non-saponifiable.

The part insoluble in alcohol was reacted on by water, which left a residue formed of coagulated albumen and globules of pus. The aqueous solution contained, besides a little albumen, which could with facility be coagulated by heat, and separated by filtration, the *pyine* of which we have just been speaking. The following are the principal characters which M. Gueterbock assigns to this substance:—It is insoluble in concentrated alcohol, and soluble in water. This solution is precipitated by acetic acid and by alum; an excess of these reagents does not redissolve the precipitate. The yellow prussiate of potass forms no precipitate with it; by the addition of a drop of hydrochloric acid to the liquor, a deposit is thrown down which disappears in the slightest excess of acid. The solution of pyine, when acidulated by hydrochloric acid, does not form a precipitate with the prussiate of potass. Caséine, with which pyine has otherwise so great an analogy, behaves in a totally different manner with this reagent. It is equally impossible to confound *chondrine* with pyine: for the former of these substances furnishes gelatine by ebullition, and gives with the solution of alum a precipitate soluble in an excess of this reagent—characters which do not belong to pyine.

Notwithstanding the knowledge of these properties, the chemical history of pyine is yet far from complete; so that we cannot justly place it among the number of those substances of which the characters may be said to be thoroughly defined and understood.

Pus contains all the salts which are to be found in the other liquids of the economy; M. Gueterbock succeeded in determining them by incineration.

The following are the results of the analyses which he made on some fresh pus:—

Water	86·1
Fatty matter soluble in hot alcohol ..	1·6
Fatty matter soluble in cold alcohol, and extractive matter	1·3
Albumen, pyine, globules	7·4
Loss	0·6

The above pus left, on incineration, seven per cent. of soluble salts, formed principally of chloride of sodium, and one per cent. of phosphates and earthy carbonates, with some traces of iron.

The results obtained by M. Valentin differ from the foregoin This physiologist asserts that he has foun in pus, cholestérine, stéarine and oléine, results which would appear doubtful, if we may judge by the experiments of M. Gueterbock.

Does pus ontain fibrine? Some observers, and in particular MM. Valentin and Mandl, have resolved this question in the affirmative, and think that the lobules and granulations which we find in pus really contain fibrine. Still, this opinion is founded on no very positive chemical datum.

Ammonia, when mixed with pus, gives rise to a characteristic reaction, first pointed out by M. Donné. The mixture loses its fluidity, and assumes the appearance of a more or less transparent, yellowish jelly, which may be drawn

out into filaments. This reaction may serve to distinguish pus from some other liquids, and especially from mucus; it is due to the swelling out of the globules which swim in the pus, and of which it is easy to prove the presence by means of the microscope.

In fact, when observed under a suitable lens, pus presents itself under the form of a serous liquid, in which are seen to be swimming globules of various forms and sizes. The greater number are double the size of those of the blood; they are pale and more transparent than are these latter, and their form is less regular. Sometimes, they are pretty well rounded and smooth; at other times, their surface is rough and uneven, or flattened, and offers angular projections of great irregularity. According to M. Gueterbock, they are composed of an envelope of albuminous matter, soluble in acetic acid and precipitable by prussiate of potass, and of a nucleus formed of granules which are insoluble in the acids.

More recently, M. Bourguignon has made a very curious and important observation upon the constitution of these globules, should it turn out to be confirmed. On diluting some pus with a little water, and observing one of the globules intact, he remarked that the granules, or corpuscles, contained in this globule, were animated with a very rapid movement; one might say, in fact, that the vesicle was filled with a host of animalcula; when the external membrane was ruptured, these animalcula escaped, at the same time preserving their power of motion. Acetic acid instantaneously arrested this phenomenon.

We may also add, that M. Borelli and, subsequently, M. Donné have proved the presence of *vibriones* in the pus arising from chancres, and that other observers have found various infusoria—as *monades* and *vorticellæ*—in pus of a bad nature; these, however, are secondary results which we must not confound with the foregoing.

Fetid pus differs in no sensible manner from laudable pus, in so far as regards the appearance of the globules. The putrid decomposition appears to exercise itself only upon the matters dissolved in the serum. Beyond the formation of ammonia, it gives rise to the production of a very appreciable quantity of sulphuretted hydrogen, proceeding from the sulphur of the albuminous matters. We can thus readily understand the presence of hydrosulphate of ammonia in unhealthy pus, and we may further explain the black tint assumed by the surface of certain wounds, or communicated to the dressings applied to them, on making use of goulard-water as a topical application.

ORIGINAL CONTRIBUTIONS.

OBSERVATIONS ON CERTAIN SURGICAL PRINCIPLES AND PRACTICES,

By F. C. SKEY, Esq., F.R.S.,
Lecturer on Anatomy to St Bartholomew's Hospital.

It would be a curious subject of inquiry, and not unprofitable withal, that which would recal to the attention of the practitioner of medicine, to whatever grade of the profession he belongs, the source of the opinions on which are founded his future views of disease—whether they have been the legitimate offspring of conviction, founded on unprejudiced inquiry, on a close scrutinizing observance of the real workings of the machine; or whether the issue of a sort of godfather adoption of the opinions of others, by such as timidly prefer an authority to a reason; or thirdly, of those who, entering on the wide field of investigation, place interest before truth, and attach themselves to that standard which has fewest adherents, in the hope of early promotion to the leading ranks; or fourthly, of those few who, swayed by no prejudice, captivated by no theory, and seduced by no authority, adopt opinions simply because they are in direct opposition to all theory and all authority—of those who display their own standard, to the eccentricity of which they trust for their notoriety.

It would be a curious inquiry, and not unprofitable, to observe how far opinions which may be supposed to influence the welfare of so many, result also from character and personal feeling. If the hard maxims of law may be twisted by political bias, even by the judicial administrator of the law on the bench (and who will doubt it), can it be expected that medical men should be exempt from influences inherent in our very nature and bound up with our most sacred affections? If any science will justify variety in opinion, it is that of medicine. Its uncertainty and the inefficiency of its immediate agents, so long as minds will speculate, justify, even among the most logical and the most philosophical practitioners, differences wide and various. But such differences, wide and various as they present themselves to the unreflecting, should be but differences of detail; the principles, for the most part, should stand prominent and demand obedience. The true principles of medicine are, of course, based on a true physiology. This ought to be the framework of our practice and our opinions.

The foregoing remarks have arisen from occasional rumination on the state of the profession, as seen through the varieties in the views and practice of its various members. The cause of the difficulty in determining and selecting the treatment most appropriate in the cure of disease arises from the fact, that the large majority of diseases in reality advance onwards to their own cure, sometimes hand in hand with, and often in despite of, treatment. Thus the degrees of excellence in practice and the soundness of opinion are determined with difficulty, for it is chiefly in the niceties of management of disease that the able practitioner manifests his superiority. But these very points of detail, in reality so important, are so minute and so delicate as to be inappreciable by the eye of the unthinking, who find success of a certain kind the attendant on their own views, and, in their ignorance, refer the cure to their treatment, rather than to nature.

The higher the class of practitioner, and the greater his experience, the more does he lean on Nature for his guide, and less and less confidence does he repose on the curative influence of medical agents. The sound practitioner of medicine follows Nature as his polar star. If she be distorted from her path, he endeavours to conciliate her by gentle means to a return: he studies her movements and strives to imitate them.

In the great varieties of treatment of the present day none is more striking, and perhaps more characteristic of the man, than that which, referring a large class of diseases to inflammatory actions, professes to remedy them by reducing the quantity of the circulating blood. Such a man's reliance is on the lancet, which is ever employed with an unsparing hand; and on purgative medicine, which forms the staple of his stock. He deals largely in calomel, in black doses. He abjures nitrogenous principles, and every nutrient element, lest they add to the inflammatory liability of his patient. He bleeds in headache, he bleeds in pleurodynia, he bleeds in gastrodynia, he bleeds in rheumatism and in gout, he bleeds in hemorrhage, and when in difficulty or in doubt still he bleeds. He argues that the loss of fifteen or twenty ounces of blood will do no harm to the health of the individual, and "he rarely loses a patient." He is called to an accident. It matters little what its nature. He bleeds the patient to ensure his safety; he professes no farther motive than that of preventing inflammation. In injuries to the skull or brain, twenty ounces of blood are abstracted. "The pulse rises," says he, "and I bled him again." Thirty years since, bleeding to fainting was recommended by authority, and was unhappily adopted by many, for acute inflammation of the conjunctiva. For a thousand years and more, pain, heat, redness, and swelling, have constituted inflammation; but, with this class of practitioners, any one of the above signs appears to justify the lancet. In truth, their depletions are confessedly not restricted to inflammation, but are resorted to in aid of general treatment. How far are such views of the nature of disease removed from those of the most enlightened and the most experienced members of our profession! What is the immediate effect of bleeding on the pulse of a person, not the subject of positive inflammation? It rises, as it is called; that is to say, it becomes more frequent in its beats; and, supposing the quantity of blood taken to be large, it is no longer a tonic pulse, but is unnaturally soft and compressible. It has been raised ten or twenty beats in a minute, partly in obedience to the wants of every part of the body, which calls for blood from the central supply; and partly because, the force of contraction of the heart remaining nearly the same, it has a less duty to perform. The frequency of the pulsation is proportionate to the reduced quantity of blood. The exceptions to this rule are rare and peculiar.

The effect of loss of blood on the *system* is a sense of languor and loss of power; on the *bowels*, constipation. Select a healthy man of forty, the regular action of whose digestive system has been his boast throughout life; abstract twelve or sixteen ounces of blood from his system, and the action of his bowels is suspended until the blood removed from the circulation has been replaced by the extra work thrown upon the lacteal system. Does Nature take no cognizance, then, of a sudden diminution of the circulating blood? and does the accessary consequent constipation mark her approval or otherwise? But of infinitely more importance to the recovery of the individual is the condition of health of the *nervous system*. If the circulation be accelerated by loss of blood, if the tonic pulse be rendered compressible and soft, does not the nervous system participate in the injury? Unhappily, the workings of this important element of health are not so palpable. They cannot be tested by the finger, like the circulation; they are detected in their minute manifestations only by the observant and the reflecting, and most assuredly they often escape observation by the medical community.

They may be *seen* in the actions of the eye, and in the expression of the countenance; in the heavings of the chest, in the action of the muscles, and in the attitude of the person. They may be *felt* in the pulse, in the insubordinate beatings of the centre of the circulation, and in the skin. They may be *deduced* from the altered tone of the mind. They *may be* so detected. But are they? Do not these phenomena, all-important as they are, frequently pass and repass before the eye of the practitioner without remark; or, if observed, are they understood to an extent which influences his treatment? They may be freely developed by bloodletting, employed without the protective agency of inflammation. They may be developed through the agency of poisons, as in fever, &c. Under any circumstances, they are evidences of a wrong sustained to a system as important to life as the heart itself. Exactly in proportion to the quantity of blood removed from the circulation is the nervous system disturbed. It is no longer tonic. It exhibits itself in a variety of forms of fitfulness and eccentricity. The actions of the circulation are under imperfect control, and the heart bounds with pulsations, rapid, interrupted, and irregular.

Take two men of similar constitutional powers and liabilities; abstract from one of them twenty ounces of blood; subject them both to the poison of typhus fever. Which of the two is most likely to imbibe the disease, and which to escape the contagion?—and why? Because in the man from whom the pabulum has been drawn we find want of power to withstand disease.

Practically based on the same principle is the good old-fashioned notion that a man should not encounter fever or other contagious disease on an empty stomach. The more he is reduced the greater his liability.

Is not the constitution a surer mark for every description of disease—apoplexy itself, perhaps, and inflammation, not excluded—under a state of nervous system weakened by depletion? Undoubtedly it is. Two persons undergo a painful surgical operation: one loses twenty ounces of blood, the other five ounces only. Which is the more probable subject of subsequent inflammation? Unhesitatingly we may reply, the former. Where do we find the more serious and more frequent attacks of puerperal fever and inflammation of the uterus? In those women whose confinements have been attended with the greater amount of hemorrhage, who are reduced and rendered prostrate by loss of blood. The patient who has lost blood is more liable to inflammation than another, because, in the unhealthy condition of his nervous system, he is susceptible of irritation that a tonic condition of this system would throw off; and let it be remembered that it comes upon us with a reduced circulation and exhausted powers.

Dr. Gooch, Dr. Marshall Hall, and Mr. Travers have written excellently on these subjects. It is to be lamented that such works should ever be laid aside before they have been thoroughly studied, or until the precepts therein inculcated have sunk deeply into the mind, and become "familiar as household words."

It is not an unusual practice, that of administering a large dose of calomel and other form of depressing aperient immediately on the occurrence of a large accident, such as compound fracture or severe injury to the head.

It would be difficult to explain the *rationale* of this practice, infinitely more honoured in the breach than in the observance. What end is answered by a drastic purgative but weakness, exasperating the injury already sufficiently great to call into requisition all the energies of reparation. If it be intended as a protection against future inflammation, erroneous indeed is the intention, and inoperative the means, except for mischief.

Anologous to this principle—which may be compared in military matters to the futile endeavour to destroy a besieging army by repeated sorties of detachments from a weakened garrison, the concentrated force of which is required for the final struggle—is the ancient and partly obsolete practice of preparing patients for operation by gradual depletion; or the reducing process adopted after the operation, with the mistaken purpose of preventing inflammation. All this is done in direct violation of a law which prescribes a tonic condition of the nervous system, as the most favourable for the performance of all large surgical operations.

It may be easily comprehended that a man of indulgent habits and prone to obesity may undergo a process of moderate reduction of his weight by regulated diet, reasonable purgation, and active exercise. But such means tend to tighten, instead of to relax, the cords of his nervous system. This is not the nature nor the principle of the reduction alluded to. These agents promote health, increase the strength, and give tone to the actions of the heart, and to the general functions of the body. The term reduction may apply to his weight and to the heats of his pulse, which latter is reduced from a standard of false excitement to that of tonic health, and in the same degree it presents a condition of his system most tolerant of injury to its integrity.

The frequent failure of operations of expediency does not militate against this principle, healthy as the system may be at the time of their performance. In the last work of a deservedly eminent surgeon, the principle of such depletive preparation in cases of operative surgery, which has in view the depression or reduction of the individual; as likewise that which reduces the patient, after the operation, for the purpose of preventing inflammation, has been most properly denounced—late though the just denunciation reach us.

"Do we take sufficient cognizance," said an eminent surgeon, who had himself recently been the subject of a serious accident, "with our purgations and our bleedings, of the shock our nervous system has sustained?" "I think not," was the reply; "and it may be well that this accident has happened to you rather than to another."

And so it is: we adopt the practice of bleeding without reflecting on its consequences, because we have observed that it may afford temporary relief, even in neuralgic affections, and without taking note of the palpable fact, that undue fulness of the circulation may be concurrent with a morbid state of the nervous system.

The comparative mortality in the circle of general practice is a bad criterion of the efficacy of this or that principle. It is only in large hospitals where the experiment can be fully tested. No doubt more blood may be taken with impunity in the country than in the metropolis, but the principle holds the same.

It is a curious fact, that many eminent members of our profession eschew the lancet altogether. They declare that they never bleed; that bleeding is gone out of fashion; and a most unprofitable fashion it is. An invaluable agent occasionally in the hands of the judicious, but an instrument of much evil when indiscriminately resorted to.

To illustrate the foregoing remarks I will describe two cases. The first of these belongs to a class of most frequent occurrence, in which depletives, general and local—for they are, of course, identical in their influence—impair the reparatory powers of the constitution, protracting the progress of the disease towards recovery, both positively, by the ill-timed administration of local agents, and negatively, by the denial of such general means as tend to promote the health through increased vigour given to the circulation.

A lady, consequent on her confinement, has pain and hardness in the breast. On inquiry it will be found that she has had what is called a hard time. She was in labour many hours, and lost more than the usual quantity of blood. Her skin is clammy; her pulse is large but soft and compressible; her appetite doubtful and uncertain, having, probably, a tendency to relaxed bowels.

Now, there are three modes of attacking this local plethora:—1, by local depletion; 2, by promoting action elsewhere, and raising the standard of the general health; and 3, by the combination of the two former.

The local reduction is attempted by leeches, of which about eight may be applied, and from which such temporary relief from pain follows as to lead to a repetition of the remedy. But the cause of the local plethora, which is advancing towards abscess, is not affected: it remains as before; and the suppurative action, slightly arrested for the time, rallies and reforms, and abscess generally follows in the end. The local application has given relief from pain, and pain only. The constitutional powers are reduced by loss of blood, occasioned directly by the leeches, and indirectly, by an aperient, which has been ordered as their usual concomitant. The benefit derived by the local depletion must also be [illegible] it is applied to the [illegible]

[illegible] nefit deriv[illegible] employed early.

They are worse than useless in abscess, of doubtful good in established suppurative action, and pertinent only in the first stage of inflammation: for when applied in the second stage, they often tend, by their local irritation, to promote the completion of the process by the formation of matter. Nor is it an unreasonable inference that, in virtue of the reducing influence of the leeches on the circulation, the abscess, which almost certainly follows, will be larger in size than if it had formed without the aid of surgical art, and will be much more protracted in its progress.

The second form of treatment consists in raising the standard of the general health; and this would appear at once the more rational, as it is unquestionably the more successful, mode of contending against the impending evil.

The constitution is primarily at fault, not the breast; and to attack the breast for a fault of the constitution is, to use the language of Mr. Abernethy, "to minister to a symptom." Tonic medicine, porter, good diet, in fact, tonic treatment, to meet an atonic system. No purgative, no local depletion, no handling of the breast, which should for the time be entirely forgotten. Compound tincture of bark with mineral acid, meat diet, the breast supported without pressure by the local application of a thick fold of wadding, will determine in the course of a day or two what Nature intends. The appetite will be increased, sleep promoted, and health improved. If the local disease be engaged in the first stage, or that of inflammation, suppurative action will be finally arrested, and the thickened mass will be gradually absorbed. If in the second stage of suppurative action, the tonic treatment will answer two important indications, viz., the diseased actions will be limited in degree; the formation of matter, though it may not be arrested, will both be reduced in quantity and, what is of little less importance, the crisis will be accelerated. All that part of the swollen gland in which suppurative action is thoroughly established will be pushed on to the completion of abscess; all the remainder will be absorbed.

The advantages, then, are, that the period of suffering is abridged, the disease itself is limited by tonic treatment, and the health is improved. We force on a diseased process in a healthy, instead of prolonging it in an unhealthy, state of constitution, and in so doing we accomplish the great end of treatment—the early restoration of our patient to her family circle.

In like manner, and acting on the same principle, in those cases of chronic enlargement of the glands of the groin following gonorrhœa or chronic venereal sores, in which there is not constitutional power sufficient to mature the disease to its crisis, bark will bring on this crisis in the course of a few days, and either the tumid mass is dissipated, or the crisis is perfected by the formation of a small abscess.

With respect to the third mode of treatment, which consists in a combination of the local and general, it is only applicable in the first stage of inflammatory thickening. It is a great mistake to suppose that local depletion and tonic medicine are subversive of each other's influence. It is called "blowing hot and cold." It would be difficult to devise a better principle for restoring a disturbed balance of the system so apparent in these cases, than that of blowing hot when it is cold, and cold when it is hot; and this, in fact, is the application, to give force to the system weakened by illness, and abstract blood where there exists local congestion. But the abstraction of blood should be adopted with caution, avoiding alike the irritation of the local agent, whether leeches or cupping-glasses, and the reaction of the constitutional powers consequent on loss of blood.

The other form of cure is an example in which the nervous system sinks under the effects either of depletion or of local injury, for the one was as frequent a cause of collapse as the other. I quote it because it speaks plainly, although it labours under these disadvantages, that it is of a negative rather than positive kind, and has been before alluded to elsewhere. But I select it in illustration of another important principle to be ever kept in view in the performance of surgical operations, viz., that operations of expediency are dangerous by their sudden shock to the nervous system, which is unprepared for the attack. In such a condition of the system all operations are dangerous, and the larger ones often fatal. Operations cannot be done on the human body with impunity unless the nervous system takes [illegible] necessity, acknowledging, as it were, the presence of an evil to be got rid of. A wound into a healthy knee-joint is generally fatal to the structure of the joint, whereas we cut into a diseased knee-joint with impunity. The

same remark applies to the bladder and to other cavities of the body, whether mucous, serous, or synovial.

A medical man passed into the bladder of a patient, a young man of twenty-three, an elastic catheter (No. 8). In withdrawing the instrument, it broke in half, one portion remaining in the bladder. He walked to St. Bartholomew's Hospital, and I saw him. Would it have been safe to have cut into this man's bladder, under the circumstances of his case, without either pain or even uneasiness? I think not.

I saw him daily in good health, without suffering, passing water freely, with a good appetite for food, and sleeping soundly. Thus passed ten days.

On the eleventh he complained of pain in the bladder; he had passed a disturbed night, with frequent attempts at micturition; pressure on the bladder gave him uneasiness. On that day I removed the catheter by the lateral operation; about two ounces of blood were lost.

On the following morning, eighteen or twenty hours after the operation, he was attacked with severe pain extending all over the abdomen, great restiveness, headache, hot skin, and had a bounding pulse of 120. He was under the immediate charge of a very intelligent house-surgeon, and under the observation of dressers and students, many of whom were present on the occasion; and almost to a man, when I inquired of them the views they took of the condition of this patient, said he had inflammation of the bladder, or peritoneum, and recommending bleeding on a large scale. In the first place, there were not symptoms of inflammation; and, in the second, had inflammation followed, it would not have appeared under forty hours, at the earliest period. There were nervous symptoms resulting from the shock sustained to his constitution by the operation on a bladder hardly yet prepared to sustain it. A large dose of ammonia and opium sent him to sleep, and, on awaking after six hours, every vestige of danger or difficulty had subsided. In three weeks he was quite well, and at the expiration of the fifth week he married. Had this man been bled, I believe he would have had an attack of inflammation, or something worse.

This is a strongly-marked case. But allusion to strongly-marked cases is not requisite in enforcing the immense importance of this principle, which exhibits itself to daily observation in the occurrence of a train of small, but palpable, manifestations of such disturbance to the nervous system as can only be met by treatment expressly directed to that system, but which, apparent though they be to an observing eye, are, for the welfare of the sick, too often referred to the fault of the circulation, notwithstanding the repeated warnings we have from time to time received from the heads of our profession.

Grosvenor-street, Oct. 4.

CONTRIBUTION TOWARDS A MORE ACCURATE THEORY OF THE "TARTARUS BORAXATUS," AND ANNOUNCEMENT OF VARIOUS OTHER SALTS FORMED BY THE BORO-TARTARIC ACID.

By GEORGE WILLIAM H. KRUG,

Doctor in Philosophy of the University of Jena, and Apothecary in the City of Campinas, Province of San Paulo, Brasil.

Previous to entering into detail, it is necessary to mention that there exist two essentially different formulæ for the preparation of tartarus boraxatus. The Parisian Codex directs it to be formed from the bitartrate of potass with boracic acid, while almost all the other Pharmacopœias and books of formularies, though differing as to the relative proportions, order the employment of bitartrate of potass with biborate of soda. The original formula, given by Lefèvre, a physician of Ulm, directs one part of the biborate of soda to three of the bitartrate of potassa: these are those most generally employed. My remarks, therefore, have reference chiefly to the products of those two formulæ, as representatives of the various specimens of tartarus boraxatus which occur.

In the actual state of science, with respect to tartarus boraxatus, there indubitably exist many deficiencies, and also errors, as may be at once presumed from the differing opinions of various chemical authorities concerning the nature and composition of this preparation; and, moreover, I believe that, up to the present, no one yet occupied himself in the investigation as to the existence of other salts, into whose composition entered jointly the boracic and tartaric acids, whose results must necessarily be a great aid to the attainment of an exact knowledge of the tartarus boraxatus itself.

Very recently, the authority of Baron Liebig sanctioned the theory and formula of a so-called tartrate of potassa and boracic acid, with the constitution noted in the subjoined diagram:—

$$(2-T \times KO, BO^3).$$

The proposer of this theory, M. Duflos, apothecary in Breslau, attributes to the boracic acid in this combination the part of a base, and insinuates that such tartrate of potassa and boracic acid is a salt analogous to the tartar emetic, in which the boracic acid represents the same part as the oxide of antimony in the latter salt. This very plausible idea appears to have induced Liebig to give the before-mentioned sanction. Duflos directs the salt to be formed from weights relatively representing one atom bitartrate of potassa, and one atom boracic acid. The formula of the Parisian Codex for the preparation of tartarus boraxatus gives quantities which represent rather less than two atoms of the bitartrate with one of boracic acid; this preparation is, therefore, by Duflos, stated to be a mixture of free bitartrate of potassa with his supposed tartrate of potassa and boracic acid. Consistently with the foregoing, he supposes the tartarus boraxatus of the original formula (that of Lefèvre) to be a double salt, composed of one atom of the tartrate of soda and potassa (sal polychreston seignetti) with two atoms of the tartrate of potassa and boracic acid, as in the accompanying diagram:—

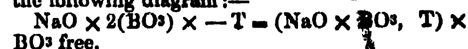
$$(KO, NaO \times 2-T) \text{ and } 2\ (2-T \times KO, BO^3).$$

There is, however, to be found in the memoir of M. Duflos a contradiction so great that it overwhelms his whole theory, and it is surprising that it should have escaped the penetration of the distinguished Liebig. It is, in brief, this:—Duflos says, that the neutral and soluble tartrates produce a precipitate of bitartrate of potassa in the solution of *tartrate of potassa and boracic acid*. But in the tartarus boraxatus of the original formula he teaches the existence of a neutral tartrate (sodæ potassio-tartras, P. L.), conjointly present without visible perturbation, with the supposed tartrate of potassa and boracic acid, and says that this so-called double salt dissolves readily, and without any residuum, in a small quantity of water.

The present memoir will show that the entire theory is false and unfounded; that neither the tartarus boraxatus of the Codex, nor that of the original formula, are truly chemical combinations, but that they are neither more nor less than mixtures of bitartrate of potassa (in a more or less modified form) with two several chemical combinations of a highly interesting character, which contain a double acid composed of the boracic and tartaric acids. To establish these facts, I undertook a series of experiments, whose description I shall give below, and shall follow these by a statement of the conclusions to be legitimately drawn from them.

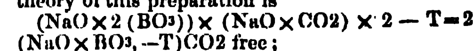
EXPERIMENTS.

No. 1. Weights representing relatively one atom biborate of soda and one atom tartaric acid ($C_4\ H_4\ O_5$ and $H_2\ O$) were dissolved together in the minimum quantity of boiling water necessary for solution. The liquid, whose reactions were neutral, was quickly filtered and set aside to cool. After the lapse of some time there was a separation of crystals from the solution, which, carefully purified, were found to be pure boracic acid, being perfectly soluble in alcohol and tinging its flame with the characteristic green. The liquid in which these crystals formed was repeatedly agitated with the strongest alcohol to extract any free boracic acid which it might still contain. Treated in this manner the liquid had the physical appearance of a syrup and a neutral reaction. It was impossible to obtain crystals from it; when evaporated, there remained an anhydrous mass, gummiform, and highly hygroscopic. According to my view, one atom of boracic acid was expelled from the borax by the influence of one atom of tartaric acid, while this last formed with the remainder a new salt to which I wish to give the name of boro-tartrate of soda. The formula of this salt appears from the following diagram:—



$$NaO \times 2(BO^3) \times -T = (NaO \times BO^3,\ T) \times BO^3 \text{ free.}$$

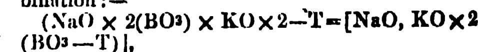
In further confirmation of my opinion I performed the experiment No. 2. Direct production of boro-tartrate of Soda. The relative weights of one atom of borax, of one atom of carbonate of soda, and of two atoms of tartaric acid were dissolved together in water. The solution was rapid and complete, with liberation of carbonic-acid gas. After filtration no trace of boracic acid separated, neither did the liquid when concentrated and treated with alcohol yield any portion of such acid. The solution had a neutral reaction, and formed on evaporation a gummiform mass in all respects identical with that produced during the first experiment. The theory of this preparation is



$$(NaO \times 2\ (BO^3)) \times (NaO \times CO_2) \times 2 - T = 2\ (NaO \times BO^3, -T)CO_2 \text{ free;}$$

and this opinion is still further supported by

No. 3. Relative weights of equal number of atoms of borax and bitartrate of potassa were dissolved in boiling water. The solution was quickly effected, and some time after the filtration nothing was separated, save a little tartrate of lime (an impurity generally present in cream of tartar). The solution, filtered anew, had a perfectly neutral reaction; showed no disposition to crystallize, and, when evaporated, yielded an anhydrous mass, hygroscopic and gummiform, which, treated with strong alcohol, afforded no traces either of boracic or tartaric acid. This diagram represents the theory and formula of this combination:—



$$(NaO \times 2(BO^3) \times KO \times 2-T = [NaO,\ KO \times 2\ (BO^3-T)],$$

which I consider to be a double neutral salt, the boro-tartrate of potassa and soda.

No. 4. Results entirely analogous were obtained by the joint solution of equal atoms of biborate of soda and of bitartrate of ammonia. To the salt produced, the annexed formula is applicable:—$[NaO,\ N_2\ H_8O \times 2(BO^3-T)]$. The boro-tartrate of soda and ammonia is also anhydrous, gelatinous, and hygroscopic.

No. 5. The relative weights of one atom of biborate of soda, of one atom carbonate of lime, and of two atoms tartaric acid were triturated with water in a mortar. The reaction was tardy in developing itself, the carbonic-acid gas being disengaged with much difficulty; on this account a very gentle heat was applied, when immediately the fluid became of a gluey consistence, having every appearance of decomposition. It appears to me, therefore, that the double salt thus represented $[No,\ CaO \times 2(BO^3-T)]$, allowing it to exist, is excessively unstable in the attractions by which its components are united.

No. 6. Equal atoms of carbonate of lime and of boracic and tartaric acids were triturated with water in a mortar: there resulted a perfect and neutral solution, having the characteristic taste of the soluble salts of lime. After, however, the lapse of a few hours, the fluid became spontaneously thick as glue, with all the signs of decomposition. A small portion, however, was still in a state which admitted its passage through the filter, the reaction was still neutral, and the taste as above. Apparently then, there exists this salt $(CaO \times BO^3-T)$, but this boro-tartrate of lime is also a very unstable compound.

No. 7. Weights representing four atoms of borax with one of the carbonate of magnesia of

the shops [Mg O + H2 O + 3 (Mg O + CO2)], and eight atoms of tartaric acid, were dissolved together in [illegible] water. The solution was instantly effec[illegible] liberation of carbonic-acid gas. The [illegible] fluid was clear and neutral, and sho[illegible] of decomposition. Crystals were not [illegible] om it; but there remained after ev[illegible] ubstance anhydrous, gelatinous, [illegible] scopic, represented by the followi[illegible]

[N[illegible] 2(B O3,—T)]. The boro-[illegible] artrate of [illegible] nd magnesia.

No. 8. [illegible] lative weights of one atom of the [illegible] nate of magnesia, of four ditto boracic [illegible] l of four ditto tartaric acid, were rubbed to[illegible] ler in cold water in a mortar. The reaction [illegible] apid and attended with considerable elevation [illegible] temperature, there resulting a perfectly ne[illegible] ral solution whose taste had a striking resemblance to that of sulphate of magnesia. No crystals were procurable, and on evaporation there remained an amorphous, anhydrous, gelatinous, and highly hygroscopic mass—a salt whose composition is this represented:—(Mg O + B O3, T—).

No. 9. I mixed together the saturated solutions of two atoms of the borotartrate of soda, and of one atom sulphate of copper [Cu O + SO3]. The resulting clear liquid was placed in a long cylindriform phial, and upon it was carefully poured concentrated alcohol. The phial was then placed aside, and left untouched for the term of three weeks, at the close of which the alcohol was found to have attracted to itself nearly all the water of the solution. On decanting the fluid there was found at the bottom of the phial a crustiform mass of a clear blue colour, which at some points near its surface showed an almost trace of crystallization in small, round, button-like conglomerations. Within this blue mass there were discovered large and beautiful crystals of sulphate of soda. This blue salt was anhydrous, anhygroscopic, and unchangeable by exposure to the air; was slightly soluble in water, and the reaction was similar to that of the neutral salts of copper. This combination, therefore, consisted of soda, oxide of copper, and boro-tartaric acid. The diagram here given shows the theory of the formation of the new double salt.

2 (Na O + BO3, T—) + Cu O + SO3 = NaO + SO3 + [Na O + BO3, T + Cu O + CO3, T—].

No. 10. Equal atoms of boro-tartrate of soda and sulphate of copper were mixed together in solution; immediately there fell a fine and abundant precipitate of a clear blue colour. The supernatant fluid had a bluish tint, evidencing a certain degree of solubility of the precipitate. The fluid contained sulphate of soda; the precipitate was borotartrate of copper (CuO + BO^3, T).

No. 11. Relative weights of one atom tartar emetic (KO, H^2St^3 + 2 — T) and of two atoms of boracic acid were dissolved together in boiling water. The solution was filtered and put aside. After the lapse of a little time the tartar emetic and boracic acid were found separately crystallized, and were with the greatest ease separable by means of alcohol.

No. 12. The well-known acid reaction of the tartarus boraxatus renders very probable the existence of biboro-tartrates. With a view to obtain information on this head, I dissolved a quantity representing one atom of biborate of of soda with the equivalent of two atoms of tartaric acid. The quantity of water required for the solution was very small, and this was quickly effected. The resulting fluid was limpid, and the reaction and taste were sensibly acid, and the latter very agreeable. By spontaneous evaporation there was procured a mass, scarcely hygroscopic, and showing a very confused cauliflower-like cyrstallization. When treated with alcohol neither boracic nor tartaric acid was obtainable from it. For want of a sufficiently delicate apparatus I could not ascertain whether or no it was perfectly anhydrous; if it be, then it is represented thus—NaO + 2(BO^3, T—); but the trace of crystallization which appeared renders it highly probable that this salt contains water essential to its composition, and then the following formula is applicable:—

[NaO, H^2 O + 2(BO^3, T—)].

I obtained results entirely analogous, from the conjoint solution of one atom of bitartrate of potassa with two atoms of boracic acid: there being formed in this case the biboro-tartrate of potassa.

No. 13. Equal atoms of the boracic and tartaric acids having been dissolved together in a little water, after a short time crystals of boracic acid were deposited, the tartaric acid remaining in solution.

Having thus, as a preliminary measure, completed the above experiments, I proceeded to a more intimate investigation of the "tartrate of soda and boracic acid" (*so called* by the proposer of the theory, Duflos), and of the tartarus boraxatus of the original formula, and so instituted the experiment

No. 14. Equal atoms of bitartrate of potassa and of boracic acid were digested together in water for some time. The solution proceeded slowly, but at length became complete, yielding an acid liquid from which fell a scant precipitate of tartrate of lime. The solution was filtered, and evaporated to dryness; no signs of crystallization appeared during the process. The residuum was anhydrous acid, and very slightly hygroscopic. No free acid could be extracted from it by means of alcohol. Neutral soluble tartrates precipitated bitartrate of potassa from the solution of this mass. From these facts, this salt of Duflos ought to be considered as a double salt thus constituted [(KO + 2 (BO3, T—) + KO + 2T)]. Thus accounting for the materials 2(KO + 2T—) + 2 (BO3) employed in the experiment. This double salt is composed of equal atoms of biboro-tartrate of potassa and of bitartrate of potassa without water. (According to the discoveries of Fremy the anhydratic bitartrate of potassa is = neutral tartrate of the same base. On this point, however, every one is at liberty to adopt his own view.) In what manner the neutral tartrates precipitate the bitartrate of potassa from the solution of this salt, we shall afterwards see.

No. 15. Relative weights of one atom biborate of soda and two atoms bitartrate of potassa (which corresponds approximatively to one part borax and two parts cream of tartar in absolute weight, as the atomic weights of these two salts differ but a very little) were dissolved together in boiling water. The solution, after filtration, was evaporated to the consistence of a weak syrup, and then set aside for some days. A little tartrate of lime fell to the bottom, but no trace of bitartrate of potassa. When evaporated, there remained a gelatinous mass, anhydratic and highly hygroscopic, from which nothing was extracted by digestion in alcohol. I consider this combination as thus constituted:—[(NaO + 2(BO^3,T) + 2(KO + T —)]. There thus appears a notable relation between this salt and that of Duflos. Reducing the formula of both these combinations to the general type, and for this end substituting both K and Na by R, the formula of the salt of Duflos is [(RO + 2(BO3, T—)) + (RO + 2T—)], and that of the other double salt [(RO + 2(BO3, T—)) + 2(RO + T—)]. In the former salt there being only an atom RO less than in the latter.

But what is still more singular is, that both these salts are mutually and at will transformable: to wit, mixing one atom of the first salt in solution with another solution of two atoms of tartrate of potassa, we regenerate one atom of bitartrate of potassa, which precipitates itself, whilst one atom of the second salt will be found in the solution. On the other hand, mixing the solution of one atom of the second salt with that of two atoms of tartaric acid, there also falls a precipitate of cream of tartar; but now there remains in solution an atom of the first salt. These two salts may, however, exist together in solution without any precipitation. Another singular peculiarity is, that there exists in the second salts tartrate of potassa, united with another acid salt without decomposition.

No. 16. Weights representing respectively one atom of biborate of soda and three of bitartrate of potassa (corresponding nearly to one part of the former and three of the latter) were dissolved together in boiling water; the solution was then evaporated to the consistence of a weak syrup, and remained untouched for one month. During this time a considerable precipitation took place, the precipitate exceeding in weight the fourth part of the cream of tartar employed, and consisted of tartrate of lime, with bitartrate of potassa. This occurrence affirms still more my opinion as to the constitution of tartarus boraxatus; but, as the partisans of the theory of Duflos may insinuate that the tartrate of lime alone, which is always found as an impurity accompanying cream of tartar, may be the cause of this decomposition, determining the formation and separation of a double salt, soluble with difficulty, and composed of tartrate of lime and bitartrate of potassa, it becomes necessary to disprove anticipatively such views, and for this purpose I made the following experiment:—

No. 17. Duflos gives the formula of the tartarus boraxatus of the original prescription—[(KO, NaO + 2T) + 2(KO + BO^3, 2T)]; this, reduced to the general type, both K and Na being replaced by R, becomes [(RO, RO + 2T) + 2(RO + BO^3, 2T)]. The first member of such combination I produced by the solution of one atom of salt of seignette (KO, NaO + 2T) in a little water. The other member of the combination was produced by the dissolution of one atom of borax, of one atom of carbonate of soda, and of four atoms tartaric acid, together, in a little water. It is evident that I took all possible means of rendering difficult the production of bitartrate of potassa, all the ingredients used in the experiment containing only one atom of potassa. All the substances employed were quite free from lime. Nevertheless, on mixing the two limpid solutions, there fell in a short time a proportional precipitate of bitartrate of potassa (approximatively corresponding to one atom). I view this result as a definitive affirmation of my opinion, because, subtracting from the formula of Duflos one atom of bitartrate of potassa, there remain exactly the elements of my formula:—

[(NaO + 2(BO^3, T)) + 2(KO + T)].

As to the assertion that the concentrated solution of tartarus boraxatus of the original formula of Lefévre, perfectly free from lime, and which, previous to solution, was evaporated thoroughly to dryness, does not, even after the lapse of years, offer any trace of a precipitate, it is a point I cannot yet decide from individual experience. But, even supposing this to be the fact, I rather believe that that one superfluous atom of bitartrate of potassa undergoes a modification by the excessive heat employed in the last stage of evaporation, which modification is the cause of its persistent solubility. It is useful here to recal to memory the discoveries of Fremy on the tartrelata. In this very case it may be that the aforesaid superfluous atom of bitartrate of potassa becomes transformed into an atom of tartrelate of potassa, which salt is very soluble, and differs from cream of tartar only in one atom of water which it contains less than cream of tartar.

CONCLUSIONS DEDUCED FROM THE FOREGOING STATEMENT.

I. There exists a peculiar double acid, composed of boracic and tartaric acids, but it only exists in combination with oxides in the form of salts, of which, at least, the greater number are anhydratic. This rests on almost all my experiments; principally, however, it is proved by the experiment No. 8. No. 13 shows that this acid cannot exist in a free state. This double acid is represented by the diagram, (BO^3, T); its neutral salts by this, (RO + BO^3, T); its neutral double salts by this diagram, [(RO + BO^3, T) + (RO + BO^3, T)]; and its acid salts thus, (RO + 2(BO^3, T)); (but it may be that these acids also contain basic water, and in this the following diagram will more correctly represent them:—RO, H^2O + 2(BO^3, T)]).

II. The affinities of this double acid appear very unequal in the several compounds it forms.

In experiments Nos. 8, 14, and 15, it appears to possess strong affinities, [illegible] capable of overcoming great difficulties; [illegible]at, as to the salts of lime, they appeared to be, on the contrary, extremely weak.

III. A compound of this acid which corresponds to tartar emetic does not exist.

IV. Neither is there any analogy between the salt called by Duflos "tartrate of potassa and boracic acid" and tartar emetic. The true formula of this salt of Duflos is $[(KO+2(BO^3, T))+KO+2T)]$.

V. The tartarus boraxatus of the Parisian Codex is a mixture of this salt of Duflos with cream of tartar (which may be more or less transformed into tartrelate of potassa).

VI. The tartarus boraxatus of the original prescription is also a mixture of cream of tartar (which may be more or less modified into a tartrelate of potassa) with a double salt thus constituted, $[(NaO+2(BO^3, T))+2(KO+T)]$; and this, in my opinion, is the true tartarus boraxatus.

Finally, I think it not superfluous to recommend to chemists who con dispose of greater facilities than myself, to study more closely this double acid, and to extend their investigations to more of its combinations with the several oxides.

It is only by the repetition and further extension of the experiments that a just and exact idea can be formed of the nature and constitution of these interesting compounds, in which chemical affinity appears to have nearly reached its extreme limits, and displays relations of a very singular, and at times anomalous, nature.

THE PHYSIOGNOMY OF DISEASES OR SEMEIOTICS IN THEIR ASSIMILATIVE CHARACTERS.

By GEORGE CORFE (Author of "A Popular Treatise on the Kidney," &c.), of the Middlesex Hospital.

[Illustrated by Portraits of Cases.]

(Continued from p. 639.)

The subjoined table will give my readers, at one glance, the various poisons that have been taken, mostly for a suicidal purpose, together with the attempts to destroy life by other means, by each sex, during the space of fifteen years. The number, during that period, that have been relieved, and sent away as out-patients, has, also, been considerable; but these casual cases are not included, but only those individuals in whi[illegible] the dose taken, and the severity of the sym[illegible]ms, warranted us in admitting them as patients into the medical or surgical wards.

	Laudanum.		Oxalic Acid.		Laud. and Oxalic Acid.		Arsenious Acid.		Cut Throat.		Hydrocyanic Acid.		Acid. Sulp.		Plumbi Acet.		Cupri Acet.		Kreosote.		Hydr. Ammo. Chlor		Equinia, or Glanders.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1832	..	4	4	1	..	..	..	..	3	2	1e	..	..	..	.	..	..	..	..	..	..	..	..	..
1833	3	6	1	..	..	..	2	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1834	2	1	1	1	..	..	1	2	2	3	..	..	..	1h	..	..	..	..	..	..	..	1	..	..
1835	1	4	1	4	..	1	2	1	3	..	..	1g	..	1i	..	1	1	.	1	..	..	..	1	..
1836	2	5a	4	2	..	..	1	..	4	..	..	..	..	1	..	..	..	1	...	1	..	..	..	..
1837	1	1	..	..	..	..	1	.	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1838	7	4	1	1	..	1	1	..	3	..	..	..	..	..	.	4	..	..	..	..	..	..	..	..
1839	3	6	1	1	..	..	..	.	2	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..
1840	1	5	1	5	1	..	..	1	2	3	..	..	..	1	..		..	..	..	..	..	..	..	..
1841	3	1	..	4	..	.	..	..	2	..	..	..	..	..	..	2	.	..	..	..	..	1	1	..
1842	3	4	..	1	..	..	1	2	2	..	..	..	..	..	..	2k	..	..	..	..	..	..	..	..
1843	1	6	2	4	..	..	..	2d	2	1	1f	..	..	..	..	2	..	..	..	..	..	..	..	..
1844	1b	1	..	2	..	..	..	2	1	..	..	..	..	1	..	2	..	11	..	..	..	2	..	..
1845	.c	1	1	..	..	..	1	1	3	..	..	..	..	...	..	..	..	..	..	1	..	1	3m	..
1846	.	1	..	2	..	..	..	.	2	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..
Total	28	50	17	28	1	2	10	11	36	11	2	1	..	5	..	15	2	2	2	2	..	5	5	..

In addition to the above cases there were the following:—

	M.	F.
Strangulation	1	0
Nitric acid	1	0
Nitro-hydrochloric acid	0	1
Muriate of tin	1	0
Carbonate of barytes	0	1
Zinci sulphus	1	1
Liq. ammoniæ	0	2
Nux vomica	0	1
Hydr. nitr. oxyd.	0	1
Iodine	0	1
Essential oil of bitter almonds	0	1
Æther rect.	1	0
Hydrophobia	1	0
Italian family, six in number, supposed to be poisoned by "aqua tophana," administered maliciously	4	2
Drowning	1	0
Carbonic acid gas, or carburetted hydrogen, from cesspools, &c.	2	0
Struck by lightning	1	1
	116	144
Total	260	

a One of these was crude opium.

b This was a remarkable case of resuscitation by electro-galvanism.

c Liq. opii sedativus. A medical assistant.

d Arsenic and laudanum combined.

e A medical assistant; found dead in a hackney-coach; the bottle (an oz. phial) found under the straw.

f Dead on admission.

g An army surgeon. Dead on admission.

h A perfect tube (the sloughed œsophagus) from the pharynx to the cardiac opening of the stomach was thrown up, and is preserved in the Museum.

i Sulphuric acid and laudanum combined.

k One of these poisons was liq. plumbi acet.

l Poisoned by the cupri acet. in eating the sweet ornaments on French cakes.

m *Vide* public press of November, 1845, for an account of these three cases.

APOPLEXIA RENALIS,

from renal degeneration, is a disease that has been so frequently mistaken for sanguineous cerebral effusion on the one hand, and for poison by laudanum on the other, that we may group the affection with cerebral asphyxia, for the purpose of showing the assimilation of features of the three diseases. In order to effect this, I think I cannot do better than present to the reader an abstract of two striking illustrations of the above affections, namely, narcotism by laudanum, and insensibility from the presence of urea in the brain, which were published by me soon after the period of their occurrence. The one (of laudanum), a male patient, had taken an ounce and half of this drug six hours before admission, and he was, to all appearances, dead when b[illegible]ought into the room; the pulse was intermi[illegible]g the respirations convulsively performed, [illegible] not more than two in a minute; the face [illegible] pupils contracted; and the extremitie[illegible] and cold. After the administration o[illegible]ch-pump, electro-galvanism, and e[illegible]rom our powerful machines, were sep[illegible]yed. In three hours he roused up sudde[illegible] it were from an almost lifeless state to [illegible] excitement and anger, calling us "b[illegible] savages," and "beasts," for trying our e[illegible]nts upon him. He left the hospital quite [illegible]oon afterwards, but eventually killed himsel[illegible]drow[illegible]g.

The second case (apoplexia renal[illegible]r ischuria renalis), in a female, was admitted labo[illegible]ring under the very same symptoms. Perfect in[illegible]nsibility, which had existed ten hours prior [illegible] her entrance into the hospital; contracted pupils; and convulsive, slow breathing. She died in four hours and a half after her being seen by us. There was strong presumptive evidence that she, also, had taken poison, as a three-ounce phial, containing laudanum, was seen the preceding day, and could not now be found. However, it was proved on the inquest that the laudanum had been used the preceding night by her niece, as a liniment over the loins for severe pain experienced there, and that she never had been allowed to touch it as an internal medicine. The examination of the body, after a patient investigation, fully proved that the cause of death arose from advanced "morbus Brightii." The kidneys presented the usual ravages of that disease; the bladder was perfectly empty, the size of a walnut; and the medical gentleman who had been in attendance upon her for some months stated that the urine, when any could be obtained, was always highly albuminous, and that anasarca had shown itself some weeks prior to her fatal attack.(a)

I may here remark, too, that the shocks of electricity produced a faltering of the pulse and a diminution of the vital powers in this instance; whilst, in the first case, they evidently acted most wonderfully and powerfully upon the brain and general circulation, rousing the respiratory system to a surprising activity in the course of one hour after the administration of this therapeutical agent.

On another occasion a man was brought into the hospital by some strangers, having been found in a stable on the horse's bed. He was perfectly senseless. Countenance bloated and dingy, pupils contracted, and breathing laborious; pulse full and jerking. It was a difficult point to decide whether these symptoms were the result of a kick from the horse, intoxication, apoplexy, serous effusion into the ventricles, or poison from some narcotic drug. As there appeared a slight tendency to convulsions over the features of the face, it might have been the sequel of an epileptic fit; however, none of these surmises proved correct, for, whilst the servants were busy in undressing him, his feet were observed to be œdematous. A catheter was passed, and a few drops of urine were obtained, which was highly albuminous on the addition of nitric acid. The case now was made clear to our minds. It was poison from urea, the result of ischuria renalis. His head was shaved, blood was taken from his temples by leeches, he was made to swallow a purgative draught, and a turpentine enema was administered. He rallied out of this comatose condition, and then informed us that he had suffered for a long time with aching pain in his loins, occasional giddiness, and dimness of sight; that his urine had been

(a) I am not sure that our Professor of Chemistry did not obtain some beautiful crystals of nitrate of urea, from the fluid which we collected for his analysis, in the ventricles of the brain in this female. But I have seen this salt procured, on other occasions, in considerable quantity from the same fluid, in fatal cases of cerebral effusion, consequent upon the disease termed morbus Brightii.

scanty of [illegible]te; and that "his head became so bad" that he fell down whilst cleaning the horses, and was unconscious of all that had passed since. [illegible] was cupped to the loins, and had repeated [illegible] of our Pil. Elaterii co., with warm bath[illegible] ultimately recovered, though the urine [illegible] remained slightly albuminous. Some sco[illegible] such insidious and difficult cases could be [illegible]merated, which have been mistaken by the practitioner before he has sent the patients here; for apoplexy and active depletion has been resorted to [illegible]der that impression; whereas the rapid evac[illegible]on of the bowels, by powerful doses of elateriu[illegible]nd moderate leeching to the temples and blist[illegible] to the vertex of the head, hav[illegible] proved the most successful plan of treatment in these wards. Some cases have terminated fatally, and crystals of nitrate of urea have been obtained by the Professor of Chemistry from the fluid in the ventricles of the brain, as I have already remarked. There is no stage of albuminous disease of the kidney at which this suppression of urine, and subsequent coma, may not creep on. A large secretion of pale, light urine, of a low specific gravity, with little or no albumen, may as suddenly become suppressed, as a small quantity of this secretion which is muddy and like small beer, frothy, and loaded with albumen. The main test is the high specific gravity, as this will always inform us whether a due proportion of solid material is eliminated by the kidneys. The presence of albumen is a secondary consideration.

In connection with the foregoing remarks it should be observed, that serious disturbance takes place in the brain from another form of renal disorder, totally opposed to the one just adverted to. There is no disease in these organs, but they are rather acting as the "medicatrix naturæ," in striving to separate noxious principles from the system; and this they do in the form of lithic-acid crystals. The disorder is usually set up in persons who have lived well upon animal food? who are bony, muscular, and well-formed individuals.

A man has just left the medical wards under the care of Dr. Hawkins who was of this description; he worked at the City barges as "hopper," and, not being such a tippler as most of this class, he ate heartily of animal food several times a day. He came to us labouring under "epileptic fits." He was a most athletic fellow, and, had he not been attacked with a fit in the hospital, one would have been disposed to doubt the statement he made of his previous seizures. He had constant pain over the right hemisphere, with some vertigo, tinnitus aurium, and slight deafness. Various plans of treatment were tried without avail; when at length, whilst under the influence of a diuretic, judiciously administered for the relief of his cerebral disturbance, he continued to pass every day, for a week or so, upwards of half a teaspoonful of red sand. His head symptoms rapidly disappeared, and he left the hospital perfectly convalescent.

The following comparative analysis of the elements of the urea, bile, sugar, and lithic acid may not be uninteresting to the reader:—

	Urea.	Bile.	Sugar.	Lithic acid.
Hydrogen	6 66	8 30	6 66	2·85
Carbon ..	19·99	58·46	39 99	34 28
Oxygen ..	26·66	22 61	53·33	22·85
Nitrogen	46·6	3·70	—	40 00
	100·00	100·00	100·00	10·000 (a)

COMA, OR TEMPORARY LOSS OF CONSCIOUSNESS FROM BILE, WORMS, &C., OR OTHER IRRITANTS.

Here, indeed, a wide field for observation is presented in this hospital, and fresh opportunities of viewing the chameleon colours of these changeable appearances are occurring daily.

In private practice, also, I doubt not that a very large number of disorders are constantly occurring, the symptoms of which are termed "apoplectic," "tendency to apoplexy," &c. &c., but which, in truth, may be called "biliary congestion," "hepatic engorgement," "pent-up or morbid cystic bile." I will, however, proceed to mention what I mean by these terms, and, in doing so, I may add that I now write, unfortunately, from some little personal experience of former days. An individual presents himself to your notice, describing his symptoms. He is a robust, well formed man, from thirty to fifty; inclined, perhaps, to corpulency, and may be he is "pansu," or, as the pauper females term it, "high stomached." He is fond of living freely upon animal food and beer, &c., and follows a somewhat sedentary life. He relates that he is occasionally attacked with pain over the forehead to such a degree that he becomes quite muddled and unfit for work, or unable to exert himself either mentally or bodily, in his daily calling. There is, from time to time, tinnitus aurium and vertigo; he gets rather deaf in one or both ears; his sleep is either more heavy and prolonged than usual, or it is attended with horrid and disagreeable dreams, and he is more restless and feverish than he is wont to be. He has but little appetite, his knees totter under him as he walks, his heart intermits, he is occasionally short in his breath, and he thinks himself weak and out of sorts; but does not know where he is ill, as he suffers little or no pain. Now, these ailments are the forerunners or shadowings forth of a more serious train of symptoms, which may, and do often, follow if active measures are not adopted for their mitigation. The patient goes on to describe a numbness felt down one arm and leg, an odd sensation in the face of the same side; his former symptoms continue, and he becomes uneasy and seeks for relief. When you see him enter the hospital admission-room, you observe an awkwardness of gait and tottering or dragging of one leg, an expressionless countenance, and a dull, heavy eye. He is evidently very low spirited, perhaps bursting into tears before he has told half his sad tale of suffering. Well, such cases formerly would have been called, and still are called by a very large class of practitioners, "apoplexy," and they are not considered safe, nor is it deemed legitimate practice, unless the arm is instantly laid bare, and the lancet made to let out twenty or thirty ounces of blood, with subsequent cupping or leeching in an unsparing manner to the head, &c. Whereas the admirable practice adopted in the medical wards of this hospital by Dr. Seth Thompson has taught me, by the extraordinary and gratifying results, that this practice is both useless and prejudicial.

As soon as the patient is in bed, a full dose of calomel and colocynth, such as five grains of the former and ten grains of the latter, is administered, followed up in four hours by a large cathartic draught; his head is shaved, and, if there is much heat about the forehead, eight or ten ounces of blood may be taken away by cupping behind the ears. But this is by no means an ordinary part of the treatment. In the course of the following morning the nurse shows us a copious evacuation, dark as the darkest mahogany or chocolate, fetid, abominably so, and containing but little fæcal matter. This is cystic bile—bile that has been "laid up" in the gall-bladder—that has become inspissated, heavy, and morbid, and could not find its way into the common duct, owing to the gorged state of the hepatic biliary system on the one hand, and to the congested mucous surface of the duodenum and stomach on the other. This bile is, therefore, a noxious accumulation, a morbid product, and acts as a poison upon the nervous and vascular system, just in the same way and in somewhat a similar manner to the poison of urea when it circulates in the blood, and is not sent forth by the kidneys. The dose is again and again repeated, perhaps for five, seven, or ten times, and at length pure healthy bile passes away, without fetor, of a canary colour, and emitting a faint odour very analogous to the smell of the narcissus, or daffodil flower. The head becomes clear; the intellects brighten up; the patient is lively, active, and in good spirits; the sleep is tranquil, refreshing, and moderate; the appetite becomes keen; and he walks across the ward with a firm, steady, and equal pace. But, although this manifest improvement has taken place since he has got rid of the "pent-up poison" that lurked in his system, yet does there still remain a slight weakness of the arm and leg. This excellent practice has been attended with singular benefit. A blister is now laid over the whole length of the longitudinal sinus, and the discharge is kept up from its surface by means of the savine ointment, whilst the purgative treatment alluded to is still persevered in from time to time. Thus have I seen cases, but especially during the last season, become perfectly convalescent, and leave the hospital without the slightest appearance of hemiplegia, and without having undergone any depletion.

The following is an instance of many such cases:—A female, about forty-five, entered an hotel in Bond-street, as charwoman, between six and seven o'clock in the morning (in March), and soon afterwards became faint, sat down in a chair, when the "boots" went and called up the master, who came down, and, finding her speechless and unable to walk on one leg, instantly ordered a cab, placed her in it, and came himself to the hospital with the patient. I saw her immediately on her admission, and, finding that she was of a spare habit and not a free liver, I was resolved to use no active depletion, but to commence unloading her liver by calomel and colocynth, in no measured doses. Of course the master knew little of her habits, as she was merely an occasional scourer in his kitchen, &c., only that she was not addicted to drink, as he informed us. I believe it would astonish many practitioners, had they witnessed the beginning, progress, and gratifying termination of this case, under the judicious, bold, and decisive treatment of her physician, Dr. S. Thompson. After the evacuation of large quantities of dark bile, of the most fetid nature, penetrating in offensiveness of smell to such a degree that the moment a person entered the ward (thirty feet by eighteen feet) he might detect its effluvia; and after the free discharge of a blister applied over the whole vertex of the head, and when pure, pale, rhubarb-coloured bile began to flow, this patient not only regained the full use of her speech and faculties, but she got up, dressed, and fed herself—in short, walked about the wards and hospital garden, and left the institution as perfectly free from those symptoms, for which she entered it, as though she had never been the subject of such an alarming attack.

But I need not pursue the subject, although many, v[illegible]many, such instances could be adduced, [illegible]male as well as on the female side of the building, whose cases are recorded by the clinical clerks in their reports of the physicians' patients.

I have often had occasion to notice that, where a train of nervous symptoms arises from other causes than that of cerebral disease or lesion, the symptoms are by no means defined regular, or consistent.

The injury offered to the brain by a blow, bruise, or effusion—as in compression, sanguineous apoplexy, scrofulous disease, or tumour of the cerebral substance—oftentimes presents a consistent train of nervous symptoms. But where the brain is the mere sufferer, and not the *fons et origo* of the train of symptoms presented to our notice, the nervous system is more undefinedly attacked, and the evidences of such an attack are equally incongruous. For example, here is an instance of cerebral disturbance just related, which would lead a discriminating pathologist to conclude that the woman was suffering from effusion into the crura cerebri, pons varolii, or cerebellum; she was speechless, and that, too, for several days. If it had so proved, death would almost have inevitably followed. But then there is hemiplegia, which is *not* the ordinary attendant of a sanguineous clot in this portion of the brain. Her speech returns perfectly before she obtains the full power of her limbs. This undoubtedly is the

(a) "Dr. Prout on Urinary Diseases."

reverse in those instances of cerebral lesion where the patient is deprived of speech: the injury offered to the ninth pair of nerves, in apoplexy of the medulla oblongata, is scarcely ever so fully repaired as to enable the individual to articulate with clearness and freedom, although he may be able to walk about with firmness and vigour.

These observations will be found strictly correct, not only under the head of those hepato-nervous diseases (disorders, should I not call them?) which I have been endeavouring to elucidate, but also under another fruitful source of hemiplegia, which is by no means rare in the practice of the medical wards of this hospital: I allude to the presence of worms in the intestinal canal. The following instance will explain my meaning, I hope, more fully:—A tall, robust countryman, from Berkshire, was admitted, under Dr. M. Crawford, into the hospital last year, with the following malady: His countenance was healthy, but his features were void of expression, there was a dulness of physiognomy; he complained of partial loss of sight of the *left* eye; the iris was natural and active. He had also, a numbness extending down the *right* arm and leg, and over the *left* side of the face. He suffered from occasional giddiness, so that he was oftentimes afraid to trust himself to walk alone even across the ward. The numbness down the leg was occasionally so severe that he could not walk even from his own bed to that of his neighbouring patient. His appetite and his spirits were tolerably good, and with the exception of a former attack of rheumatism, which had left sufficient traces of endo-cardiac disease to spoil the rhythm of the heart's sound, there was no assignable cause for the present train of symptoms. However, the country practitioner deemed it advisable to put him under treatment, as though cerebral disease was slowly advancing: he was cupped, blistered, bled, and kept very low; but he derived no benefit whatever from this course of practice. His varying symptoms were narrowly watched; the numbness would suddenly leave one arm and attack the opposite, and remain there for some days. It was considered at the time that the disturbance in that "nicely balanced engine," the heart, might account for these nervous ailments, and the attention of his physician, Dr. Mervyn Crawford was more particularly directed to this organ: he took digitalis with some transient benefit; was occasionally blistered and cupped to the head and neck; but still the disease remained unabated.

I must here pause a short time, and digress somewhat from the subject immediately before me, in order to relate the following curious circumstance.

It is now upwards of two years ago when Dr. Hawkins admitted into the physicians' wards a fat, chubby, and rosy-faced girl from the country, who had been sent up by her master, although she presented the picture of health, on account of a "nasty, disagreeable" cough, which so disturbed the servants, nay, the whole family, that she was quite unfit for his service. She ate, drank, and slept heartily enough; but, when this fit of coughing seized her, it rang through your head, and was almost insupportable. However, it proved equally as obstinate in the wards of the Middlesex, as in the country village. She had been with us upwards of three weeks, when, like most of our country patients who come in here with no very serious ailment, she was attacked with slight fever, sore throat, and headache—the result, as we believed, of confinement in a London hospital. Her physician, Dr. Hawkins, ordered a smart emetic, that it might cut short, if possible, the attack, and a brisk purgative at night; on the following day the nurse drew from under the bed a lumbricus, which she had passed, measuring three quarters of a foot. I need scarcely add that the girl soon left the hospital perfectly free from cough and every other ailment.

(To be continued.)

* The population of Paris has increased from 1841 to 1846 118,636 individuals.

FOREIGN PRACTICE.

Reported for the MEDICAL TIMES by ALFRED MARKWICK, Esq., Surgeon to the Western German Dispensary, and formerly Externe to the Venereal Hospital, Paris, &c.

ON A NEW OPERATION FOR THE REMOVAL OF INGROWING NAIL. BY M. LONG, SURGEON TO THE HÔPITAL CIVIL DE TOULON.

The operation for ingrowing nail, although simple, has attracted the attention of many distinguished surgeons. Among the numerous proceedings mentioned by authors, some have the defect of being palliative; others that of being either too long or too painful. The operation of M. Long possesses advantages, which has induced us to lay it before our readers.

The author, reflecting on the connections of the nail with the surrounding tissues, conceived the idea of removing it by its root with a common spatula. The numerous trials which he and his pupils made on the dead subject soon confirmed his opinion, and he was able to tear away the twenty nails in the short space of five minutes. It may be necessary to mention that the nails of some bodies are liable to tear; this is also the case if the nail has been softened by topical applications.

The operation is easily and quickly performed, and but slightly painful; it needs no preparation, and all that is required is an ordinary spatula. The patient is seated in a chair, with his foot resting on the operator's knee; the surgeon then takes the flat end of the spatula in his right hand, and, having placed his thumb on the concave, and the index and middle fingers on the convex, surface, the other fingers being disengaged, proceeds slowly to separate the skin covering the root of the nail. When arrived at the posterior border, he suddenly elevates the flat end of the spatula, so that the instrument forms an acute angle with the diseased toe, and thus places its other end beneath the nail, which still adheres at the sides and centre. By then passing the spatula between the nail and the soft parts the evulsion is easily accomplished.

Such is the proceeding adopted by M. Long, and the results have always been successful. Among the patients operated on by this skilful surgeon we may mention one—a custom-house officer, who had on the right great toe an ingrowing nail, the sides of which were deeply imbedded in the flesh to the extent of about a centimètre (39-100ths, or rather more than two-fifths of an English inch). The evulsion of the nail was accomplished without pain, and without the slightest hemorrhage; the next day the patient returned to his occupation, and in fifteen days he observed a new nail make its appearance. We have ourselves performed this operation on a man, lying in the ward for the wounded, at the Toulon Hospital. This patient, a working mason, had received a violent contusion on the left great toe; there was traumatic onychia, and the nail was growing into the flesh. We effected the evulsion of the nail by M. Long's method: the patient left his bed on the fourth day, and on the twentieth he quitted the hospital, the new nail beginning to make its appearance.

In conclusion, we may state that the operation of M. Long appears applicable to all cases of disease of the nail in which evulsion is necessary; and we may add that its principal advantages are—1. In effecting a complete and definite cure; 2. In sparing the patient considerable suffering; 3. In causing no loss of blood; 4. In always allowing the tissues to reproduce a new nail, which has been the case in every instance where the operation has been performed by this method.—*Gazette Medicale de Montpellier, L'Abeille Medicale.*

19, Langham-place.

REMARKABLE DISEASE OF THE KIDNEY.

Communicated by H. NORRIS, Esq., F.R.C.S., South Petherton.

Thyrza Hutchins, a child two years and ten months old, whom I first saw about a month ago, was represented to me as having been ailing for four months; and that up to that period her general health had been good. Her appearance was like that of a child far advanced in dropsy; emaciation very considerable, and abdomen exceedingly prominent. On my making particular enquiries, I ascertained that the secretion of urine was natural in quantity as well as in quality; that her bowels were regular, and her appetite good when she had potatoes, which she partook of eagerly, but that she refused every other article of food. I found her tongue clean, and pulse about a hundred, and moderately firm. When I examined her abdomen I was unable to detect any fluctuation; but, on the contrary, the taxis communicated the feeling of a firm elastic tumour, with an equal surface, extending from the sternum to the pubes. Death took place on the evening of the 11th ultimo, and I instituted a *post-mortem* examination on the following day, twenty-four hours after death. Decomposition had already commenced, the abdominal parieties being much discoloured. On making an incision midway between the umbilicus and the ensiform cartilage, a portion of the colon protruded, filled with gas; and immediately behind it an enormous tumour made its appearance, occupying nearly the whole cavity of the abdomen. It was firmly attached to the perineum on the right side throughout its whole extent; partially so to the left, to the sacrum and lumbar vertebræ; and above, to the diaphragm.

When this mass was removed I carefully examined it. Its weight was seven pounds and two ounces, and twenty-four inches in circumference, being nearly globular; its surface traversed by a multitude of blood-vessels, some of them of considerable size. On cutting open this tumour, I discovered it to be the kidney, the lower half of which appeared to be healthy in its structure, and capable of performing its office of secretion: the ureter, also, being healthy and pervious throughout its course to the bladder. The upper half, however, was one mass of disease, enclosed by an enormous sac; its appearance was brainlike; its consistence pulpy, interspersed with numerous cysts, from the size of a pea to that of a large walnut; some of them contained straw-coloured serum; others, especially the larger ones, serum of a bloody colour. Besides these cysts, there were lying loosely several clots of coagulated blood; the whole assuming very much the aspect of fungus hæmatodes. I may observe, in conclusion, that the contents of the sac were not uniformly of a pulpy nature, but intersected throughout its substance with numerous membranous bands, which, in some parts, were strong and unyielding to moderate pressure, and easily broken down in others. The whole of the fluid that escaped during the examination must have amounted to more than two pints.

POISONING FROM THE SEEDS OF THE DATURA STRAMONIUM.

Communicated by A. STOBO, Esq., M.R.C.S.

C. B., about five years old, a stout, healthy boy, the son of Musta parents, ate more than a drachm of the seeds of the datura stramonium taken from the fresh apple in a state of ripeness; the seeds had been slightly roasted on an old tin vessel over the fire. When seen, about an hour after, he appeared much excited and rather delirious, under the impression of some immediate danger, clinging to the person who had him on her lap. Pulse about 120; face flushed; eyes of a peculiarly dazzling lustre, pupils dilated; convulsive motion of the limbs and neck; thick frothy saliva about the mouth. He had been put into a warm bath, and had been given a dose of calomel before my visit at 11.30 A.M. Ten grains of sulph. zinc, and ten of ipecacuanha, were immediately given. No effect being produced in about twenty minutes, ℨss. sulph. zinc was given: slight effects at vomiting came on, and a

piece of soursop (anona muricata), with masticated portions of the seeds of the stramonium adhering, was brought up. I thought it prudent, under the circumstances, to use the stomach-pump: about a quart of tepid water was injected, when the stomach began to act freely; a quantity of soursop pulp and half-digested food, mixed with the seeds of stramonium, came away; a large injection of soap and water was thrown up the rectum, but was returned immediately unmixed with fæces. An ounce of castor-oil was retained on the stomach, and in two hours operated freely. The seeds of stramonium were plentifully mixed with fæces discharged. The boy seemed relieved for the moment; the eyes were in the same state; the tossing about of the limbs was rather increased; the pulse had risen in volume and frequency, with much flushing of the face, &c.; the skin, naturally of a pale olive, became of a bright copper, colour; the temperature of the body was much increased.

Two P.M. Took ten ounces of blood from the arm, and ordered another ounce of castor-oil. Symptoms abated after the bleeding.

Four P.M. Symptoms more intense than at two o'clock; took away six ounces of blood from former orifice; bowels freely open; stramonium seeds still mixed with the fæces; pupils less dilated. Cold epithems to the head, and diluent drinks.

Ten P.M. Pulse about 100; skin and head cool; appearance of terror worn off, but in its place maniacal vigilium, unceasing motion, and a disposition to sing. A little tinct. opii added to the epithems.

19. Has not slept during the night; pulse 98; skin cool; eyes more natural; has been constantly moving over his mattress singing or talking; bowels have been moved; no further appearance of seeds. The restlessness wore away during the day. A draught with liq. opii sedat., spt. æth. nit. with aq. camph., at bedtime.

20, six A.M. Slept well during the night, asked for food on awaking; except a slight idiotic expression, the usual state of health restored, only a little reduced; no paralysis nor other bad symptom has supervened in this case.

Tortola, West Indies, Aug. 28, 1847.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF MEDICINE.

Meeting of Sept. 21; M. BEGIN in the Chair.

THE INVENTORS OF ETHER.

A letter was read from the French Consul at Boston, asserting that he had arrived at the conviction that the credit of the discovery of the hypnotic properties of ether was due to Mr. Morton, and not to Dr. Jackson. The secret had been sold to the latter gentleman for the sum of 5000 dollars.

The letter was referred to the commission appointed for the investigation of the newly-observed virtues of ether.

LITHOTRITY AND LITHOTOMY.

M. Blandin, examining the statistics brought forward by M. Civiale, remarked that the cases in which the crushing of the stone had not been entirely completed, were struck off of the tables by M. Civiale, and that it was, however, indispensable to take them into account. Instruments were introduced and opened within the bladder; laborious investigations were submitted to; the calculus was seized, occasionally a portion of it was removed; and, the operation being afterwards for one reason or for another abandoned, the case was not to be looked upon as one of lithotrity! This M. Blandin argued was not fair: such patients were afterwards cut; and who would dare assert that the dangers inherent to cystotomy were not very materially enhanced by the previous attempts at crushing? Lithotomy was certainly, now-a-days, followed by more fatal results than formerly; but why? Because the cases in which that operation was now performed were those which lithontriptic surgeons had already manipulated, or rejected as offering but slender chances of success. M. Civiale was of opinion that after cystotomy relapses were of more frequent occurrence than after lithotrity; M. Blandin was of an opposite way of thinking, and for the following reasons:—A calculous diathesis, a permanent irritation of the urinary organs, or the abandonment of fragments of concretions in the bladder, were the circumstances which favoured a relapse. Now, the first of these conditions, viz., a calculous diathesis, was totally independent of the method employed, and the chances of its exsitence were equal with both. Irritation of the urinary viscera was more permanent after lithotrity than after cystotomy, and fragments of stone were more likely to be left in the bladder when the former method was employed than when the latter was resorted to. It was, M. Blandin asserted, at present impossible to form a correct notion of the comparative advantages of the two methods, because modern cases of cystotomy could not be placed on the same line with those observed before the introduction of lithotrity into science.

M. Malgaigne considered the question now before the academy as one of the most important which could possibly be agitated. Public opinion had in a great measure pronounced, and, for his part, he did not hesitate to say that, if ever he had the misfortune of being affected with the stone, he would submit to lithotrity in preference to cystotomy. It was at the bedside of the patient only that the question of pre-eminence between the two methods could possibly be discussed; a debate on this point in an academy could lead only to negative results. The matter assumed a most serious aspect, if the relative and alleged mortality of the two systems was taken into consideration. If it was really true that M. Civiale cured ninety-eight out of one hundred patients, surgeons who operated in another manner, by cystotomy, losing more than half the cases placed in their hands, must have a very accommodating conscience if they could allow themselves to rest quiet before they had sifted the matter to the bottom. M. Malgaigne had felt deeply upon this subject, and, having made it his business to examine carefully into the various statistics brought forward, had acquired the conviction that none were entitled to any credit either in France or abroad. They were mostly collected from badly-kept hospital day-books, and did not bear a close examination. From a small number of recently-observed operations, M. Malgaigne concluded that, now-a-days, two cases were lost out of every five in which cystotomy was performed, and one only out of every five in which the calculus was crushed. The number of fatal cases was smaller in private practice than in hospitals, on account of the bad ventilation of the greater part of the sick-wards. Finally, M. Malgaigne defended strongly lithotrity, but not the results brought forward by M. Civiale, which he thought were much exaggerated; but he considered it the duty of the surgeon always to endeavour to crush the concretions before any attempt was made to remove them by cystotomy.—Meeting adjourned at five o'clock.

SCLEREMA OF THE ADULT.—CASE BY DR. BOUCHUT.—L. C., a house-painter, aged thirty-two, having greatly overheated himself during a fire, on the 22nd of June, remained for several hours in a cold passage open to every wind, and returned to his daily labour. The next day he experienced some stiffness in his limbs, which increased to such an extent that after four days he was obliged to leave it off. The movements of the head, arms, and body had become very difficult, and the skin had acquired a degree of hardness extremely remarkable. Its colour was not changed, nor was it the seat of any heat or pain, but it was as hard as marble on the face, arms, body, and scrotum. The jaws were almost immoveable; the shoulders, elbows, wrists, and fingers were fixed as firmly as if they were affected with ankylosis; the efforts to overcome this rigidity were attended with pain, but no tenderness of the parts was observed on pressure. The penis was in a state of painful erection during the night, sensation was preserved all over the body, and the perspiratory function was not in the least impaired. The appetite was unchanged, the digestive powers natural, and no febrile excitement existed. Stimulating frictions were performed upon the skin, the bowels were opened with two brisk purgatives, and a blister was placed behind the neck. These measures were productive of some amelioration, but a complete cure has not yet been obtained. The following is the present condition of the patient, as represented by Dr. Bouchut in the *Gazette Médicale* of September 25:—The induration of the skin still persists, though in a less marked degree; the head, forehead, cheeks, chin, and neck are very hard; the eyelids and lips have gradually recovered their natural softness; the jaw is still almost immoveable; the movements of the neck are absolutely impossible. The skin of the thorax is as hard as that of a frozen subject; the skin of the fingers and hands has resumed its softness, but the mobility of the shoulders remains very limited. The pelvic extremities are in a healthy condition; some trace of the induration may, however, be noticed upon the legs, but the skin can be pinched between the fingers, which it is impossible to do on the arms, neck, or body. The temperature of the body is not below its usual degree. The general health remains satisfactory.

ACADEMY OF SCIENCES.

Meeting of Sept. 27; M. BRONGNIART in the Chair.

INTOXICATION BY THE VAPOURS DISENGAGED IN BRASS FOUNDRIES. BY DR. REBOULLEAU.

The author, having had occasion to observe the morbid symptoms resulting from this cause, describes them as follows:—At first a dull pain is experienced in the hypochondria and in the lumbar region; loss of appetite, oppression, and weariness of the limbs; a chill and general uneasiness are alone afterwards noticed; the pulse is small, frequent, and irregular; nausea and vomiting occasionally appear, and general heat and perspiration usually follow. This crisis lasts from eight to ten hours, and closely resembles a paroxysm of intermittent fever. It is during the night that the attack generally takes place, and it reappears four or five times, particularly during damp weather.

The author attributes these effects to the metallic emanations from the foundries, and recommends the operation of casting to be performed in open sheds.

ACADEMY OF MEDICINE,

Meeting of Sept. 28; M. BEGIN in the Chair.

CHOLERA.

M. Prus stated that, from a communication received that very day, no doubt could be entertained of the appearance of cholera at Moscow; Smolensk, Plescow, and Riga had also been attacked. It was farther asserted that the city of Odessa had been visited in a similar manner. If the information received was correct, cholera had in a very short space of time travelled over a space of 700 leagues (1750 miles). It was not right to create false alarm, but it would be unjustifiable not to take beforehand some precaution against the probable invasion of the scourge; it was the duty of the Academy of Medicine to point out the measures which might prevent, or delay its apparition, or, at least, render the disease less murderous. An important circumstance, in the eyes of Dr. Prus, was the extraordinary abundance of fruit during the present year.

M. Girardin remarked that, when cholera had invaded Russia in 1830 and 1831, it had followed two directions perfectly similar to those it now adopted.

M. Prus added that the disease did not show itself with the same violence as in 1831.

M. Rochoux said that, if anything was proved, it was the complete ignorance of the profession relatively to the causes of cholera. Its progress also was a circumstance which it was totally

impossible to foresee. What useful measures could, therefore, be proposed?

CYSTOTOMY AND LITHOTRITY.

M. Civiale read a long paper, in which, without introducing any new matter, he endeavoured to defend his previous assertions against the criticisms of MM. Velpeau and Blandin.

M. Velpeau, in his answer, again endeavoured to show the inexactness of M. Civiale's mode of establishing statistics; but the debate, not offering a single new feature, and remaining within the limits of a positive assertion on one side, and of as positive a denial on the other, presented but slender interest to the wearied audience.

Meeting adjourned at five.

POISONING BY ARSENIC.—DIAGNOSIS.—Dr. Legroux was recently called in to attend a young person who presented the most alarming symptoms of poisoning. The patient refused to acknowledge the nature of the poison which had been taken, the motions and the matter rejected from the stomach having been incautiously thrown away. M. Legroux applied a blister, and the serosity which was thus produced yielded to the chemist, after destruction of its organic matter, sixteen arsenical stains.

VARICOCELE—OPERATIONS.—M. Ricord's operation for the cure of this disease consists in the "subcutaneous ligature of the vessels," and is performed in the following manner:—The veins being carefully separated from the vas deferens, easily recognised by its cartilaginous consistency, a needle armed with a double thread is passed through the skin, *under* the veins, and issues again out of the skin, in such a manner as to leave on one side a loop, and on the other the two extremities of the silk thread; a second needle, similarly charged with a double thread, is passed *through the same* apertures of the skin, but between the veins and the cutaneous envelope of the scrotum, and follows a contrary direction to that given to the first ligature, so as to leave a loop on the side, from which issue the extremities of the first thread, and reciprocally its extremities on the same side with the loop of the other ligature; the threads are then passed through the loops, and drawn tightly in a horizontal direction, and the subcutaneous ligature is effected. At the end of one week, or of ten days at the furthest, the ligature is removed in the simplest manner, and frequently without division of the veins: by merely drawing one of the threads which hang at either side the knot is immediately loosened. We have seen many applications of this method; we have ourselves performed the operation; and, although a vast number of cases have now been submitted to it, we do not know of a single one in which it has been productive of accidents, we do not say fatal, but even sufficiently serious to warrant anxiety.

ULNAR ARTERY.—For the ligature of the ulnar artery the forearm is usually flexed upon the arm. M. Malgaigne deprecates this practice for the following reasons:—The ulnar artery descends to the wrist, between the flexor carpi ulnaris and the flexor digitorum sublimis: it is besides, covered by the skin and fascia; if the forearm is bent, the position of the artery becomes still deeper by the protrusion of the tendon of the flexor carpi ulnaris. Extension of the forearm, and forced supination of the hand, on the contrary, cause this tendon to retire backwards, and render the position of the artery so superficial that it can readily be felt, and that its pulsations may even be frequently seen.—*Revue Med. Chirurgicale.*

HYDROPHOBIA.—CASE.—A child, aged eight years, was bit in the hand by a little dog on the 25th of August. The dog died on the 27th with symptoms of hydrophobia, after having also bit a girl, who was taken to an apothecary. Her wound was not cauterized, but a draught was exhibited, warranted to prevent the ill effects of the accident. Fortunately no signs of hydrophobia have hitherto made their appearance. The wound in the hand of the boy was poulticed; but, the fears of the family being excited, he was brought on the 27th to Dr. Blatin, who found at the basis of the nail of the right medius finger a small lacerated wound, six millimètres in length and one or two in depth; its neighbourhood was purple, and tender on pressure; the axillary glands were free from any swelling or pain, and the child appeared in every other respect perfectly healthy. A circular ligature being applied on the finger above the wound, a large drop of purulent and sanguineous matter exuded; the laceration was enlarged with the knife, and caustic potass was applied to the whole surface. During each of the two following days the cauterization was renewed, the eschar being previously removed. On the sixth day the parts were healed, and for three weeks no alteration of the child's general health was observed. On September 20 (twenty-six days after the accident) the child was seized with agitation and trembling; at night attacks of suffocation made their appearance, deglutition became impossible, and during two hours a characteristic crisis of terror, hallucination, sobbing, and hysterical laughter was observed, and was followed by a period of quiet which lasted half an hour. The throat was then examined: the pharynx and velum were of a deep red colour, and an abscess was found in each tonsil. A bath and pediluvium were prescribed, and the child was kept in the water only by the exercise of main force. From that time forward the alternacies of delirium and violence, the continual sputation, sobbing, and repulsion for bright objects and for fluids were unceasing. Another day and night were spent in this condition, and death occurred suddenly during a violent tetanic convulsion. The wound and the arm had not been the seat of any pain or swelling. From the first the pupils were much dilated, and remained insensible to the strongest light. No trace of pustules was observed on or under the tongue, and a loud rhonchus was heard in the chest. During the spasmodic attacks the pulse rose to 150, and in the intervals was never above 100; the abdomen was soft until the last twenty-four hours, when it acquired from flatulency a considerable development. The treatment consisted in the daily exhibition of muriate of morphia (two grains in several doses) and a few grains of calomel, which occasioned the expulsion of a considerable number of small worms. Inhalation of ether was prevented only by the sudden death of the patient.

D. M'CARTHY, D.M.P.

REVIEWS.

Report of the Inquest on Miss Sophia Dallett, held at Putney on the 8th and 14th of July, 1847; printed from the Notes of one of the Jury, with an Appendix. Edited by JOHN ROSE CORMACK, M.D. Edin., F.R.S.E.; Fellow of the Royal College of Physicians of Edinburgh; late Physician to the Royal Infirmary of Edinburgh; Physician to the College for Civil Engineers, Putney, &c. &c. Churchill, Princes-street, Soho.

When are we to see the last of this unseemly feud? In the name of belligerent Physic, which should now be satisfied *ad nauseum*—in the name of common sense, which has long since assigned its meed to each actor in the tragedy—we reiterate, when are we to see the last of this unseemly feud?

A pamphlet on the Putney Inquest! What can Dr. Cormack have been doing, to require such a costly vindication?

The case stands briefly thus: Sophia Dallett, a young lady, in her fifteenth year, was attacked on Thursday, July 1st, by symptoms which her family conceived to be of a bilious character; to remedy these, a couple of *anti*bilious pills were administered, and the dose repeated on the following day. Sunday, finding her no better, Mr. Farmer, the chemist and author of the antibilious pills mentioned, was applied to, and he furnished "four grains of grey powder to be taken at bedtime, and a common black draught for the morning." The morning found her no better—the evening worse. The powder of the previous evening had been returned, and the draught had had but little effect. The public have faith in a remedy in the ratio in which it acts on their bowels. The doses were repeated, with the addition of a saline mixture, that same evening, and on Tuesday morning. Sickness did not recur, and the draught operated, "neither violently nor gently," in an hour. The patient now became very low, some alarm was excited, and Dr. Cormack was summoned. He saw her three times on that day (Tuesday). Repeated and violent sickness, and increasing abdominal pain, were the symptoms. Dr. Cormack considered the case "*probably* a low fever," and that the previous medicine "had been *perhaps* too *searching*." His treatment consisted of homœopathic doses of a narcotic (hydrochlorate of morphia), and of a "diffusible stimulant," in the shape of camphor mixture. Creasote mixture (Ph. Edin.) was given to check the sickness. Subsequently these forms were substituted:—Opium and extract of henbane, of each half a grain, divided into three pills, one to be taken every hour; and an *external* "diffusible stimulant," composed of spirits of turpentine and liniment of the sesqui-carbonate of ammonia, of each five drachms, laudanum two drachms, to be applied to the abdomen by means of a piece of flannel. At the last visit (8 P.M.) *ginger-beer powders* were considered indicated, and effervescing draughts nearly so. Wine was directed to be given should faintness supervene. The symptoms were altogether alleviated. Between four and five, however, on the following morning (Wednesday) Dr. Cormack's attendance being promptly sought, he found his patient in a state of "stupor and collapse," which he thought "*as just possible* (the italics are his own) to have arisen from the absorption of the opium of the liniment;" whereupon he, and the friends he called in to his aid subsequently, set to work in right earnest to apply the means for recovery from narcotism: the poor girl was hauled from room to room; mercilessly slapped; her throat tickled; sulphate of zinc administered as an emetic; the stomach-pump on the point of being applied, when death closed the scene.

The reflections drawn from this case are in favour of nobody. Dr. Cormack's patient died either of narcotism, or of collapse. His treatment of fever, as he *suspected*; of peritonitis, as he dreaded; cholera, as he half imagined, was strange enough. But we will not say more for it—more than that, in the squabble into which he has managed to involve himself with the chemist and the medical juror on the occasion, there is no gain of professional dignity. At any rate, *legitimate medicine* neither stands nor falls with the deserts of Dr. Cormack. His practice is certainly not that of our London physicians.

TO CORRESPONDENTS.

THE MEDICAL TIMES may be procured by an order on any Newsman or Bookseller, or it will be sent direct by post from the Office of the Medical Times *to Subscribers sending by a Post-office order, directed James Angerstein Carfrae, or an order on some party in town, One Guinea IN ADVANCE, which will free them for twelve months. Half-yearly Subscription, 13s.; Quarterly, 6s. 6d.*

E. M. Alpha.—*We think Denman's as good as any.*

An Army Surgeon writes—"*John Pringle was one of the brightest ornaments of our department, and many will be jealous of any attempt to deprive us of the lustre reflected by his great reputation. Had Mr. Emerson taken the trouble to read the whole of the titlepage, he would have seen the work was a translation, and might then have given the quotation in the original, which is always desirable,*

but especially when quoting from works in the mother tongue.

Mr. S. Aston Williams *sends us a printed circular of a Mr. R. Smith, "who begs most respectfully to inform the inhabitants of Westbourne-grove and its vicinity, that he has taken the above villa, where he intends practising the different branches of his profession. R. S. begs to state, that any lady or gentleman consulting a physician can have their prescriptions most accurately prepared." Who can wonder that the members of the profession are treated with contempt by persons in authority. The defect lies in the education, not only professional but the general, which must be elevated.*

A Subscriber, Robeiglass.—*We fear there will be great difficulties in the way of obtaining fee for attendance.*

An Old Subscriber *may obtain all the information he seeks by calling at the East India-house.*

C. M. *is thanked for the information, which is under consideration.*

Gottingen.—*We think the College has the power.*

J. W., Clapham.—*We are not aware of the amount of salary, but an application at the office in Scotland-yard will be the means of obtaining all the information.*

Dr. R. De Gumbleton Daunt.—*The communication has been received.*

Sigma.—*The school is respectable, and the lecturers well adapted to impart instruction in the various sciences to which they especially devote their attention.*

Mr. J. S. Brenton.—*A private communication has been sent.*

Teetotaller.—*It is not our province to discuss the subject. Water is certainly a very good thing.*

Delta.—*Our correspondent will oblige us by communicating to us his address.*

A Pupil *cannot do better than provide himself with South's edition of Chelius—the most complete work we have on surgery.*

Mr. Healey *desires to acknowledge, through our columns, the receipt, towards the expenses of the Poor-law Convention, of half a guinea from Dr. Hinds, of Birmingham, as also a subscription of one guinea from Mr. Alfred Ebsworth, of Nottingham. The numerous communications with which he has beeen favoured on this subject have been acknowledged privately.*

A Pupil of Mr. Dermott.—*We are much obliged for the communication, but from peculiar circumstances think its publication inexpedient.*

Poor-law Unions.—Mr. Hardwick, M.R.C.S. and L.A.C., of Hempnall, *thus addresses us:—"For the spirited conduct of your journal in exposing everything mean and disreputable connected with our profession, and for its noble advocacy of the best interests of that profession, I beg you will accept my warmest thanks. Your present step of exposing the meanness and injustice of ignorant administrators of the poor law, as regards medical remuneration, is quite exhilarating. Unfortunately, I am one of that injured and oppressed party, and will never fail to raise my cry stentorian until something be done to ameliorate our condition. By looking into my books, I find I have been attending and supplying with everything needful, upon the average of the last three years,* four hundred and ninety-two *cases per annum for the* great *consideration of* £40. 2s. *per annum."*

Dr. Krug on Boro-tartaric Acid.—*We are indebted for this interesting paper (including the translating) to the kindness of our able and much-esteemed correspondent Dr. Daunt, of Campinas.*

Letters and communications have been received from Mr. Casey, St. Helen's; Mr. Hastings, Stoke Church; Mr. Whittle, Brenchley; Dr. Sheehan, Buttevant; Mr. Hawks, Thorpe; Mr. Cocks, Harlow; Mr. Cawthorne, Afloft; Mr. Allen, Epsom; Mr. Butterworth, Rochdale; Dr. Ogilvie, Aberdeen; Mr. Grewcock, Falkingham; E. M. Alpha; An Army Surgeon; Mr. S. Aston Williams; An Old Subscriber; C. M.; Gottingen; J. W., Clapham; Dr. R. De Gumbleton Daunt; Sigma; Mr. J. S. Brenton; Teetotaller; Delta; A Pupil; A Pupil of Mr. Dermott.

THE MEDICAL TIMES.

SATURDAY, OCTOBER 9, 1847.

MEDICAL STUDENTS.

"Recreation's season over,
Labour now demands your care;
Grant it—you will soon discover
What its rich requitals are."
COLESWORTH.

The above quaint motto, from an intelligent, if not an erudite, author, is intended to apply to the obligations which at this season hold between medical students and the profession of which they have chosen to become the future representatives. We promised in our last article on this subject to say a few more words thereon in the present number, and thus runneth our discourse.

We are not intending to present it according to any of those stupid old forms of division and subdivision, *à-propos* of nothing for which junior parsons, unrequited patriots, and apprentice-boy declaimers are chiefly remarkable. We intend to follow no particular style, arrangement, or mode of reasoning whatever: we simply mean to have a few words of utterance, as near the truth as we can get them, and be utterly indifferent to the particular form or feature which the delivery of this said truth may be invested with.

Our first object will be to say current somethings about medical students as they are often found; and then a few somethings more concerning the habits and manners that should be peculiarly theirs.

We have a great objection to epithets—they are excessively vulgar things, more easily got than lost, and particularly apt to stick to the individual they may happen to be thrown at all the days of his life. For this reason we do not intend to apply any denominatives distinctive of the students upon whose characters we make the following running comments.

To call them this, that, or the other, according to the established slang of the day, might be giving to some biped piece of impudence the opportunity of conferring a nickname long after the individual it related to had ceased to deserve it.

Without, therefore, using appellatives of any kind, we will proceed to say that there are various shades of difference for which medical students are remarkable. We do not know whether they are more unlike one another, the mass through, than any of the uninitiated of other learned bodies: perhaps they are not; but it little matters, seeing that they are curious enough to deserve criticism in the abstract, and without any reference whatever to other popular somebodies whom they may distantly resemble.

Now, there is a student, complimentarily so called, who is chiefly known from an approach to his likeness appearing upon one of the flash songs of the day. He wears a glazed hat, low in the crown; a pilot coat, ornamented with buttons like little trenchers; his neck is carelessly girded with a silk or worsted something, in which the deepest possible colours are run together in the greatest possible contrast; he wears no straps, and rejoices in a pair of boots whose soles are celebrated for the number of shins they have kicked; he looks upon gloves as foppish and effeminate, and considers a stick like a hedge-stake to be a *sine qua non* to the out-door respectability of a gentleman; he reads the slang dictionary, and swears like a carman; he regales himself with half-and-half before breakfast, and covers his supper with sundry potations of whisky-toddy; he goes half-price to the minor theatres, and is fond of winding-up at Evans', or "the Finish;" he is ready for a "rubber" with anybody, and prizes his meerschaum above his money; he bets in a small way, knows the odds upon everything from the racecourse to the ring, and is devoted to the study of *Bell's Life in London*. As a natural consequence of the aforesaid freaks, his professional duties receive little share of his attention. One of two things happens: he runs the usual course of time allotted to studentship, gets rejected, and betakes himself to another calling; or he suddenly renounces his bad habits, works with as much energy as he played aforetime, passes a creditable examination, and merges into business a respectable practitioner! We have known many such cases, and therefore never cease to hope the best things of the character above detailed, so long as a chance is left for him. But he plays a game that is dangerous to trifle with: to such man, and every such, we say—*carpe diem!* As no man can better apply the motto, none can be more fitted for translating it.

There is another student—affectedly one we mean—who vastly resembles the above in some particulars, and differs as much from him in others. The resemblance is in attending to anything but his proper business; the difference is in the objects that divert him from it. This gentleman belongs to the fashionable world—at least he thinks so. Some silly acquaintance in the country has given him half-a-dozen town introductions, and thus paved the way for well-nigh ruining him. He plumps all at once into a consequence that forms a strange contrast with the modesty, retirement, and industry that would better become him. Considerable of the money that his parents intended to pay for his rooms and his victuals finds its way at once into the pockets of certain outfitters who have an extemporaneous process for making the external man of a provincial look like that of a cockney. He cultivates a moustache; carries a snuff-box and dress-cane; makes morning calls *à la mode*; and passes his evenings at parties or fashionable places of amusement. He does not associate with his fellow-students—they are too low; he never reads a medical book—it's a bore; nor enters the dissecting-room—it's so filthy; nor attends lectures—they're so tedious. He rises when common people are eating their dinners, and boasts of going to bed by daylight. At home he was as long-sighted as a lynx; but his optics have suddenly changed their anatomy, and an eyeglass has become indispensable: he grins at the girls through this piece of crystal, which he considers a necessary appendage to the dress of a gentleman.

The career of this youngster terminates variously. A timely stoppage of the supplies will sometimes bring him to his senses, and set him in right earnest about redeeming the opportunities he has lost: if he have gone beyond convenient redemption, he may find his way into the army, or betake himself to the stage. The unexpected visit of his father, and of a horsewhip, has been known to be very efficacious in promoting, in his personal habits, a sanitary reform. In some cases his pursuits vary little from what we have related, excepting that, towards the end of the chapter, he gives an hour of every day to a process of cramming for examination. If he fail in this, anything may become of him, it matters little what; if by good luck he pass it,

he forthwith pledges himself to obligations which he is utterly incompetent to fulfil. The world quickly finds him out: he is fortunate, if inheriting a patrimony that suffices to keep him, for, in nine cases out of ten, he is not capable of keeping himself.

Between these extremes, there are various shades of student-character commonly met with. They are not so conspicuous as those just mentioned, but still they are things to take warning from. There is the thoroughly idle man, for instance: he is no pursuer of high life, or low life, or dissipation of any kind, for he would not be at the trouble these things cost—he is fairly idle, and nothing else. He is not frightened at his books, for he will go to sleep over them at any time; his plan is, never to do to-day what he can possibly put off until to-morrow, and never to do himself what he can get anybody else to do for him. He likes nothing better than eating and drinking, except a nice lazy yawn, or what he calls a "jolly good snooze." He gets fat, and rejoices that nothing troubles him.

Then there's the social student: he is full of anecdote; tells a pleasant tale; and sings a merry song. He has a regular round of acquaintance, who are perpetually inviting him for his feats of conviviality. He is the diner-out of his class: for, amongst those who know him, a dinner is not complete unless his toasts and sentiments, and songs, are accessory thereto. These things are all very well in their way—that is, when they don't stand in the way of anything better. But with the student they too often do. A fine voice is fatal to a man who has to get his living by other means than its exercise. The song leads to the glass, and from simple conviviality comes the direst dissipation.

Then there's the man with a genius, or what he considers one. This fellow is too clever for anything. Study with him is, of course, out of the question: he does not need it: the slow processes by which common people get knowledge, he despises: his wits are at his fingers' ends—he has an intuitive acquaintance with everything—he is the victim, in fact, of over-sharpness. He always gets rejected, which he properly attributes to the examiners not having sense enough to understand him.

There's that common being, again, who is always about to begin his sudies, but never does so. He has got his books in order, and all other things preparatory to business, except himself. He is the only commodity that is never forthcoming when he ought to be. Yet he never abandons the idea of work, and would be mightily offended if you called him idle. Like an itinerant showman, he is always "just going to begin," but he never goes further than this. If you meet him in the street, and ask what he is studying, he gets excited all in a moment, and tells you he is about to commence such or such a thing in downright earnest; and off he sets, as though he meant it. Poor fellow! all his time is occupied in forming good intentions.

In the enumeration of the several faults and foibles of these several characters, we have shown to the student the particular evils that are liable to befal him. We have shown him what he *ought not to be*—he will easily understand that the opposite of these things will best become him. A modest and proper estimate of his own importance will preserve him from rudeness and vulgarity on the one hand, and from conceit and foppery on the other. The brawling occupant of the pothouse is not further from the decency of the well-bred gentleman than is the empty frippery of the coxcomb from his dignity.

The student should never lose sight of the magnitude and moral responsibility of his professional obligations. Keeping these serious truths constantly before him will be the surest means of incitement to unyielding exertion in the acquisition of knowledge. Lectures may be tedious, and books may be dry, and dissecting may be disagreeable, and hospital practice may be troublesome, but the end of these things should be looked at; and, if regarded faithfully, it will ever be a qualification of the unpleasantness of the means.

The student should love his profession with all his heart—love its noble purposes and projects, and be thankful for the opportunities about to be afforded him of being one amongst those who are honoured in the occasion of doing good to his fellow-creatures. This high honour and happiness will in future be his proportionately to the efforts he may now make to qualify himself for deserving it.

CONVENTION OF POOR-LAW DOCTORS.

This project assumes every hour more the shape of an event decided on and certain. The various existing agencies in reference to poor-law relief have come to a mutual understanding, and, in order to allow full time for the efficient working of this happy combination, it has been determined not to hold the Convention till about Wednesday, the 27th instant. That there may be no misunderstanding or mistake, full information will be conveyed, on an early day, to every union doctor by private circular and public advertisement.

Our readers know that the Provincial Association appointed a committee on this question at the last public meeting. The committee included, among other respected names, those of Dr. Hodgkin, Mr. Martin, and Mr. Cantrell. They are aware also that the Council of the National Institute have expressed a warm anxiety in the success of the agitation, and have liberally placed their rooms at the disposal of its originators. We are happy to announce that a requisition for the Convention is by this time nearly ready, signed jointly by gentlemen, principally union surgeons, connected with both these associations, and by union surgeons not belonging, as members, to either body.

We consider a requisition of this comprehensive character useful, not so much for any actual necessity of such a mode of procedure, as for the guarantee it gives us that the Convention, once called, will receive, in the course of policy it may in its wisdom lay down, the harmonized influence and power of the most important medical combinations existing in this country.

It is proposed, therefore, to avail ourselves of the zealous co-operation of the authorities of the Provincial Association, as well as of those of the National Institute; and the Convention will be held in the rooms so handsomely offered by the latter body.

The requisition, as we understand, runs thus:—

"We, the undersigned, being persons interested in the amelioration of poor-law medical relief, hereby call a General Convention of Poor-law Surgeons, to be held on Wednesday, the 27th of October, at three o'clock P.M., at the Hanover-square Rooms, which have been handsomely placed at the service of the undersigned for such purpose by the National Institute of Medicine; and the undersigned strongly recommend immediate special meetings of poor-law surgeons in their several unions and districts, for the purpose of collecting data to be submitted to, and of appointing delegates to attend, such Convention; and also earnestly invite all poor-law surgeons, whether appointed as delegates or not, to give the Convention the advantage of their attendance, where practicable. [Here follow the signatures.]

"Communications may be addressed, in the meantime, to Thomas Hodgkin, M.D., Brook-street, Grosvenor-square; to T. Martin, Esq., Reigate; to W. Cantrell, Esq., Wicksworth; to George Ross, Esq., secretary to the National Institute, Hanover-square Rooms; and to T. Piers Healey, Esq., No. 43, Connaught-square, London, who has kindly undertaken the duty of Hon. Secretary."

The many poor-law surgeons who wish to attach their signatures to this requisition, to be in time, should send their authorizations by the very next post. The document cannot be too largely signed; nor could an autograph be dedicated to a better service.

The delay in holding the Convention will have some other good effects. It will allow union doctors to get up and systematize their data; as also to hold in the interval sectional meetings of unions and districts, to publish their opinions through resolutions, and to appoint delegates to attend the Convention. As one of our respected and active correspondents, Mr. H. Livett, says, "this will save much talk—mere useless talk."

Already we have had three sectional meetings of this useful character. The first was held by Messrs. Cantrell, Tasker, and others, in the neighbourhood of Derby. The second was held in the Town-hall, Wells, on Sept. 30, Mr. Livett in the chair. The following were the resolutions:—

"1st. On the motion of Mr. Prankerd, of Langport:

"'That this meeting considers the present rate of remuneration to union medical officers to be, in most cases, inadequate: and, inasmuch as in different unions different salaries are paid for the same services, that it is likewise very unequal; and that some steps should be taken by the parties interested to endeavour to remedy these evils.'

"2nd. On the motion of Mr. Hudson, of Shepton Mallett:

"'That, as it would be useless and only productive of ill feeling and unpleasantness to apply for a remedy to local boards, this meeting considers the commissioners and the Secretary of State for the Home Department the proper quarters in which to make known the grievance and to seek a remedy: and that a memorial presented to them, temperately setting forth the inequality and injustice of the present state of professional remuneration under the poor law, and requesting that some fixed principle be laid down, by which more adequate salaries may be regulated, and signed by the whole body of poor-law medical officers, would, now the commission is about to be remodelled, be well timed and likely to be productive of good results.'

"3rd. On the motion of Mr. Furnivall, of Hutton, Weston-super-Mare:

"'That this meeting agrees to adopt the following form of memorial; but considers that its presentation should be delayed for one month, to allow time for ascertaining whether a General Convention of poor law medical officers be practicable; as such a Convention would be the best means for ascertaining the sense of the whole body; and such a memorial would have much greater weight if presented with the concurrence of the whole, rather than that of a comparatively small section of the medical officers acting under the poor law.'"

A few days after October 2, a meeting of the

poor-law medical officers of the Basford union was held in Nottingham, when the following resolutions were passed:—

"Mr. ORTON, of Beeston, in the chair; Mr. NORMAN, of Ilkeston, vice-chairman.

"1st. Proposed by Mr. Longstaff, of Ilkeston, and seconded by Mr. Fowler, of Calverton:

"'That this meeting, representing the feelings of the medical officers of the Basford Poor-law Union, deprecates the present inadequate salaries of the medical officers, sanctioned by the poor-law commissioners.'

"2nd. Proposed by Mr. Ebsworth, Bulwell, and seconded by Mr. Graham, Basford:

"'That this meeting is of opinion that a commission (a moiety consisting of medical men, acquainted with poor-law union practice) should be issued by Government to inquire into the subjects of the duties and remuneration of medical officers.'

"3rd. Proposed by Mr. Norman, seconded by Mr. Longstaff:

"'That, on careful investigation, it appears to us, that in the Basford Union the medical salaries are far inferior to those in most other unions, being scarcely equal in a single instance to the actual cost of drugs and horse expenses, and therefore preclude the possibility of the medical officers doing justice to themselves and the poor also.'

"4th. Proposed by Mr. Fowler, seconded by Mr. Ebsworth:

"'That copies of the returns furnished to this meeting by the several medical officers be forwarded to the poor-law commissioners and the board of guardians, with the view of inducing them, at the earliest possible period, to remove the grievances under which the medical officers of the Basford Union are now suffering.'

"5th. Proposed by Mr. Longstaff, seconded by Mr. Graham:

"'That this meeting is of opinion that the present fees allowed for vaccination in the Basford Union are so low as to render the the Vaccination Extension Act almost a nullity; and that no fee less than one shilling and sixpence will cause the act to be carried out in the spirit in which the Legislature intended.'

"6th. Proposed by Mr. Longstaff, seconded by Mr. Ebsworth:

"'That this meeting condemns the exclusion of burns, scalds, and other long-protracted and dangerous surgical cases from article 177 of the present Poor-law Regulations; and they are of opinion that the article 181 should have been more defined, and made imperative.'"

Mr. Ebsworth, who has done us the favour of communicating to us this report, and in whom our readers will recognise one of our well-known and clever correspondents, adds an assurance that one of the gentlemen attending the meeting will attend the Convention as a delegate.

It only remains for us to say, that the ball is now at the feet of the union surgeons, if they will only fearlessly and *honestly* do their duty. There must be no flinching from the pain, no shirking from the labours, of this duty. It is every man's interest equally—and therefore in honour should have every man's attention equally. To hang back in the hope, or chance, that others will do their work and ours, is neither just—nor prudent—nor, indeed, to add the truth—*gentlemanly*. A common injustice requires a common resistance—and this the more here, since involved with our interests and rights, are the first necessities of our poorer fellow-citizens. Let each union doctor then be up and stirring, and lend his fair share in bearing the heat and burden of the day.

There are persons — too — with something fiendish in their composition, who, having no interest in the present evils, will try their best at their maintenance, by sowing dissensions and distrusts, and by enfeebling and dividing our concerted action. If they succeed—the fault again is ours. The very attempt is an insult to our understandings: but the triumph will be conclusive evidence that the insult has been well deserved.

PROPOSITION FOR IMPROVING PERFECTION AT THE LEICESTER INFIRMARY.

PUBLIC institutions, like individuals, become renowned in two ways—either by acts which redound to their credit, or by those which brand them with marks so ignominious as to make them mistrusted, despised, or condemned. Amongst the latter must be placed the unfortunate hospital at Norwich, with its lazy nurses and dirty towels; whilst amid the former, if we are to believe the testimony of some who advocate its claims, that pink of hospital perfection will be located, the Leicester Infirmary. This latter institution has been kept for a long series of years in unmerited oblivion, having, as we are informed, an "internal management as perfect as a human institution can be." This declaration, moreover, we ought to receive as "gospel," coming as it does from a gentleman who has obtained episcopal authority to exercise the sacred functions of the priest's office. Yet, by an unfortunate transmutation to which everything sublunary is exposed, the "cloth" which is *now* universally reverenced has been divested of that infallibility which was considered one of its attributes in a by-gone age. In spite, therefore, of the clerical declaration of perfection in the management of the Leicester Infirmary, there have been some who have thought that its perfection might be made still more perfect by adding to the number of its medical and surgical staff. This has become the *questio vexata*, having occupied the attention of a committee for the last twelve months, which had been especially appointed to compare the existing rules of the house with the practice then prevailing; to consider whether, and what, alterations might be necessary to *increase the efficiency* of the charity; and to promote the interests of medical and surgical sciences.

The committee, it appears, pursued its labours with great zeal and activity—met more than thirty times—accumulated evidence of the most important character, and a short time ago read its report to a meeting of the governors. There it was recommended that an additional physician and surgeon should be added to the establishment for the following reasons:—"It appears," says the report, "not to have been the practice of the honorary surgeons, and of their predecessors for many years, to meet the out-patients on the days of the attendance of the latter, after their first admission, and that whilst the persons whose cases the house-surgeon considered of the most importance were directed by him to go to the houses of the honorary surgeons, the remainder were left under his care; a state of things evidently at variance with the rules and the designs of the institution."

The practice seems to have arisen in consequence of Saturday being selected as the day for the attendance of the out-patients, which suited very well their convenience, but was so inconvenient to the surgeons as to render it impossible to give all that attention which the hospital patients required without neglecting those who, with fee in hand, could readily castigate any supposed neglect towards them by a withdrawal of their patronage. Moreover, the population of Leicester, like most other towns, has greatly increased within the last few years; additions also have been made to the infirmary, so as to augment its means of affording relief to those who seek it, and yet no addition has been made to the number of medical officers. Under these circumstances the recommendation was made, which, at a meeting of the governors last week, afforded those present ample opportunities of doing the polite to their friends, and of displaying those oratorical powers with which nature and art had combined to endow them. There is something in these meetings, *per se*, which is truly amusing. Really excellent individuals are oftentimes not content with a simple display of their benevolence; they must also embellish it with a few ornaments which are considered as attributes of dignity. A little speechifying must be accomplished even when the knees smite together, and the tongue is paralyzed with a perturbation which renders sundry hums and ahs requisite to the safe delivery of the oration with which the individual is pregnant, and travails in pain to be delivered. Whether Mr. Packe, who was a prominent orator at the meeting of the governors of the Leicester Infirmary, was so affected we are not prepared to say; but he delivered himself of an amazingly large speech, which, when divested of various cut and dried expressions, such as "sense of duty," "honest conviction," "valuable institution," "noble chairman," &c., might be popped into a nutshell. The sum and substance of the reverend gentleman's remarks were, that the infirmary ought to be carried on for the purposes of benefiting the poor only, and not with a view of promoting medical and surgical science; and that this could only be accomplished by rigidly adhering to the present order of things, to the exclusion of medical practitioners at present not attached to the institution, and of youths who are anxious to learn in the wards of a hospital that science which carries with it the best blessings to a sick population.

Mr. Packe forgot, in his zeal for his friends, when he exhorted the governors with deep pathos "to let well alone," that no class derives greater advantages from medical and surgical science than the poor, and in proportion as this science is promoted will their sufferings be mitigated. This, he ought to know, is accomplished by "induction,"—proceeding from one discovered truth to another; and he should have been one of the most strenuous advocates for the removal of those barriers which yet prevent the majority of our profession from studying under the most favourable circumstances the diseases of our bodies. Leicester Infirmary, however, under the management of such gentlemen as Mr. Packe and Sir Henry Halford, who showed himself a worthy supporter of his reverend friend, would be excluded from all participation in the honour of advancing the science of medicine by affording to the rising generation the means of instruction, while the faculty in the town must rest content with the experience obtained from private practice. Of this individually they cannot expect anything more than a limited amount, the lion's share falling to the hospital professionals, who find, to use the words of the committee, "that the honorary appointments are very great and important, as they tend to place their possessors almost invariably at the head of their profession."

This, we strongly suspect, lies at the bottom of the opposition to the appointment of additional medical officers, as the committee adds in their

report, "The fair claims of the members of the profession (not connected with the hospital), whose good will and support are so highly desirable, to a participation, actual and prospective, in those honours and advantages, to such an extent as can be afforded, without too much diminishing their interest and value, or endangering the harmonious working of the constitution, are considerations which should never be lost sight of." This is enlightened and liberal, and to upset such a proposition by a side wind is anything but creditable.

That the perfection of this infirmary wants improving is evident from the fact, that of 5628 recommendations for out-patients, only 1619 were made use of last year; and that out of the 171 of the governors who reside in or near the town, only 26 attended to support the proposition to liberalize the arrangements of the institution. Its real friends need not be unduly alarmed at the defeat they have sustained, for it is only temporary. The matter will not be set at rest by the present arrangement, and the consequence will be that the funds will suffer. Much responsibility is resting upon the clergyman and baronet, and, as they profess to be so ardently attached to the infirmary, they ought to be prepared to make good any deficiency that may result from leaving the matter *in statu quo*. This will prove the charitableness of their dispositions more than all the official orations they may deliver during their subsequent earthly existence.

We trust, moreover, that the medical officers themselves will acquiesce in the suggestions of the committee. The help which is proposed for them will not injure in the least their reputation or practice; on the contrary, it will be the means of increasing the esteem and confidence of the public, and will prove them gentlemen of expansive and enlightened minds.

Many of our benevolent institutions want a little renovation, and if they had not attached to them quite so many whose charity partakes of the nature of "sounding brass" their efficiency would be increased in a tenfold degree.

THE NEW VOLUME.

The new volume, which will commence with our next number, will be unusually rich with new contributions.

While, continuing the courses of Professor Cooper, F.R.S.; Dr. Roupell, F.R.S.; and the great Dumas—(Matteucci, also, not being overlooked)—we may already name as contributors to the new volume:—

Ed. Rigby, M.D., the distinguished Lecturer on Midwifery to St. Bartholomew's; J. F. South, Esq., F.R.S., Professor of Surgery to the Royal College of Surgeons; W. A. Miller, Esq., M.D., Professor of Chemistry to King's College; W. Fergusson, Esq., F.R.S.E., Professor of Surgery to King's College; Samuel Wright, M.D., Clinical Professor to Queen's College, Birmingham; J. Skey, Esq., Professor of Anatomy to St. Bartholomew's Hospital; Dr. Todd, F.R.S.; Mr. B. Phillips, F.R.S.; Dr. Knox, Corresponding Member of the French Institute; W. Hughes Willshire, M.D., Physician to the Royal Maternity Hospital; C. H. Hallett, Esq., Demonstrator of Anatomy to the University of Edinburgh, &c. &c. &c. Indeed the spontaneous kindness of the most eminent members of our body, both in the metropolis and throughout the country, has been so hearty and so general that we should consume a fair portion of a page to enumerate the distinguished names, and not less distinguished papers, with which our columns are to be adorned during the course of the ensuing volume. *One Series, not the least important, will be a* Course of Lectures on Clinical Surgery, by Professor South, the distinguished Editor of "Chelius," and whose erudite and practical Lectures on Hernia, published in this Journal, were so recently welcomed by the unanimous homage of the profession. The introductory lecture of this interesting course will appear in our next number.

INDEX OF VOL. XVI.

This volume concludes with the present number, and next Saturday will celebrate the publication of the first number of what will prove the very best volume of the series. The *Medical Times* has now become so complete a microcosm of medicine, that the Index, to do justice to it, must for the future assume a much more minute and extended character. This year the Index will stretch out to sixteen pages, or forty-eight quarto columns, of small nonpareil type: a mass of matter equal to one of our ordinary numbers.

We originally proposed to publish it as part of two consecutive numbers; but from the exclusion this requires of our ordinary information, and the unsatisfactory shape of the arrangement altogether, we have felt it to be at once wiser and juster to publish it as a separate number, charging it as such. It is needless to say that the Index number, appearing without advertisements, and being printed in expensively small type, will be of no commercial advantage to us—though charged as a separate publication.

A WORD FOR CORONERS.

[To the Editor of the Medical Times.]

Sir,—I think you have dealt too severely with Mr. Thomas Paine, the City coroner. The sucking dove has fallen in for the stripes that belong of right to the lion "*brayant*."

You say Mr. Paine accused Mr. Maybury of what was unfounded, and withheld from his exchequer a golden guinea. But is not a *medical*—ay, a *medical* coroner, famous for Wilsonian fees, and who—illegally, according to Lord Denman—all but put Dr. Warren on his trial for manslaughter or murder, and this for naught more than performing, most reluctantly, a painful professional duty? If such things be done in the green wood, what must we expect in the dry? Is not Coroner Paine justified in imitating the conduct of a man so admired and looked up to by us as his Finsbury colleague? Besides, what is coronership but a game of skittles with professional characters? What coroner was it that befriended Dermott? Who Dr. Hall? Who Dr. Reid? Who Dr. Warren? Who Dr. Costello? Who Mr. Day? Who Dr. Rigby? Who Dr. Elliotson? Who Mr. Guthrie? Who Mr. Tyrrel? Who Bransby Cooper? Who, &c. &c. &c. &c. &c. &c. &c. &c.?

We pay men—*reward* men—*support* men for doing such things—why then complain of Mr. T. Paine for following the *honoured* example? Have we not made it worth his while? Does anybody get anything by doing the contrary?

Besides there are good points in poor Paine's conduct—1, he has no fears of holding an inquest on a case of arson—a continuation of a useful old practice; 2, he can—an antiquated thing, too, and just as good—sing a capital song. During the City election he favoured a public meeting of our Lumber Troop assembled in Fleet-street to hear his political sentiments—with one of the most "pathetical" songs I ever heard. "My heart is lost, Eliza!" 'Twas indeed, pathetically comical, and comically pathetic.

Your obedient servant,

A City Elector.

A SUGGESTION BY DR. FORBES.

[To the Editor of the Medical Times.]

Sir,—Dr. Forbes, in his retiring address as editor of his now defunct "Quarterly," enters into a long statement of the much he *did* in the way of securing professional support, and of the little he did in the way of getting it. Taught wisdom by his own shipwreck, he recommends all reading societies to buy two copies of the works which deserve professional support; and thus, while consulting their own convenience, give increased powers of usefulness to the journals faithful to their interests.

Now, Sir, I submit that this suggestion is most applicable to the *Medical Times*, and for several reasons:—

First,—You have enlarged the sphere and increased the efficiency and respectability of weekly medical literature at least cent. per cent., and this, too, while not increasing, but rather diminishing, its costliness.

Secondly,—You have delivered the profession from a dictatorship at once vindictive, remorseless, and unprincipled, and from its unfettered agency at once vulgar, insolent, and demoralizing.

Thirdly,—Whatever real opposition was shown to the new charter of the College of Surgeons you marshalled.

Fourthly,—You have taken a manly, a decisive, consistent, and independent course on medical reform.

Fifthly,—You did the profession great service on the Hounslow inquest, and this not without expense or danger.

Sixthly,—You are fighting a good and hopeful fight for the union surgeons.

For all these reasons I recommend to the profession warmly the adoption of Dr. Forbes' excellent suggestion. G. R.

*** We cannot do less than approve of so *just* an application of a wise suggestion, but think the hint would be improved on if, out of our thirty thousand *readers*, there was not *one* who did not make it a point of honour, as it is, indeed, of policy, to peruse us in a copy of his own.

THE INCOME TAX.

[To the Editor of the Medical Times.]

Sir,—Permit me to thank you sincerely for your able advocacy of the rights of the medical profession, and your talented exposures of the injustice we are subjected to, both from the public and the institutions that ought more especially to protect us.

Your leading articles of last week demand in an especial manner the gratitude of the profession, as there are few but feel keenly the pressure of that odiously inquisitorial impost, the income-tax; and, when combined with the injury inflicted upon medical men by the shoals of illegal and ignorant practitioners, we need not wonder at many departing this life with no provision made for those near and dear to them. It, therefore, behoves the profession to petition unanimously against so unjust a tax, and to devise some means of union to extirpate the latter from their neighbourhoods. I beg your permission to propose three plans that, if carried out with spirit and energy, would infallibly tend to raise the profession in the social scale, and effect what must be anxiously desired by all.

1. To petition individually against the income-tax as regards the medical profession.

2. To become subscribers to the General Medical Annuity Fund, founded by Mr. Daniell, of Newport Pagnel.

3. To form a local or general fund, with a committee of management and a clever solicitor for secretary, to indict illegal practitioners for misdemeanour, and assist the Apothecaries' Society in bringing actions against them for the penalties. To publish local lists every three months of the unqualified, with information to the public of the liability to fine and imprisonment of such

persons, and the non-liability of all persons to pay who employed them.

If the foregoing plans are carried out with ability and energy, I feel confident immense results would follow. I am for putting our own shoulders to the wheel, and not waiting for the slow, apathetic, and cumbrous movement of a lethargic corporation. The evil is daily increasing to our pecuniary loss, and to the serious injury of the public health. When I inform you that there on my list (which does not, I fear, comprise half the number) eight hundred unqualified practitioners in the metropolis and within ten miles, you will allow it is time for us to be up and doing. There are one hundred and forty in the Tower Hamlets, and twenty-three in the parish of Bethnal-green alone.

Now, a subscription of two guineas per annum from each qualified practitioner in the Tower Hamlets would form a considerable fund, which, rightly applied, would produce astonishing results to the subscribers: for, if a tithe of the above number were carefully and vigorously attacked, the other locusts would take to flight, and adopt the prudent course of seeking safety in their proper sphere of bricklayers or railway police.

If these hints meet your approbation, I should feel obliged by their insertion in any form you may think most suitable, with such comments as your superior opportunities of information may supply.

I have the honour to remain
Your most obedient servant (in haste),
A Practitioner with Three Tails.
Hackney-road, Sept. 27.

GOSSIP OF THE WEEK.

War-office, Oct. 1.—2nd Dragoons: Surg. Robert Dunkin Smyth, from the 87th Foot, to be Surg., vice John Winterscale, who retires upon half-pay.—20th Foot: Staff-Surg. of the Second Class Isidore Anthony Blake, M.B., to be Surg., vice Fishbourne, who exchanges.—81st Foot: Assist.-Surgeon Charles Frederick Stephenson, M.D., from 9th Foot, to be Assist.-Surg., vice Schooles, promoted on the Staff.—87th Foot: Staff-Surg. of the Second Class William Leslie Langley, M.D., to be Surg., vice Smyth, appointed to the 2nd Dragoons.—Hospital-Staff: Surgeon Thomas Moore Fishbourne, M.D., from the 20th Foot, to be Staff-Surgeon of the Second Class, vice Blake, who exchanges.—Assist.-Surgeon Henry James Schooles, M.D., from the 81st Foot, to be Staff-Surgeon of the Second Class, vice Langley, appointed to the 87th Foot.

Apothecaries' Hall.—Gentlemen admitted members on Sept. 30: Horatio Coare Brenchley, Thomas Hood, Joseph Rushforth, Henry Fowler Jenkinson, Samuel Fowell, and George Bellasis Masfen.

Curious Case in Medical Jurisprudence.—The *Gazette Medicale* relates the following facts in a recent number:—"On the 6th of January last the body of a man was found lying in bed and in a state of combustion, by some persons who entered his bedroom in the morning. The chamber was filled with a dense smoke, and one of the witnesses asserted that he saw playing around the body of the deceased a small whitish flame, which receded from him as he approached. The clothes of the deceased and the coverings of the bed were almost entirely consumed; but the wood was only partially burnt. There were no ashes, and but a small quantity of vegetable charcoal; there was, however, a kind of mixed residue, altered by fire, and some pieces of animal charcoal, which had evidently been derived from the articulations. The deceased was in the habit of carrying lucifer-matches in his waistcoat pocket, and, according to his usual practice, he had had a hot brick placed at his feet when he went to bed the preceding evening. Two hours afterwards his son and daughter-in-law passed by the door of his room, but there was nothing which attracted their attention. It was only the following morning early that his grandson found the body in the state described. The deceased was seventy-one years of age. He was not fat, nor was he addicted to drunkenness. The temperature of the air was low: there were no indications of electricity. The son and his wife were suspected of having murdered the deceased and burned the body in order to conceal the traces of the crime, and a Dr. Masson was commissioned to investigate the case. The body, which had been buried, was exhumed and examined. The cravat, partially burned, was still around the neck, and part of a sleeve of the night-shirt was found. The hands, completely burned, were only attached to the forearms by some carbonized tendons, which gave way on the slightest touch. The thighs were completely detached, so as to resemble a wilful mutilation but for the discovery of animal charcoal about them. From these facts Dr. Masson, considering it impossible to ascribe these changes to the effect of accidental burning, and that, under common circumstances, they could only be produced by a violent combustion continuing for some time, drew the inference that the burning must have resulted from some inherent cause in the individual, probably roused into activity by the hot brick placed at the feet of the deceased. The burning once commenced would be easily supported by the state of the tissues. Hence the case was, in his opinion, to be referred to the class of spontaneous combustion. It is said that Orfila coincided with M. Masson in this extraordinary opinion, and the accused were acquitted."

Manslaughter by Quack Doctors.—A young man, named John Duffy, a native of Endrin, in King's County, who was lately employed in the mercantile establishment of Mr. Timothy Bagnall, Ferbane, recently caught a cold, and went home to his friends at Endrin. While residing there, he was bled in the arm by a man named Tommy Egan, a rough country surgical practitioner, who, in the operation, punctured an artery beneath the vein. The limited skill of this hero of the lancet rendered him indifferent to the injury he inflicted, consequently he adopted no means to repair his fault. In a short time the arm swelled, and the blood burst forth; when the infatuated people called in another quack named Connor, "a cure-all," who opened the wound with the end of a goose quill, removed the clotted blood, and poured in some of his quack medicines. This, however, seemed rather to increase the sufferings of the unfortunate man, the blood flowing excessively from the wound. His friends were then alarmed at the dangerous appearance of the wound, and called in Dr. Fry, of Ferbane, who, on beholding his perilous situation, desired that he should be removed to the infirmary here, at the same time putting a tourniquet on the arm to prevent the excessive flow of blood. In this state, and almost exhausted, the young man reached Parsonstown on Sunday week, when Dr. Peirce did all his power to save him; but, notwithstanding his efforts and extreme attention, he died on the following Tuesday. On Wednesday James Dillon, Esq., senior coroner, was called on by the authorities to hold an inquest on the body. On his arrival, he selected a respectable and intelligent jury according to the new law, after inflicting penalties on ten persons for non-attendance. The sister of the deceased was examined as to the various operations performed on her brother, and Dr. Peirce, who made a dissection. The jury returned a verdict of "Manslaughter" against Egan and Connor, alleging that the puncture and subsequent mismanagement were the immediate cause of death. The coroner then discharged the jury, and issued his warrant for the apprehension of the parties, one of whom (Connor) was committed to the county goal on Saturday last, by Messrs. Lauder and King, J. Ps.; but Egan decamped, and has up to the present eluded the vigilance of the police.—*King's County Chronicle.*

Interesting to the Medical Profession.—On Wednesday, Mr. P. T. Chambers, of Newcastle, appeared by Mr. Brewis, at the County Court, Gateshead, to recover £9. 1s. 6d. from Mr. Thomas Forman. The defendant was represented by Mr. Stoker, jun.—The plaintiff, who practises medicine and surgery, had been consulted by the defendant; and the sum claimed was the amount of his bill of charges. In proof of Mr. Chambers' title to recover, he was examined to show that he began his apprenticeship with the late Mr. Laidler, and concluded it with the late Mr. Maxwell—the latter of whom cancelled his indenture in March, 1815—ever since which time he had practised his profession on his own account. The cancelled indenture was produced; also a letter, purporting to be written by the defendant (and which, although not read, was understood to contain an acknowledgment of the debt); with, likewise, an "I. O. U." bearing the defendant's signature.—Mr. C. P. Henzell, surgeon, a witness for the defence, deposed that he went to Mr. Maxwell's as an apprentice in August, 1816, and found the plaintiff there. The plaintiff continued with Mr. Maxwell, for some time afterwards, as witness's senior apprentice.—Mr. W. C. Preston, surgeon, deposed that he went to Mr. Maxwell's in 1813. Mr. Chambers came subsequently, and was there as an apprentice when Mr. Henzell was bound.—Mr. Thomas Dove, solicitor, deposed that in May, 1815, he was articled to Mr. Donkin, whose office adjoined Mr. Maxwell's surgery. For a year or more afterwards he saw the plaintiff daily going to and fro as Mr. Maxwell's apprentice.—Mr. Forman, the defendant, deposed that for all the medicine and assistance he had from the plaintiff he paid him over the counter. The signature to the "I. O. U." was his, but when he wrote it the paper was blank. The plaintiff told him he liked to have his patients' names, and got him to write his name on a sheet of paper. The letter produced, and to which his name was attached, was not his writing.—The answer to all this evidence was a denial of the truth of Forman's statement, and an assertion that the plaintiff was freed from his indenture in March, 1815, through the kindness of Mr. Maxwell, and practised for himself, although the appearance of his being an apprentice was kept up.—Mr. Stoker called the attention of the judge to the endorsement on the indenture, which had apparently been tampered with; and his honour remarking that he could not get over the evidence for the defence, dismissed the case.—*Gateshead Observer.*

The Epidemic in Edinburgh.—The fever which has raged here so fearfully during the past summer does not appear to be assuming a more modified or less virulent aspect. On the contrary, by all accounts, the contagion appears to be increasing daily, and its victims are becoming so numerous as to give great cause for alarm, and to demand the adoption of such prompt and effectual steps as skill and experience can recommend, to mitigate, as far as possible, its dreadful effects. Of late, the epidemic has appeared in several instances in the middle and upper classes of the city, though its devastations are confined chiefly to the poor and destitute. On Monday Mr. Mackay, one of the assistant-inspectors of the poor for the city parish, fell a victim to the malady, which he caught only ten days previously in the discharge of his official duties. Mr. Mackay has been connected with the institution for ten years. This is the second assistant-inspector which the parochial board have lost within the last few months. We learn also that the mistress of the industrial school recently set on foot by the board fell a victim to fever some weeks ago; and that the master, Mr. Thomson, is at present lying ill of it. In fact, the operations of this institution are to be completely suspended for the present, and the building which was used for the purposes of the school is to be devoted to the reception of fever patients. To give some idea of the mortality from the disease at present, we may state that the number of paupers which the city parochial board alone have sent to the infirmary since the 1st of June to Monday last was 887, of whom no less than 485 died, 70 per cent. of these being fever cases. That the disease is fearfully increasing is evident from the fact that 455 of the

above 887 have been admitted since the 10th of August; and, above all, from the circumstance that at the present moment there are no fewer than 143 fever patients in various parts of the town, who, from want of accommodation, cannot be admitted into the infirmary. Nine-tenths of these are Irish, who have flocked to the charity workhouse from all parts of Scotland. The Royal Infirmary has long been inadequate to the demands made for admission within its walls, and though an additional large shed, capable of containing, we believe, from 80 to 100 beds, is the course of erection, that accommodation is even far short of what the present calamity so grievously necessitates. We understand that the medical committee of the parochial board intend to have an interview with the managers of the infirmary, with the immediate view of taking some decided steps to provide for those cases of fever which cannot at present be overtaken, and we have no doubt they will meet with the liberal support of the community. Fever has also attacked several of the police force, twelve of the constables being at present under its influence, and some of them are in a very wretched state.

The Yellow Fever in New Orleans.—The yellow fever continues to rage in New Orleans with terrible effect. We see announced amongst the deaths Archibald L. Dey, aged twenty-four, son of Mr. Anthony Dey, of this city; Mr. Marion Ward, son of the late Samuel Ward, of this city; Theo. Fisk Blake, late of Boston; Dr. B. Hull, Mr. John Patlethwaite, &c. The Howard Association is the title of a society formed for the aid and relief of the afflicted, and Messrs. Henry E. Lawrence and A. B. Coleman, of New Orleans, at present in this city, have been designated as its agents here. Donations for the relief of the suffering will be received by them at the Astor-house. The following, from the *Picayune* of the 5th of September, gives the latest intelligence of the progress of the disease:—"The past has been the most fatal week of the epidemic, which scourges us with a severity which is appalling. The interments for the week in the cemeteries of the city up to nine o'clock on Saturday morning were 533, of which 427 were of yellow fever; the corresponding numbers of the previous week were 442 and 311. Add the interments from New Orleans at Lafayette, 43 cases, and we have a total of interments for this city for one week of 576, being an average exceeding 82 each day. This awful mortality needs no comment. The reports of the Charity Hospital show a slight increase of admissions and deaths there. The total admissions for the week ending Saturday evening, at six o'clock, were 445, against 434 the previous week; while the deaths from yellow fever there during the same time were 128, against 92 the previous week. The discharges of yellow fever from the hospital the last week were 222. The weather during the week has been signally unpropitious, being extremely changeable. Several days have been cold for the season, keen north winds blowing. At the moment of writing, however, the weather is extremely warm and favourable, and we pray that it may continue so. The few details we have given above will better tell our absent friends the story of the sufferings of this doomed city than whole columns of comment, and we gladly dismiss the subject for a moment from our minds."

Strange Death.—A very melancholy sensation has been created in the parish of Cairney (Aberdeenshire) and neighbourhood by the death of a woman, under the following circumstances. She had been attending, as sick-nurse, on a young man suffering under malignant scarlet fever, and, in wiping the face of the sufferer, some of the purulent matter from his mouth came in contact with a pin-scratch on her hand. Her arm almost instantly became inflamed, and she was soon in an agony of extreme suffering and fever. Everything was tried to stay the process of mortification, but in vain. After some little time the arm was amputated; even this failed; and after a few more days of great distress the woman died.

Prevalence of Fever.—The existence of fever in Newcastle, caused by the influx of numerous bodies of peasantry from Ireland, was noticed some time ago; but within the last fortnight the disease has alarmingly increased. In Sandgate, Pandon, Wallknoll, and Stockbridge, the places where the Irish poor are principally located, the disease has been very virulent. Out of 182 cases of sickness reported to the board of guardians last Friday (Sept. 24), by Mr. Newton, the district surgeon, 136 were stated to be ill of fever. Several other cases have likewise been reported to have occurred in Puddingchare, Head of the Side, Castle Garth, and Close; but in other parts of the town the state of health generally is good. The Fever Hospital, which has lately been considerably enlarged, is full of patients, there being at this time between sixty and seventy; and the consequence is that a great proportion of the sufferers have to be attended to, at much disadvantage and risk, at their respective and miserable abodes; and thus the disease is permitted to spread from family to family, from the want of a proper establishment to allow of their immediate removal. The board of guardians, aided by their officers, have been most prompt in their efforts to relieve the sufferers, and have fitted up the extensive premises in the upper part of the vagrant-ward for the reception of those patients who are convalescent, where every attention is paid to their wants. The medical officers of the several parishes have been unremitting in the discharge of their duties; and Mr. Newton, one of the medical officers, is at present labouring under the infection, besides his assistant, Mr. W. Swan, together with Mr. M'Nay, the medical officer for All Saints' east ward. Mr. Shield, surgeon, New Bridge, has been appointed by the board of guardians to fill the temporary vacancy occasioned by the illness of Mr. Newton. Among the relieving officers, Mr. Robson, of Westgate township, and Mr. Wilson, of All Saints' parish, are both indisposed, but, we understand, are in a fair way of recovery. The Rev. Messrs. Standen and Cullen, Catholic clergymen, have also caught the infection while visiting the sick and dying. The fever, up to this period, has principally been confined to the Irish paupers, whose condition, according to the report of the relieving officers, is truly wretched, the great majority of them having arrived in the town meanly clad and destitute, and are glad to take refuge in those dark and filthy abodes too common in Sandgate, where they exist but a short time, to propagate disease and misery.

By a royal decree, M. Charles Lunde is appointed to succeed M. Pariset, deceased, as a member of the Board of Health.

Dr. Richond des Brus, deputy, will succeed Dr. Montluc, deceased, as physician at the mineral baths, at Néris.

It is announced that two general inspectors in the medical service are about to proceed to the western coast of Africa, to look after the health of those employed in our squadrons.

Dr. Maurin, of the Mediterranean steam-boats, has been appointed chevalier of the Order of St. Sylvestre, by his Holiness Pius IX.

The cholera is raging at Moscow. On the 17th of September several persons were picked up in the streets.

Dreadful fever is raging at Teheran. Dr. Bell, an English physician there, had obtained leave of absence, after a severe attack, and was returning home; but we learn the sad intelligence that he died before he quitted Asia, at Erzeroum.

The following is the list of applicants for the clinical chair vacant by the death of M. A. Bérard:—MM. Langier, Jobert, Robert, Michon, Vidal (de Cassis), Malgaigne, Chassaignac, Gosselin, Marchal (de Calvi), Huguier, Alquié (de Montpelier).

The members of the Administration of Hospitals in Paris are holding a consultation about establishing a colony for deserted children.

At the opening of the annual session of the Faculty this year, the address was pronounced by Professor Bérard.

Adulteration of Oatmeal.—At the Glasgow Circuit Court of Justiciary, on Wednesday, Sept. 29, Alexander Bannatyne, grain-merchant, St. Vincent-street, Glasgow, was indicted for falsehood, fraud, and wilful imposition, in having mixed bran and thirds with oatmeal, supplied by the house of Bannatyne and Co. as oatmeal for the relief of the poor in the Highlands, in pursuance of a contract with the committee in Glasgow for the relief of Highland destitution. After the evidence had been heard, the jury delivered the following verdict:—"Guilty as libelled, with the exception of mixing with bran, but recommended the prisoner to the utmost leniency of the court, in consequence of the practice having been adopted by other parties in the trade." The Lord Justice Clerk sentenced him to be imprisoned four months from this date and pay a fine of £300, failing to pay which, at the expiry of that term, to suffer other four months' imprisonment. The prisoner was then removed from the bar.—*Globe*.

Obituary.—On the 4th inst., at his residence, Tottenham, Middlesex, John Morgan, Esq. member of the council of the Royal College of Surgeons, and many years one of the surgeons of Guy's Hospital.—Aug. 21st, aged 36, of fever, Richard Mackenzie Hiddleston, Esq., resident medical officer at the House of Recovery, Leeds. —On the 2nd ult., at Trafalgar-cottage, Manor Hamilton, aged 62, James Dundas, Esq., R.N., F.R.C.S.I., surgeon to the dispensary, and medical attendant of the workhouse. Mr. Dundas contracted malignant typhus fever during his attendance in the temporary fever hospital. He was assistant-surgeon of H.M.S. Cyclops at the battle of Trafalgar, and on leaving the service he devoted a long and useful life to the cause of humanity and science; his loss will be long felt by the community and members of his own profession.—Sept. 5th, at Granard, aged 72, Dr. M'Cormick, medical attendant of the union workhouse.—Sept. 11th, at Doncaster, aged 46, of fever, caught in the discharge of his duties as medical officer to the Doncaster union workhouse, Robert Storrs, Esq., surgeon.—Sept. 19th, at Honiton, aged 40, from a tubercular deposition in the lungs brought into action by an attack of typhus fever, James Campbell, Esq., M.D.—Sept. 19th, at Baltinglass, of fever, John Johnston, Esq., medical officer to the union workhouse and district fever hospital.

MORTALITY TABLE.

For the Week ending Saturday, Oct. 2, 1847,

Causes of Death.	Total.	Average of 5 Summers.
All Causes	1143	940
Specified Causes	1140	935
Zymotic (or Epidemic, Endemic, and Contagious) Diseases	317	226
Sporadic Diseases.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat	150	103
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	169	157
Diseases of the Lungs, and of the other Organs of Respiration	227	226
Diseases of the Heart and Blood-vessels	29	25
Diseases of the Stomach, Liver, and other organs of Digestion	80	94
Diseases of the Kidneys, &c.	8	8
Childbirth, Diseases of the Uterus, &c.	9	10
Rheumatism, Diseases of the Bones, Joints, &c.	4	7
Diseases of the Skin, Cellular Tissue, &c.	2	2
Old Age	35	50
Violence, Privation, Cold, and Intemperance	110	28

INDEX TO VOL. XVI.

INDEX.

INDEX.

Q.

R.

Reviews—

T.

U.

V.

W.

Y.